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Financing Payouts in the Nordics

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Purpose

The purpose of this paper is to investigate if payouts financed with external capital exists in the Nordics, and if they do, to what extent they occur.

Methodology

The paper is of a quantitative nature and have a deductive approach. To try to describe the investigated phenomenon of a payout gap a binary Probit regression model has been used.

Theoretical Perspective

The presented theories aim to give the reader a basic understanding about the foundations connected to payout financing, such as capital structure, the theory of signaling and the pecking order theory. Furthermore we will have a look at some previous researches in the field and present the results of these studies.

Empirical Foundation

Our results confirms the notion that there are firms in the Nordic stock market that tend to rely on raising funds externally in order to finance their payouts. Furthermore, we have shown that debt issuing debt is the most commonly used financing method and that dividends prevail over repurchases regarding payout policies.

Conclusion

The study shows that the phenomenon of externally financed payouts do exist within the Nordic stock market. The primary vehicle to raise capital externally during time of insufficient cash flow to meet desired payout levels is issuing of debt, while the primary vehicle to return cash to investors is through dividends.

We have not been able to pinpoint one certain key driver behind the phenomenon. However, we can conclude that the firms with a high market to book-ratio, which also make dividends to a higher extent are the ones with the highest probability of having a payout gap. Meanwhile, the firms with a lot of cash and a positive operating cash flow are the ones with a significantly lower probability of having a payout gap.

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Nyckelord

Aktieåterköp, Kassaflöde, Skuld, Utbetalning, Payout Gap, Utdelning

Syfte

Syftet med denna uppsats är att undersöka förekomsten av externt finansierade utbetalningar i Norden, och om sådana existerar, i vilken utsträckning de gör det.

Metod

Denna uppsats är av kvantitativ karaktär och har en deduktiv ansats. För att försöka beskriva det undersökta fenomenet med payout gap har en binär Probit regressionsmodell använts.

Teori

De presenterade teorierna syftar till att ge läsaren en förståelse kring grundbegreppen som associeras med externt finansierade utbetalningar. Dessa inkluderar kapitalstruktur, signalteori och pecking order-teori. Vidare presenteras tidigare forskning på området samt en redogörelse för resultaten av dessa studier.

Empiri

Våra resultat bekräftar uppfattningen om att det finns Nordiska företag som inbringar externt kapital för att finansiera utbetalningar. Vidare har vi kunnat visa att upptagning av lån är den vanligast förekommande finansieringsmetoden, samt att utdelningar används oftare än återköp beträffande utdelningspolicy.

Slutsats

Studien visar på att detta fenomen att externt finansiera företagsutbetalningar även finns på den nordiska marknaden. Det primära sättet att finansiera sina utbetalningar är genom lån och det vanligaste sättet att distribuera utbetalningarna var genom utdelningar. Vi har inte lyckats hitta en specifik faktor som driver detta beteende. Däremot kan vi slå fast att företag med ett högt market-to-book-värde och som gör utdelningar är de företag som har högst sannolikhet att ha ett payout gap. Medan företagskaraktäristika så som högt operationellt kassaflöde och stor kassa ger en lägre sannolikhet för ett payout gap.

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1. Introduction

In this chapter we are giving the reader an introduction to the study. We present the background and the purpose of the study as well as the questions that are to be answered throughout the study. Moreover, this section presents the delimitations of the study, the material used and the disposition of the study.

1.1 Background

In theory most people agree that the payouts a firm distributes are financed through the free cash flows that the business generates, at the very least this is said to be true over the long run (Jensen, 1986). Doing the opposite, financing payouts through externally raised capital, either by issuing debt or by issuing equity, is generally considered uneconomical as well as pointless or at the very least inefficient (Miller and Rock, 1985). To clarify exactly what that means, payouts in this context is cash transferred from the firms to its shareholders and incorporates both dividends and share repurchases. External capital in this context is cash raised through the sale, through the issuing of new equity or through long term debt raised in the capital markets.

Recent research shows that many firms in the United States are raising capital externally in order to finance payouts. Farre-Mensa et al. (2015) studied the US publicly traded entities over a series of 23 years and concluded that “32 % of aggregate payouts are simultaneously raised by the same firms, mainly through debt but also through equity” (Farre-Mensa et al., 2015, p. 2). This also takes place within the same year, meaning that the firms are lending capital in order to, during the same period, distribute payouts to their investors.

The intuitive answer to why firms might do this despite its apparent costly nature is quite simple and eloquent, the signal effect. This means that a firm needs to communicate strength and belief in future growth in times of weakness or financial distress. The signal effects can also affect the payout decisions of a firm to the extent that a firm makes payouts to please its investors who might expect receiving payouts. Thus, a firm might, rather than suspending dividends during a weak year, raise capital in order to maintain a previously set level of payouts. However, Farre-Mensa et al. (2015) concludes that the signal effect alone does not fully explain why companies are behaving as they are. (Farre-Mensa et al., 2015)

Another intuitive explanation to why firms raise capital externally to finance their payouts is that firms, while not generating sufficient cash flows to finance all their payouts during a given year, could tap cash reserves in order to maintain or increase a payout level. This, despite negative cash flow from its core business and investment activities. While this explanation is true for many firms, there is still a significant amount of firms needing to raise capital even after depleting all cash reserves in order to maintain their payout level. (Farre-Mensa et al., 2015)

We found this to be particularly intriguing and think that there is a distinct need to investigate whether the same behavior occurs at the Nordic stock market and if so, what reasons are to be found to support or explain this behavior.

1.2 Purpose

The purpose of this paper is to investigate if payouts financed with external capital exists within the Nordics, and if they do, to what extent they occur. In addition we have investigated possible reasons for firms to consciously keep payout levels above what their cash flow allows them to.

1.3 Problem and Question Formulation

While the traditional finance school suggests that payouts are to be financed through the free cash flow, a recent study, made by Farre-Mensa et al. (2015) analysing the U.S. market, highlights the fact that many firms actually tend to fund their payouts through the issuing of debt and equity. According to this study, 42 percent of the observed firms finance their payouts by either issuing debt or by issuing equity and the tendency of financing payouts through externally raised capital do not tend to occur occasionally, but are rather persistent over time. (Farre-Mensa et al., 2015)

Moreover, the study states that externally financed payouts are often financed through the issuing of debt and that repurchases has accounted for a significantly higher amount of money throughout the observed years than payouts made through dividends. Furthermore, the authors state that there are some vital incentives for financing payouts through externally raised capital, such as controlling the capital structure and to boost the performance in earnings per share. (Farre-Mensa et al., 2015)

Based on what have been stated by Farre-Mensa et al., 2015, we believe that there are three main parts we would like to, but also need to, answer in order to fulfill the objectives related to the stated purpose;

- i. To what extent and how does Nordic firms raise external capital to finance their payouts?
 - a. What methods are used to bring in capital (issuing of new debt or new equity)?
 - b. What methods are used to distribute capital raised by firms to shareholders?
- ii. What reasons could the firms have to engage in these activities?
- iii. Are there any company characteristics that can be used to predict the probability of a firm having a payout gap and give insight to what factors that causes the firms to have or not have a payout gap?

1.4 Target Audience

This research is targeted at financial institutions, financial researchers and students studying economics and corporate finance. It aims at giving the reader a more profound knowledge when it regards the financing of payouts, *i.e.* the concept of raising capital externally to finance the payouts. In order to fully replicate our results a certain degree of econometric knowledge is recommended.

1.5 Delimitations

Companies listed outside of the Nordics have not been considered in this paper. To ensure data consistency and replicability we used a single predefined constituent list in Datastream. This list, which was the most comprehensive containing only Nordic firms did however not include firms listed on Oslo Børs. Thus companies listed there are not included in our sample.

All our observations are limited to the time period 2005 to 2014. All entries for companies that were not listed for the full time span has naturally been marked N/A until the year following the IPO or delisting respectively.

When defining net proceeds, money raised from IPOs have not been included.

1.6 Material

The idea of this paper, to analyze how the companies finance their payouts, derives from a Harvard Working Paper; “Financing Payouts”, made by Farre-Mensa *et al.* (2015) and published at the 15th of March 2015, why this article is used as both an inspiration as well as a reference throughout the paper. In addition to the article Financing Payouts, previous research within the relevant area have been considered, such as “Payout policy in the 21st century” by Brav *et al.* (2005) and “Corporate Investment and Stock Market Listing: A Puzzle?” by Asker *et al.* (2015).

The paper also refers to the doctrine within the area of corporate finance and focuses mainly on the international publications. The publications are mainly publications of general character and regards the different concepts used during the empirical study, the capital structure and the concept of signaling.

Regarding the empirical study, the study relies on information gathered from Thomson Reuters Datastream. For further information regarding the material used for the empirical study and how the material have been gathered see chapter five, Methodology.

1.7 Further Disposition

This paper is divided into three parts, a descriptive part, an analytical part and a conclusion.

In the descriptive part, the paper commences with a brief description of the terms used in the empirical study. Thereafter, the theory is presented followed by a presentation of the empirical study. The theory consists of a presentation of different theories regarding the capital structure and the signaling as well as a presentation of the previous research within the, for our paper, relevant area. After presenting the theory, our empirical study is presented in depth. In this section we describe the methods used with the aim to give the reader a better understanding when it regards the empirical study and the collection of information. The presentation of the empirical study is then followed by the presentation of the results of the study.

After a profound presentation of the theory and the empirical study, the paper proceeds to the analysis, focusing on the questions asked under chapter 1.3 of the paper. This section puts the theory and the empirical study together and consists of a analysis and discussion based on our own thoughts when it regards the result.

The study is finally wrapped up by a conclusion, which has as its aim to summarize what have been stated throughout the paper and give the reader a clear picture of the result of the empirical study as well as our discussion.

2 Practical Frame of References

In this chapter we are, briefly, presenting and defining the most important terms used throughout the study, with the aim of giving the reader the possibility to better understand how to interpret the results of the study.

2.1 Cash Flow

There are important differences between a firm's earnings and cash flow. Earnings are an accounting measure of the firm's performance and include non-cash charges but not the cost of capital investment, *i.e.* earnings do not represent real profits and cannot be used to, *inter alia*, fund new investments or pay dividends to shareholders, for these actions a firm needs cash. Thus, the amount of cash available to the firm has to be determined, which is done by the statement of cash flows. (Berk and DeMarzo, 2014)

A statement of cash flows summarizes the information deriving from the income statement and balance sheet and establishes the amount of cash the firm has generated and how that cash has been allocated during a certain period of time. The statement of cash flows consists of three sections; the operating activity, the investment activity and the financing activity. The operating activity consists of the net income from the income statement, which have been adjusted by the adding back of all non-cash entries related to the firm's operating activity. The investment activity then lists the cash used by the firm for investments, while the financing activity shows the flow of cash between the firm and its investors. In addition to the concept of cash flow, the concept of the free cash flow is discussed, which is the incremental effect of a project on a firm's available cash. (Berk and DeMarzo, 2014)

2.2 Dividends and Share Repurchases

If a firm decides to make payments to its shareholders, it can do so through either dividend payments or share repurchases. (Berk and DeMarzo, 2014)

Dividends are payments made by the firm to its equity holders and constitutes a cash outflow for the firm, while dividends generally reduce the firm's retained earnings. It is the board of directors that determines the amount of the dividends paid and when the payment will occur. The board can also decide that the firm will make a stock split or a stock dividend, *i.e.* decide that the company shall issue additional shares rather than cash to its shareholders. (Berk and DeMarzo, 2014)

In addition to dividends, there is an alternative way to make payments to the investors of a firm. A firm can namely make a share repurchase, also called a buyback. In these situations, the firm buys shares of its own outstanding stock. These shares are generally held in the corporate treasury, and they can be resold if the firm needs to raise money in the future. (Berk and DeMarzo, 2014)

3 Theoretical Frame of References

In this chapter we are presenting the, for the study, relevant theory and when it regards payout policies and the question of how to finance payouts.

3.1 Capital Structure

A firm can choose to finance its projects by using equity alone, in that case the equity is called unlevered equity. In addition to financing the projects by unlevered equity, a firm can raise capital by using both debt and equity. In the latter case, the equity part of the capital is called levered equity.

Miller and Modigliani (1958) have implied that, given perfect capital markets, the choice of capital structure does not affect the firm's total value, but affects the composition of the capital. The characteristics of a perfect capital market includes the lack of arbitrage opportunities, taxes and information asymmetries. When financing projects with both debt and equity, the risk premium of the levered equity will be higher compared to the case in which only unlevered equity is being used. The reason to why the risk premium of the levered equity will be higher compared to the case in which only unlevered equity is being used is that the risk connected to the debt causes an increased risk premium for the levered equity. Moreover, the choice of capital structure affects the shareholders since the debt has to be repaid before the equity. (Miller and Modigliani, 1958)

In order to put the theory of leverage in a context with payouts, we will have a look at something called a “leveraged recapitalization”. This action regards firms whose capital is consisting of solely unlevered equity. In order to change its capital structure, the firm raises debt to perform a repurchasing of shares. While the shares are being repurchased with the cash raised from the debt, the firm’s assets do not change. However, the composition of the firm’s liabilities will shift from equity alone to a combination of both debt

and equity. This way, the equity part of the capital goes from unlevered to levered and thus it is said that the firm has added leverage to its capital structure. Given perfect markets as implied by Miller and Modigliani (1958), this kind of transaction is non-beneficial when it concerns net present value and the firm's total value, but, as we can see, the capital structure changes. (Berk and DeMarzo, 2014)

However, in reality, markets are considered imperfect. One such imperfection is taxes. Using leverage under taxes can actually affect a firm's total value by using an interest tax shield. Since no interest is to be paid when using unlevered equity, the taxable amount is the same as the initial earnings before interest and taxes paid, also called the EBIT. When using leverage, the taxable income will intuitively be lower than for only unlevered equity since the interest paid has to be subtracted from the initial earnings. The tax shield is applicable up to the point where the interest paid is in line with the EBIT. If the interest paid exceeds EBIT there are no further tax gains from having high interest on the firm's debt. Since the interest bear no taxation obligation, the total amount that can be paid out to the firm's investors will be higher with leverage. Hence, the amount paid out to equity holders is lower with leverage since the interest paid "eats up" a part of the taxable earnings. To conclude, the earnings after taxes paid are lower with leverage, but in return the firm's total value will increase. (Berk and DeMarzo, 2014)

When the tax shield is taken into account it actually gives an incentive to make a leveraged recapitalization. Since the tax shield will be added on to the total value of the firm, this will cause a higher value after the leverage deriving from the shield. Still, the composition of the capital will be changed, and the equity holders will receive less, but all in all, with the debt taken into account, the value of the firm increases and creates value for the firm's shareholders. (Berk and DeMarzo, 2014) According to Farre-Mensa *et al.* (2015) results on aggregate payout activity, repurchases have been the predominant form of payout over dividends from 1997 until 2012, which marks the end of the study (Farre-Mensa *et al.*, 2015).

Even though leverage can, as we have seen, increase the firm's total value, there is a risk connected to the usage of too much debt, a consequence that can make the firm fall into a state of financial distress and if the firm is not able to repay its debts it faces the risk of defaulting. Furthermore, since the risk is connected to the debt part of the capital, it obviously increases with the amount of leverage the firm uses. With this in mind, a firm has to make a trade-off decision in their capital structure regarding how much leverage to use in order to make benefits from the interest tax shield while, at the same time, avoiding the risk of falling into financial distress. Turning into a state of financial distress will result in a negative impact on the firm's cash flow and thus decrease the value of the firm. (Berk and DeMarzo, 2014)

Another common implication is the notion that using leverage is a good way to increase a firm's earnings per share. Hence, when using leverage, a change in expected earnings becomes more volatile in relation to earnings per share and the risk on the earnings increases. If the earnings are higher than expected while using leverage, the levered earnings per share will be higher than in the case without leverage. Though, the reverse holds for the opposite, meaning that if the actual earnings are below the expected earnings, earnings per share with unlevered equity will be higher than in the case with levered equity. Thus, using leverage to finance payouts in order to boost earnings per share can be seen as a somewhat risky strategy. (Berk and DeMarzo, 2014)

3.2 Financing Payouts

The basic idea behind making payouts relies on a firm's will to return the free cash flow to the investors of the firm. (Grullon *et al.*, 2002; DeAngelo *et al.*, 2006) Therefore, a firm in general, when financing its payouts, relies on its free cash flow. The free cash flow namely tells, *inter alia*, whether the payouts are motivated by agency or signaling (Farre-Mensa *et al.*, 2015). For example, a mature and cash-rich firm distributes payouts while young, growing firms do not pay out any capital (Jensen, 1986; Grullon *et al.*, 2002; DeAngelo *et al.*, 2006). Thus, a firm should make payouts when the

internal cash flow of the firm is sufficient enough to fund the payouts (Ross *et al.*, 2013). Therefore, it has been stated that the firms that raise capital and the firms that make payouts are different firms, who are at different stages of their lifecycles and face different growth opportunities (Grullon *et al.*, 2002; DeAngelo *et al.*, 2006). To fund payouts even though the cash flow is low, is not recommended and is seen as uneconomic and pointless (Miller and Rock, 1985). However, some researchers have stated that some firms raise external funds to finance large payouts (Denis and Denis, 1993; Wruck, 1994) and that some firms simultaneously raise and pay out equity (Grullon *et al.*, 2011).

Miller and Rock (1985) developed a model for dividend policy given asymmetric information. What they basically are saying is that you can draw a straight line between a firm's dividend and its operating cash flow, given that the investments and external financing remain unchanged. The fact that dividends will become larger if the cash flow increases is therefore seemingly intuitive. At the same time the dividends should be smaller if the cash flow decreases due to a higher amount of external financing. (Miller and Rock, 1985)

Asymmetric information refers to the fact that there is a gap between the insiders and the outsiders of the firm when it regards the knowledge about the firm's administration and its future. Generally, insiders (*e.g.* managers) have more knowledge about the future paths and plans of the firm than outsiders (*e.g.* investors). Though, under asymmetric information, the insiders keep hold of this information to a certain degree compared to full information when everybody concerned with the firm is given total insight. (Berk and DeMarzo, 2014)

In addition to Berk and DeMarzo (2014), the theories by Miller and Rock (1985) conclude that young and growing firms do have an incentive to keep their dividends on a somewhat low level since a firm that keeps its dividends on a low level and uses the largest part of the free cash flow for investment purposes, reduces its risk-exposure. Thus, these firms do not have to go to the capital market in order to raise funds for investments, to

the same extent as if they would have paid a higher dividend. Larger and more mature firms should reasonably behave a bit differently and pay higher dividends. These firms can of course satisfy their needs to invest in projects, perform mergers and acquisitions etc. by using the same methods as the smaller firms. Hence, larger companies are generally more creditworthy than growing firms which will reduce their risk premium if they decide to exploit the capital market in order to raise funds. Meanwhile, young and growing firms usually have a larger incentive to keep the dividends low and finance their expansion from their free cash flow than larger and established firms. (Miller and Rock, 1985)

3.3 Pecking Order Theory

The pecking order theory implicates that a firm, in the first place, uses its retained earnings for financing purposes rather than issuing debt or equity. Thereafter, since the equity, if underpriced, is considered more expensive than underpriced debt, debt will be chosen beforehand. If the equity on the other hand is believed to be overpriced, issuing equity would be preferable. In reality though, equity is rarely overpriced due to the negative correlation on the stock price that the issuance of equity has. This leads to the conclusion that "...the price drop upon announcement may be sufficient to deter managers from issuing equity except as a last resort." (Berk and DeMarzo, 2014, p.539). (Berk and DeMarzo, 2014)

Myers and Majluf (1984) presented a model of the issue-invest decision in cases where the managers of a firm have superior information. Among the conclusions made by the authors, there are some conclusions that are of more importance when it regards this study and the pecking order theory, namely;

- i. it is better to issue safe securities than risky securities,
- ii. issuing debt is better than issuing equity when raising capital externally and

- iii. a firm should not make dividends if it requires the firm to sell stock or some other risky security in order to recoup the cash. (Myers and Majluf, 1984)

In addition to the above mentioned, firms should cut their payouts before issuing any securities (Miller and Rock (1985), while payouts consisting of dividends should prevail over payouts consisting of repurchases (Brav *et al.*, 2005).

3.4 Signalling

First of all, it should be stated that there are different theories, when it regards signaling, theories that can be applied to dividends as well as repurchases. (Brav *et al.*, 2005). For example does Bhattacharya (1979) mention the signaling theory stating that the signaling cost is the cost of external financing. If a firm pays dividends to signal but does not manage to signal what it aimed at, then the firm will have to resort to external capital, which is costly. In other words, this model states that dividends provide a valuable signal since firms make dividends if they expect that they can fund the dividends by using their free cash flow. Thus, firms with a negative cash flow, which cannot fund their dividend internally, have to raise costly external capital to be able to meet their committed dividend level. (Bhattacharya, 1979)

In addition to the theory of Bhattacharya (1979), Miller and Rock (1985) state that dividends can be used for signaling purposes. For example, if the dividends are increased through times of low earnings, it will utter a lower level of investment, where the dividends can be used as a shield to hide behind due to asymmetric information. It should be stressed though, that a dividend policy using signaling is not sustainable during a longer period of time with low earnings, rather counterproductive for the future due to the reduction of investment level. Therefore, Miller and Rock conclude that “Dividends make sense as signals for the good-news, not the bad-news firms.” (Miller and Rock, 1985). The firms referred to as good-news firms

can namely afford the cost of signaling despite low earnings in order to maintain a front for the market, which the bad-news firms do not. In other words, the theory state that the cost of dividends is that good firms shave investment to pay the dividend, and it is only the good firms that find it valuable enough to do so. (Miller and Rock, 1985)

In addition to the theories, many researchers mean that dividends can reveal information regarding a firm's prospects as well as constitute a costly signal to change market perceptions concerning future earnings prospects. (e.g. Bhattacharya, 1979; Miller and Rock, 1985) Miller and Modigliani (1961), for example, discuss the dividend policy under uncertainty and state that changes in the dividend rate often generates changes in the market price. The authors mean that this phenomenon reflects the informational content of dividends, meaning that investors can interpret a change in the dividend rate for a firm that have adopted a stabilized dividend policy with an established and appreciated target payout ratio, as a change in the management's views of future profit prospects for the firm. (Miller and Modigliani, 1961)

4. Previous Research

In this chapter we are presenting the, for the study, relevant theory and previous research when it regards payout policies and the question of how to finance payouts

4.1 “Payout Policy in the 21st Century”

In the article Payout Policy in the 21st Century the authors emphasize the fact that repurchases have become an important form of payout due to the flexibility of repurchases in relation to dividends. The repurchases namely “allows managers to alter payout in response to the availability of good investment opportunities, to accommodate time-varying attempts to affect EPS or stock valuation, to offset stock option dilution, or simply to return capital to investors at the appropriate time.” (Brav *et al.*, 2005). (Brav *et al.*, 2005)

Furthermore, the authors state that taxes do affect payout policy decisions but that it is not a first-order concern, irrespective of whether the dividends or repurchases are greatly tax disadvantaged or not. However, the study implies that where repurchases results in tax advantages in comparison to dividends, the decisions to repurchase instead of making dividends are affected. In other words, the study concludes that the tax inefficiency can constitute a factor which makes the firms prefer repurchases over dividends. Moreover, the study shows that repurchases are equally as attractive as dividends to most investors, while payout policies do not seem to be an important tool to persuade investors to hold their stock.

The authors could neither see that the payout policies are used to signal the strength of the firm or to signal the ability of the firm to bear the costs of external capital if needed, nor to separate a firm from its competitors, as to the academic signaling sense, since nothing supported the theory that a firm increases its payouts with the aim of separating the firm from its

competitors. However, the study indicates that the signaling can affect the dividends in the sense that it makes firms hesitant to reduce their dividends, since not cutting dividends can separate a good firm from its bad competitors. (Brav *et al.*, 2005)

Finally, the study seems to show that executives employ fairly straightforward decision rules based on the prediction of how outsiders and stakeholders will react, a result that the authors mean determine the playing field for many corporate decisions. (Brav *et al.*, 2005)

4.2 “Corporate Investment and Stock Market Listing: A Puzzle?”

The authors of this article discuss the decision making when it regards whether to choose between investments in order for the firm to grow larger, or making payouts to the shareholders. The conclusion states that there has to be a balance, deriving from the free cash flow, regarding how to split the capital between making investments, or payouts. The findings indicate that a lot of managers generally have a pressure on them in order to ensure short-term results. Thus, they tend to focus on making payouts in order to state the firm's well-being by the time, rather than making investments that are possibly vital for the firm's future. (Asker *et al.*, 2015)

As stated earlier, it is more important for young and growing firms to put focus on using the free cash flow for investment opportunities rather than to make payouts Miller and Rock (1985). This theory holds for the results in the study by Asker *et al.*, (2015). The results indicate that smaller private firms sometimes over-prioritize their focus on investments due to grand future visions. However, public firms tend to, at the same time, show tendencies of doing the exact opposite, namely prioritizing payouts deriving from the pressure on the managers to show positive results in the short run. The public firms therefore focus on payouts that generates levels of underinvestment, resulting in scenarios where the firms are missing out on

investments with positive net present value since they increase their payouts level. (Asker *et al.*, 2015)

4.3 “Financing Payouts”

The article by Farre-Mensa *et al.* (2015) is the first article that systematically studies to what extent the American firms finance their payouts by raising capital externally. In the article, Farre-Mensa *et al.* (2015) aim at finding out whether the firms make payouts even though they do not have a free cash flow sufficient for financing the payouts.

4.3.1 The Financing of Payouts

Farre-Mensa *et al.* (2015) have shown that even though payouts in general are funded through free cash flow, firms rely on the capital markets to finance their payouts. The researches namely show that a substantial fraction of firms, during the same year, both raise and pay out capital, *i.e.* the firms actually make payouts even though they do not have a free cash flow sufficient for funding the payouts. The firms that do not have a free cash flow sufficient for funding the payouts can namely raise capital by either issuing debt or issuing equity, where the issuance of debt is the dominant financing source. Moreover, the researchers state that, during the years when the capital is the most easy to raise, the firms choose to raise capital externally while, during the same period, making payouts. (Farre-Mensa *et al.*, 2015)

Moreover, the study shows the opposite to the general idea, *i.e.* that the firms that raise capital and the firms that make payouts are different firms, since the study shows that almost 50 percent of the firms subject to the study have made payouts while they, during the same year, raise debt or equity. The study also shows that the majority of the firms that both make payouts and raise capital externally, would not have been able to make the payouts without raising the capital. The researchers therefore conclude that the result of their study contravenes the literature, which states that payouts

are made to return the free cash flow to the investors. (Farre-Mensa *et al.*, 2015)

4.3.2 The Reason to Raise Capital Externally to Finance Payouts

Farre-Mensa *et al.* (2015) discuss the reasons to why a firm chooses to raise capital externally to finance its payouts and presents different theories. Firstly, the researchers state that there are different key drivers of financed payouts, which depends on the type of payout that is financed and the financing source. The authors of the article, *inter alia*, states that “financed payouts allow firms to jointly manage their capital structure and cash holdings in a way that cannot be replicated if they rely exclusively either on payouts or security issues” (Farre-Mensa *et al.*, (2015). Furthermore, the authors conclude that “financed payouts can be the result of a monitoring strategy that has firms setting a payout level that they can fund internally when investment is routine but that results in simultaneous payouts and issues when they want to pursue new projects” (Farre-Mensa *et al.*, 2015, p. 5).

In addition to the above mentioned, the authors emphasize the desire of the firms to increase the earnings-per-share, which they mean is a significant driver of debt-financed repurchases. The researchers namely state that there is a general idea that firms that make higher payouts are more profitable. However, they also conclude that there is no ground for the statement that the signaling considerations is the main reason to why the firms make payouts even though they do not have a free cash flow sufficient for financing the payout. (Farre-Mensa *et al.*, 2015)

Furthermore, Farre-Mensa *et al.* (2015) state that financing payouts through the issuing of debt result in leverage increases, while firms may finance their payouts through the issuing of debt to manage their capital structure and cash holdings in a way that it is hard to do through either payouts or through raising debt individually. One of the advantages of making payouts while issuing debt is namely that it increases a firm’s leverage without increasing its cash holdings or depleting it. In addition the researchers state

that firms with high excess leverage are less likely to finance their payouts by issuing debt and more likely to finance them by issuing equity. (Farre-Mensa *et al.*, 2015)

Another reason to why a firm chooses to raise capital externally to finance payouts can derive from the manager's desire to benefit from the market situation and engage in market timing. A firm can benefit from the market through two market timing strategies either by issuing shares when the firm is overvalued and then pay dividends or by issuing equity when the firm is overvalued and then repurchase the shares when the firm is undervalued. (Farre-Mensa *et al.*, 2015)

5 Methodology

In the method chapter we are presenting the type of study used in this paper along with explanations of the data sample and the data generating process used.

This study will be separated into two parts. During the first part of the research, the study aim to investigate whether the observed payout gap phenomenon within the U.S. stock market also exists on the Nordic stock market. The second part of the research consists of an investigation regarding what kind of firm characteristics that contribute to the behavior of externally financing payouts. The test is done with a binary regression model where the dependent variable is whether the firm had a payout gap or not.

5.1 Quantitative Research Method

There are two general premises one should consider in the beginning of a research; the qualitative approach and the quantitative approach. The choice between these two premises is determined by the initial question formulation. In qualitative approaches the research consists of thoroughgoing interviews that are complemented and analyzed by the researchers. The qualitative method is used when only numbers cannot explain a phenomenon. The quantitative approach involves gathering of data and test it against theories (Bryman and Bell, 2011). A quantitative research method is used when phenomena can be explained by statistical analyses and when the primary result are numbers. (Lundahl and Skärvad, 1999)

The purpose of this study is to investigate whether publicly traded firms within the Nordics externally finance their payouts and how the characteristics of these kinds of firms potentially differ from the firms who do not. Therefore, the best-suited research method in this study is considered to be a quantitative research.

5.2 Deductive Approach

There are two central theories on how to tackle the chosen problem formulation, which are called the inductive and deductive approach. The deductive approach refers to the usage of existing theories in order to create models and predictions to investigate the chosen phenomenon. An inductive approach is the opposite, *i.e.* you investigate the phenomenon and then draw conclusions and general models of the result (Lundahl & Skärvad, 1999). Since this paper is inspired by another study on this phenomenon and uses that study to create hypotheses about the results, this paper is using a deductive approach. The study this paper is based on is lacking some theoretical explanations regarding why this phenomenon occurs and therefore this paper, in some aspects, have an inductive reasoning and conclusion as a complement to the deductive approach.

This paper is based on a study written by Farre-Mensa *et al.* (2015). Their study has shown a pattern that a large portion of the American public firms have financed all or some of their payouts by raising debt and/or issuing equity.

5.2.1 Gathering of data

The study is based on secondary data collected from a third party database. In a quantitative research method, relying on secondary data is the most common approach and is a valid approach as long as the collected data is considered reliable (Bryman and Bell, 2011). All data that is analyzed in this research is retrieved from Thomson Reuters Datastream database. Since this is one of the biggest financial databases in the world, it is assumed to be reliable. Another good reason for only using Datastream for retrieving data is the consistency of definitions of the desired data for all analyzed firms.

5.2.2 Sample selection

Since there has been no previous study on this payout gap-phenomenon within the Nordic stock market, this paper has focused on listed firms on the Nordic Stock Exchanges. The baseline sample consists of publicly traded

firms listed on Nasdaq OMX Stockholm, Helsinki, Iceland and Copenhagen. All Large, Mid and Small Cap firms that appear in Thomson Reuters Datastream are therefore included in this research. Firms listed on other Stock Exchanges, such as First North and Aktietorget, are excluded from this research. These firms are excluded due to the limitation of available data for these firms in the chosen database and the time limitation of this research prevents us from manually fetching the desired data for these firms.

In total, the sample consists of 535 unique firms, which is considered a large enough sample to study the payout gap-phenomenon. There are a couple of firms that got listed during the studied time period. However, these firms have been included from the year after they got listed to get as much data as possible for the analysis.

Since all data is collected from Thomson Reuters Datastream, different kind of data had different availability. Thus, some of the desired variables had limited availability and were only available for some of the firms, for example, the “Share Repurchase”-variable, which has a large portion of loss of data. In cases where no data were available for a specific firm, but was needed for a calculation, that firm was not counted as an observation, which means that different analyzes in this study has different number of observations. However, the baseline sample is considered large enough, which enable subsets to also be large enough to represent the whole population. We have included breakdowns of sample sizes, broken down by year for every data output, these can be found in the appendix (Table 1, Table 2, Table 3B and Table 4).

5.2.3 Event study time period

This study covers a period of ten years, while the data derives from the years of 2005 to 2014. We chose a ten-year period for the study to ensure a large enough dataset to reach as accurate and reasonable conclusions of the payout gap-phenomenon as possible.

5.3 Reliability

According to Bryman and Bell (2011) the reliability of a study is the measure of how easy the research is to replicate. This means, more specifically, that a high reliability means that the outcome of the study would turn out exactly the same if someone else conducted the same research. In scientific researches, a high reliability is of great importance (Bryman and Bell, 2011). In this study, in order to ensure a high reliability, only data from trustworthy and highly reputable sources is being used. Furthermore, the methods used in the analyzes will be described as thoroughly as possible in the remaining parts of this chapter in order to give the reader a deep understanding of how the analyzes were conducted in order to replicate the exact study with the same firms. Please refer to Table Y in the Appendix for a full list of all firms, including their ICIN number needed to gather the data from Datastream.

We have also documented all variables gathered via Datastream. Please refer to Table X in the Appendix for all Thomson Reuters Datastream variables and their respective codes and descriptions.

5.4 Validity

The validity of a research can be interpreted as the legitimacy of the results (Bryman and Bell, 2011). The methods used in this research are not widely well known since this seems to be a rather newly discovered phenomenon (Mensa *et al.*, 2015). Although, most of the methods are used in a Harvard Working Paper, which is considered as a trustworthy university and would not publish the authors' findings and methods if they were not valid in an academic point of view. As a complement to the methods used in the Harvard Working Paper, an own, more extensive, definition of the payout gap has been developed and tested in the analysis. The methods used for calculating the payout gap and how the sample sets were created will be described in detail below to ensure an external validity for the event study (Bryman and Bell, 2011).

5.5 Defining Payout Gaps

5.5.1 Payout Gap

The way to measure the payout gap is rather intuitive. According to Farre-Mensa *et al.* (2015), a payout gap is defined as the gap between a firm's payout and its free cash flow. In other words, this will identify firms that, *ceteris paribus*, would not be able to fund their payouts without raising external capital simultaneously. Mathematically, the payout gap can be defined as:

$$\text{Payout Gap } (PG_{it}) \equiv \min\{\max\{TP_{it} - (FCF_{it} + CR_{it}), 0\}, TP_{it}\} \quad (1)$$

Where,

$$TP_{it} = \text{Total Payout} = \text{Dividends}_{it} + \text{Share Repurchase}_{it}$$

$$FCF_{it} = \text{Free Cash Flow} = \text{Operating Cash flow}_{it} + \text{Investment Cash Flow}_{it}$$

$$CR_{it} = \text{Cash Reduction}_{it} = -\min\{CC_{it}, 0\}$$

$$CC_{it} = \text{Change in cash}$$

(Farre-Mensa *et al.*, 2015). The subscript symbols, i and t , are indicators of firm i at year t . The variable "Change in cash" is included in the equation to take the cash effect of amortization of debt into account, which is not covered in either the operating cash flow or the investment cash flow. With this definition of payout gap, the payout gap can never be larger than the payout itself and if the payout is less than the sum of the free cash flow and cash reduction the payout gap will be zero.

5.5.2 Extended definition of Payout Gap

With the above definition of payout gap, only the performance of the current year is taken into account. To extend the model, the total amount of cash a firm has in the current year is also included in the model. In other words, the extended model defines a payout gap if the payout gap, defined as above, is larger than a firm's cash reserves. Mathematically, this can be described as:

$$PG_{it,extended} = \max\{PG_{it} - \text{cash reserves}_{it}, 0\} \quad (2)$$

This extended model is developed by us to investigate by which means a payout gap possibly is financed with cash generated from earlier year rather than funds raised from the capital market.

5.6 External Financing of Payout

Even though it is impossible to observe what specific capital the firm uses to make their payouts, it is possible to observe how the firms have raised external capital over the years. The amount of debt that the firms raised during the years as well as if the firms received cash through the issuing of equity is retrieved from Datastream. If a payout gap exist it is assumed to be fully financed with the debt raised or the equity issued. In this paper, if a firm with a payout gap had both raised debt and issued equity during the year, the payout is assumed to be financed with the percentage of debt that corresponds to the total debt raised divided by the total amount of capital raised and the rest by the equity issues. An illustrative example: if a firm had a payout gap and during the year had taken a loan of €100 million and issued equity worth of €50 million, then the payout is assumed to be financed with 66.67 percent debt and 33.33 percent net proceeds from equity.

5.7 Payout Gap multiplier

We created this ratio in order to measure the average size of payouts made by firms with a payout gap compared to firms without a payout gap.

$$\text{Payout multiplier} = \frac{\text{Percentage of aggregate payouts made by firms with a payout gap}}{\text{Percentage of firms with a payout gap of all firms that returned cash to investors}} \quad (3)$$

We have calculated it annually for all of the ten years surveyed in order to detect whether there was a relative difference in size on an average firm level in addition to the aggregate relative composition of cash returned to investors between firms with or without a payout gap.

5.8 Statistical Methodology

In the second part of this empirical study, a regression model is developed with the aim of explaining how specific firm characteristics may contribute to the probability of a firm having a payout gap. In order to investigate this, a binary regression model has been developed.

5.8.1 Binary Regression Model

A binary choice model is defined as a model where the dependent variable y is dichotomous i.e. can only take the value 0 or 1. A binary choice model is defined as:

$$Y_i = \beta_1 + \sum_{k=2}^n \beta_k X_{k,i} + u_i, \quad (4)$$

where $Y_i \in \{0,1\}$

A first attempt to describe this kind of model is with a linear probability model. A linear probability model is the simplest binary choice model and the coefficients are easy to interpret. The coefficients correspond to the marginal effects that describe the change in probability of $Y=1$ when X increases one unit, all else equal. There are two major problems with a

linear probability model though; the first problem is that the standard errors and the test statistics will be wrong. The second problem is that the predicted probability may be greater than 1 or less than 0 for some extreme values of the explanatory variables. (Dougherty, 2011)

5.8.2 Probit model

To solve these two major drawbacks of a linear probability model, a Probit model will be used instead. First, we define a new variable Z that is a linear function of the explanatory variables. This yields the following function:

$$Z_i = \beta_1 + \sum_{k=2}^n \beta_k X_{k,i} \quad (5)$$

Instead of assuming that the probability function is linear, we assume that the probability function of Z is a sigmoid function between 0 and 1. In a Probit model, this sigmoid function is the cumulative standardized normal distribution. (Dougherty, 2011)

This means that the probability of the event occurring for any value of Z is:

$$p_i = F(Z_i), \quad (6)$$

where $F \sim N(0,1)$

In this model, OLS cannot be used but instead a Maximum Likelihood analysis is used to obtain the estimates of the parameters. The estimated parameters cannot directly be interpreted as marginal effects, but by the definition of marginal effects being the derivative of the model with respect to each X_k , the marginal effects in a Probit model can be calculated:

$$\frac{\partial p}{\partial x_k} = \frac{\partial F(Z)}{\partial X_k} = f(Z)\beta_k \quad (7)$$

This means that the marginal effects of any variable is not constant, it will depend on the value of Z . To obtain some kind of summary statistic of the marginal effects, one way is to calculate the mean of all explanatory variables and then calculate the marginal effects with these values. (Dougherty, 2011)

In a Probit model there is no measure of goodness of fit equivalent with R^2 as in an OLS regression. There are some alternatives to measure the goodness of fit in maximum likelihood estimations such as pseudo- R^2 . (Dougherty, 2011) The pseudo- R^2 does not have a natural interpretation. Therefore, in this paper we will rather investigate the significance of the explanatory variables and draw conclusion out of those results than the goodness of fit measure. To somewhat try to visualize a goodness-of-fit in our model a Hosmer-Lemeshow test will be conducted. The test basically divides the subjects into deciles based on predicted probabilities and then computes a chi-squared distribution to test the fit of the model (Strathclyde University).

Since the underlying utility function we want to estimate is latent in a Probit model, there is no use to test for normality assumption of the residuals. The residuals of interest are those of the latent variable and they are by definition unobservable.

5.8.3 Our model

In this research we have 535 unique firms observed over a ten-year period, this gives us a total of 5350 data points structured as panel data. When using a binary Probit model in EViews we cannot make use of cross-sectional and/or period Fixed Effects and instead we treat it as ordinary cross-sectional data. The following linear-log model will be used in the regression:

$$\begin{aligned}
 \text{Payout gap exist} = & \beta_1 + \beta_2 \ln(\text{Capex}) + \beta_3 \ln(\text{Cash}) + \beta_4 \ln(\text{Debt}) \\
 & + \beta_5 \ln(\text{Market to book}) + \beta_6 \ln(\text{Operating CF}) \\
 & + \beta_7 \cdot \text{Size} + \beta_8 \cdot \text{Strategic holdings} + \beta_9 \ln(\text{Dividends})
 \end{aligned} \tag{8}$$

The variable *Payout gap exist* is a binary variable that takes the value 1 if the firm had a payout gap and 0 otherwise. In this model, we are using our own definition of extended payout gap to decide whether a firm has a payout gap or not. Only firms that actually made a payout have been

included in the data sample since we believe it is more interesting to investigate the payout gap behavior on firms that actually make payouts.

The five explanatory variables; Capex, Cash, Debt, Operating Cash flow and Size have all been confirmed by earlier literature (Bansal *et al.*, 2005) to have effect on the size of the payout. Therefore it would be interesting to analyze how the same variables, among others, contribute to the probability of a firm having a payout gap. All variables in the regression, except the dependent variable, are retrieved from Datastream. A short description of all the explanatory variables used in the model follows in the sections below:

5.8.3.1 Capex

Capex is an abbreviation of capital expenditures. A capital expenditure is incurred either when a firm buy fixed assets or adding value to existing fixed assets (Berk and DeMarzo, 2014). In order to get a more linear relation between payout gap and the capex value, the variable has been logarithmized in the model. A firm that has high capital expenditures means that the firm is investing a lot and therefore, our hypothesis is that the probability of payout gap will increase with increasing capex.

5.8.3.2 Cash

In this paper, cash is defined as available cash a firm has as well as short-term investments. Our hypothesis is that the more cash a firm has, the less likely is the firm to have a payout gap. In order to get a more linear relation, the variable has been logarithmized.

5.8.3.3 Debt

The debt variable is defined as the firm's long-term debt. Earlier research have concluded a positive correlation between size of payout and size of debt (Farre-Mensa *et al.*, 2015) and therefore we believe that firms who are more inclined to raise debt have a higher probability of having a payout gap. The size of the debt has been logarithmized to achieve a more linear relation.

5.8.3.4 Market to book

Market to book-ratio is a ratio to find a firm's value by comparing the firm's book value to its market value. The formula is:

$$\text{Market to book} = \frac{\text{market value}}{\text{book value}} \quad (9)$$

It attempts to identify under- or overvalued firms. (Berk and DeMarzo, 2014) Our hypothesis is that firms that are overvalued, *i.e.* have a high market to book value are willing to do payouts even if there is not enough cash to keep their high valuation. The hypothesis is that the higher market to book value, the higher probability of payout gap. This variable is also logarithmized to get a more linear relation.

5.8.3.5 Operating cash flow

Operating cash flow represents the cash flow generated by the firm's operations. It can somewhat be associated with how profitable a firm is (Farre-Mensa *et al.*, 2015). Our hypothesis is that the more cash flow that can be generated internally the less likely is the firm to have a payout gap. In our model, this value has been logarithmized.

5.8.3.6 Size

The size of the firm is defined as the total turnover in this paper. The size of the firm has been identified by earlier researchers to have a positive effect on the size of the payout, which is intuitively to believe. However, whether it increases the probability of a firm having a payout gap is not as intuitively, and this variable will be interesting to see if it has a significant impact on the probability of payout gap and whether it is positive or negative.

5.8.3.7 Strategic Holdings

Strategic holdings are defined as the percentage of a firm's share that is owned by institutional players. In order to identify an institutional player, Datastream counts all institutional holders that own more than five percent of a firm as a strategic holder. The percentage value is then multiplied by 100 by Datastream in order to get an integer value. Our hypothesis is that the higher percentage of institutional owners, the less probability of the firm

having a payout gap since we believe that institutional players want safe investments and do not want firm to raise external cash to make payouts.

5.8.3.8 Dividends

Dividends have been included to the model to rather test the legitimacy of the model. It is intuitively to believe that the higher payout amount, the higher probability of a payout gap. Therefore we assume this variable will be significant and has a positive marginal effect on the probability of payout gap, if we get another result, the models legitimacy should be questioned.

5.9 Methodology discussion

The definitions of the investigated phenomenon are not well known and to our knowledge, there is only one more paper that also has investigated this phenomenon. Therefore, it can be seen as rather naïve to write a paper about the phenomenon before it has been generally known and accepted in the academic world. However, we believe that this is a real phenomenon and that the definition of payout gap is well founded and worth analyzing.

In addition to the predefined payout gap, we developed our own definition of payout gap. There are some drawbacks of this definition that we are aware of. The biggest drawback is the timing mismatch between when the payout is distributed and the cash available for the firm. In our analysis, the cash available for a firm is retrieved the 1st of January each year and payouts are probably distributed later on the same year. However we do believe this definition gives us rather accurate analysis whether the firm had enough excess cash or not anyways.

The same goes with the assumptions how the payout gap is financed. Since the money is not earmarked we cannot see what money that are being distributed as payouts. To simplify, we assume that the payout money are uniformed distributed in proportion to how much was raised between equity issues and debt if the firm had a payout gap. We do believe this is a reasonable assumption.

In the regression model, only the firms that made payouts have been included, this is due to the fact that we do not see any reason to include firms that do not make payouts since it may rather distort the results than contribute to a more accurate conclusion.

Since we have a big loss of data points in share repurchase they are assumed to be zero when calculating the total payout if there are no data of share repurchase for the specific firm. We are aware of that this assumption can distort the results by a lot, but the alternative to exclude all firms that we did not have data about share repurchase for would give us a total of 258 data points instead of 2186 data points. This means the results presented in the study could potentially underestimate the number of firms with a payout gap and/or their respective size. This also means that the distribution between firms preferred mean of transferring cash to investors could also be skewed towards dividends. In Sweden it is still generally believed that dividends are more common than share repurchase since not that long ago it was illegal for Swedish firms to do share repurchases (Aktiespararna, 2013). We have extrapolated this assumption to all the Nordic stock markets and assume that payout gaps are mainly due to dividends, and therefore made the assumption that when there is no data of share repurchase it was equal to zero.

Another noteworthy limitation of our Probit regression model is the fact that its marginal effects are not constant, thus you can only get the marginal effect by looking at either individual firms or by looking at the sample average or of the explanatory variables. This means that when we calculate the probability of a payout gap of an average firm, outliers in the variables could potentially skew some or all of the average parameters. However, we are very confident that this risk is minimized by looking at the sheer number of observations present in all of our statistical models. We can also see that a relatively few extreme outliers are present in most of the data sets by looking at our observed values, visualized in Statistics 4A-4I and found in the Appendix where we have plotted all parameters for all years to illustrate this. The main variable of concern is the size of the company. This value is not logarithmized in the Probit model and as a consequence has a large

variance. This could imply that the mean value of the firm size is not representative as the size of an average firm. To ensure the validity of the size mean as a representative value of an average firm, the mean value has been compared to the median value, which was even larger than the mean and therefore the mean is considered a good estimator of an average firm size.

6 Result

In this chapter we're presenting the results of our data study and Probit model.

6.1 Number of Firms with a Payout Gap

Looking at the data we can see that about 30 percent of the firms within our sample had a payout gap during 2014. This figure has varied quite heavily over the last decade and, as illustrated in Chart 1A, it peaked at just under half of all firms in 2007/08 before taking quite a steep turn downwards during the first financial crisis. In practical terms these figures tell us that, empirically, raising money to fully or partially finance payouts and, as a corollary, creating a payout gap is not an exceptional tactic regardless of its purpose.

Regarding the extended payout gap, we can see a very similar trend compared to the regular payout gaps in terms of when firms were sustaining them, however the nominal number is lower across the board when it regards the extended payout gaps. During its peak this group, *i.e.* the extended payout gap-payers, contained close to a quarter of all companies surveyed before retreating down to ten percent last year. This means that during the last years firms between a quarter and a tenth of all firms in the Nordics have had their payouts at such a level that they would go bankrupt without either lowering those levels or gaining external financing to cover their extended payout gap.

Both of the tallies become more prominent when excluding firms that did not return any cash to its investors. Chart 1B shows that last year just under half of all firms surveyed, providing investors with any form of cash returns, were able to do so because they were raising capital within that same fiscal year.

Chart 1A: Percentage of all firms that have a payout gap

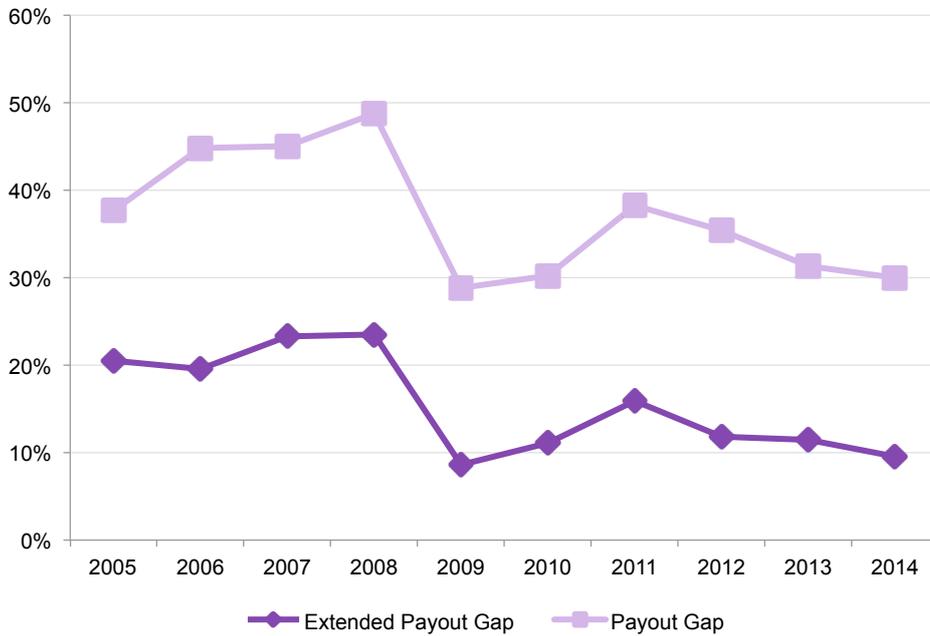
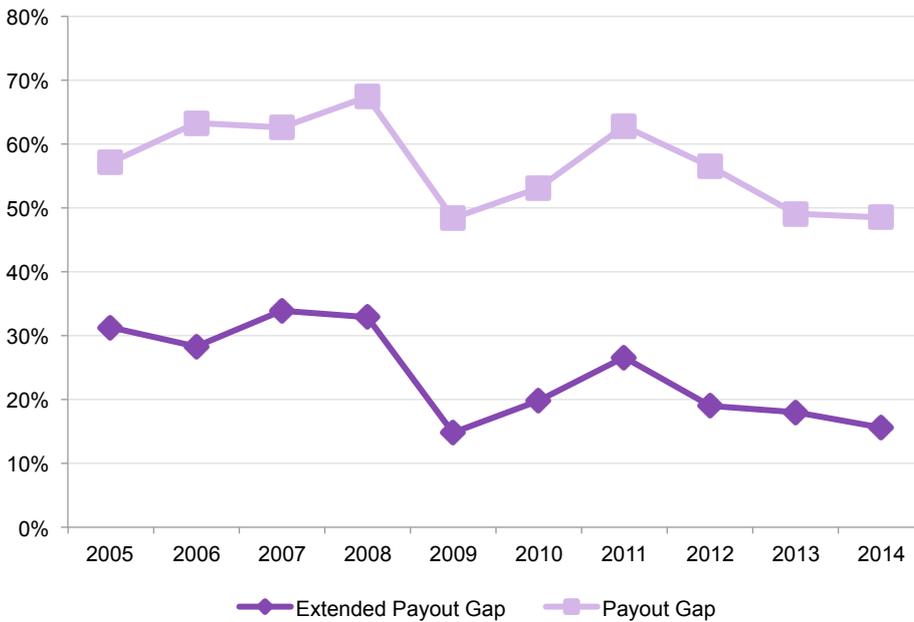


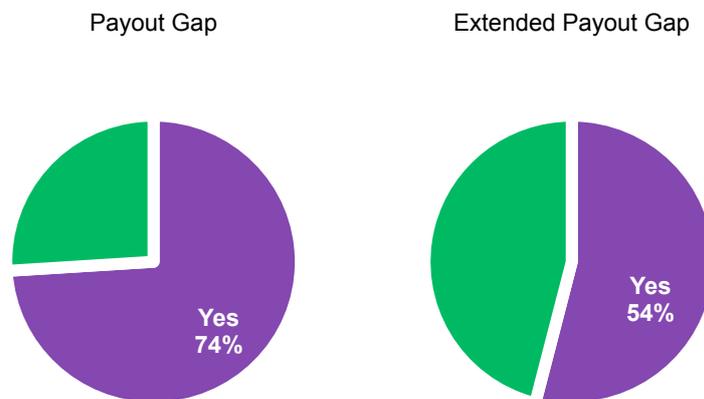
Chart 1B: Percentage of firms that were returning cash to investors while also having a payout gap.



This figure was even greater before the financial crisis of 08/09 peaking at about 67 percent. Again this implies that the behavior of raising capital, only to return it to investors in the same period, is in fact something found in a large fraction (14-33 percent) throughout the 500 Nordic firms surveyed when looking at any given year. When including firms that have taped cash reserves in order to supplement their cash flows from their business to sustain their payout level the figure is over 50 percent during seven out of the ten years and only barely below 50 percent the remaining three.

The fact that this is, in no way, an exceptional behavior becomes even more obvious when looking at the individual firm records over the entirety of the last decade. As illustrated in Chart 1C, 74 percent of all firms have had an extended payout gap at least one of the ten years included in this survey. Looking strictly at cash flows, a qualified majority of 54 percent have had a payout gap at least once during the decade in question.

Chart 1C: Percentage of firms that has a payout gap during at least one of the ten years



The above observations, concerning Chart 1A, 1B and 1C are based on 4,742 data points, please refer to Table 1 in the appendix for a yearly breakdown of the number of data points.

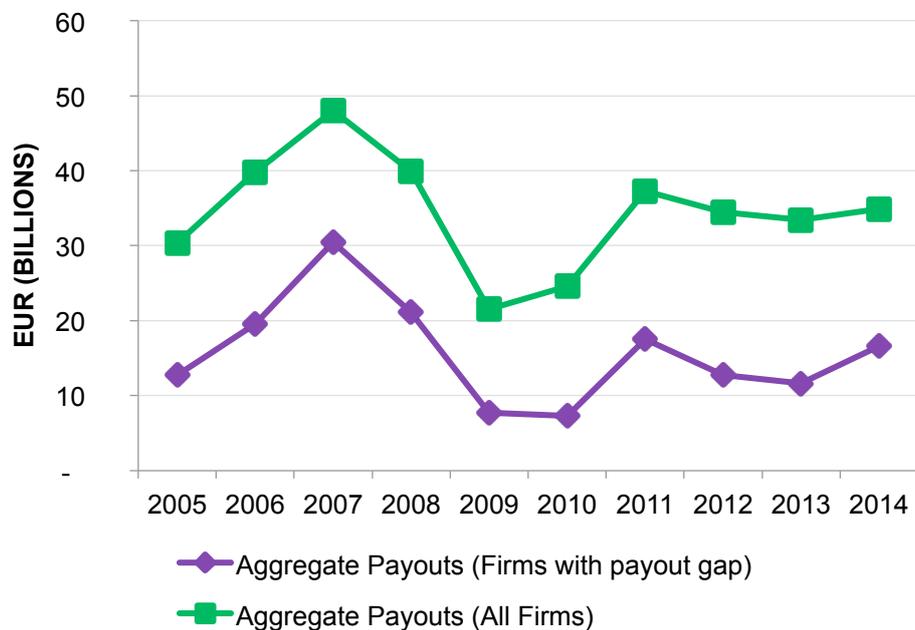
6.2 The Relative and Absolute Size of Payouts Arising from Payout Gaps

In Chart 2A we have calculated the total amount of cash returned to investors by firm and compared that to the same number when only including firms with a payout gap. The purpose of this is to illustrate;

- i. the nominal size of payouts on a yearly basis and
- ii. the importance of the payout gaps that firms are running in order to sustain the total level distributed to investors.

Chart 2A suggests that there seems to be a tangible correlation between the amount paid out in total and the amount that are financed by payout gaps. The latter figure is quite stable over the years as a percentage of the former, averaging around 40 percent. For a precise examination of that percentage on an annual basis please refer to Chart 2B in the Appendix.

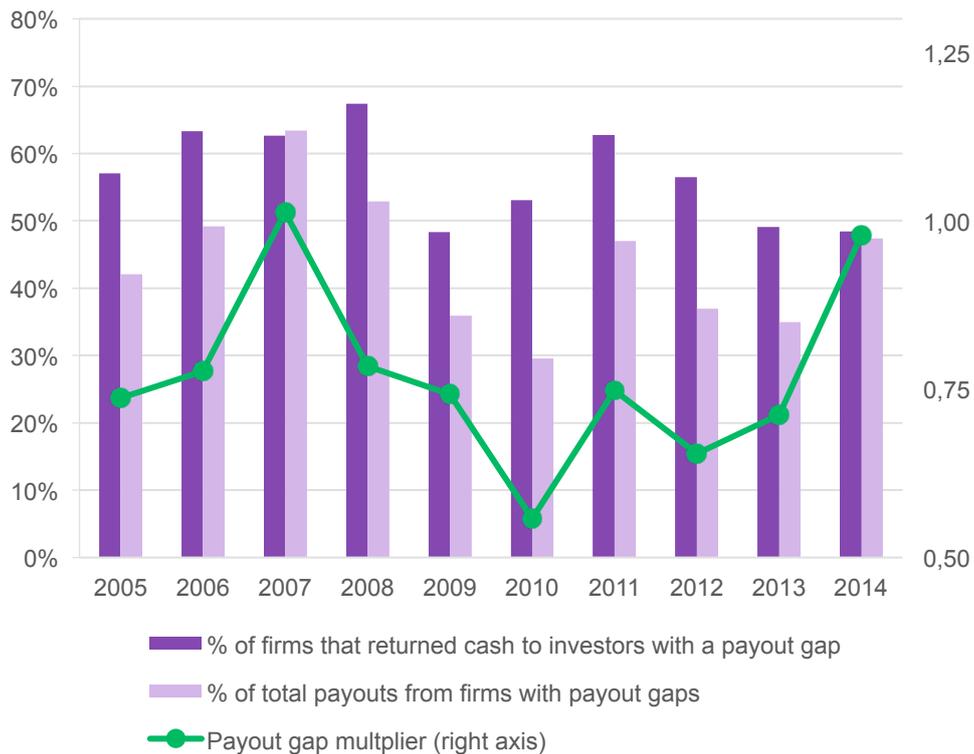
Chart 2A: Aggregate size payouts from firms



Given that we are already familiar with the number of firms that employ a payout gap we can readily display both the percentage of companies that employ a payout gap and how many percent of the total amount paid out these firms account for. By dividing these figure we are able to easily digest

to what extent firms with a payout gap pay more or less on average compared to firms that are returning cash to investors without tapping any form of external capital to cover their payouts. This last piece is illustrated by the line and is corresponding to the right hand side axis in Chart 2C.

Chart 2C: Relative size of payouts from firms with payout gaps



From Chart 2C we can clearly see that firms that employ a payout gap is definitely delivering less direct cash to investors on average compared to firms that do not employ a payout gap but do return cash in some form to investors. Only in 2007 and 2014 were firms with payout gaps on par with the other firms, meaning the payout gap multiplier is close to 1.00 during these years.

The above observations, concerning Chart 2A, 2B (In appendix) and 1C are based on 4,620 data points, please refer to Table 2 in the Appendix for a yearly breakdown of the number of data points.

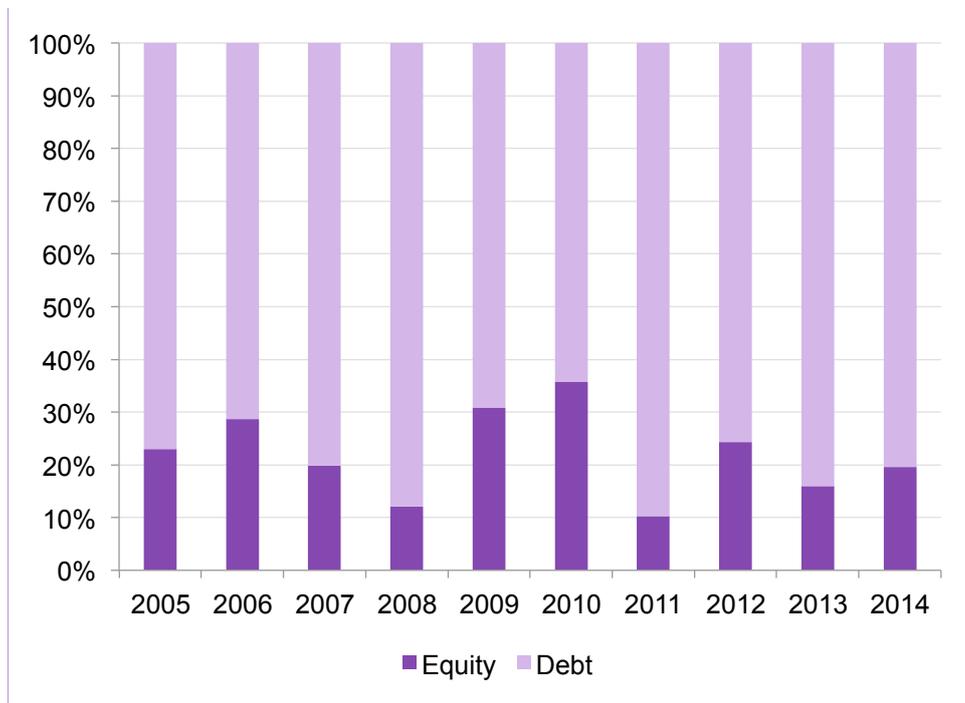
6.3 How Firms are Financing Their Payout Gaps

In Chart 3 we can see the annual distribution between raised capital from the sale of equity compared to debt raised by the companies during the same period that they were operating with a payout gap.

While we cannot say how much equity and debt respectively were used to finance the payout gap, we can get a clear sense for how they acquired additional capital during a period, which in we know they did in fact need, to finance their payouts.

As Chart 3 illustrates most money raised by firms with a payout gap is acquired via increasing their long term debt. The yearly average over the 10 years that have been surveyed is ~78 percent with the remaining ~22 percent raised by selling or issuing equity.

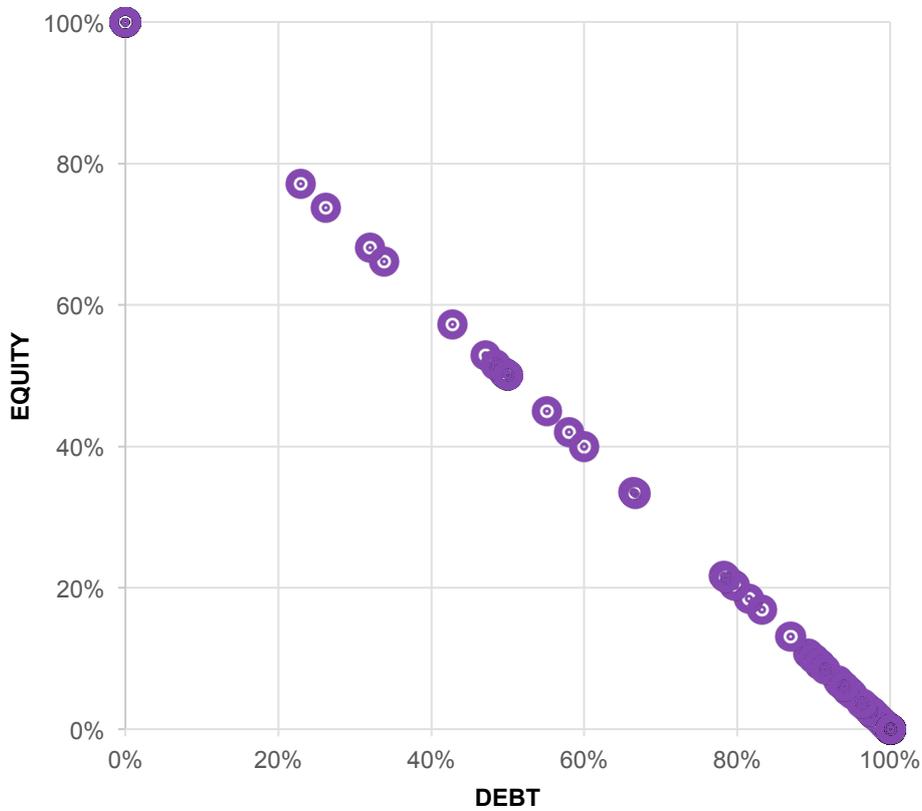
Chart 3A: Distribution between equity and debt raised to finance payout gaps



In the next chart, Chart 3B, we display individual firms’ combinations of equity and debt, it is clear that a large portion of firms are using various degrees of leverage by issuing debt, while a smaller portion uses only equity

and the another rather large group rely solely on debt. For the exact figures regarding these three groups please refer to Table 3A in the appendix. We can thus conclude that Chart 3A is not simply a measure of the number of firms that do simply one or the other, but does in fact paint a more nuanced picture of how the capital raising activities are distributed in terms their amount.

Chart 3B: Individual firm behavior for accruing capital while having a payout gap.



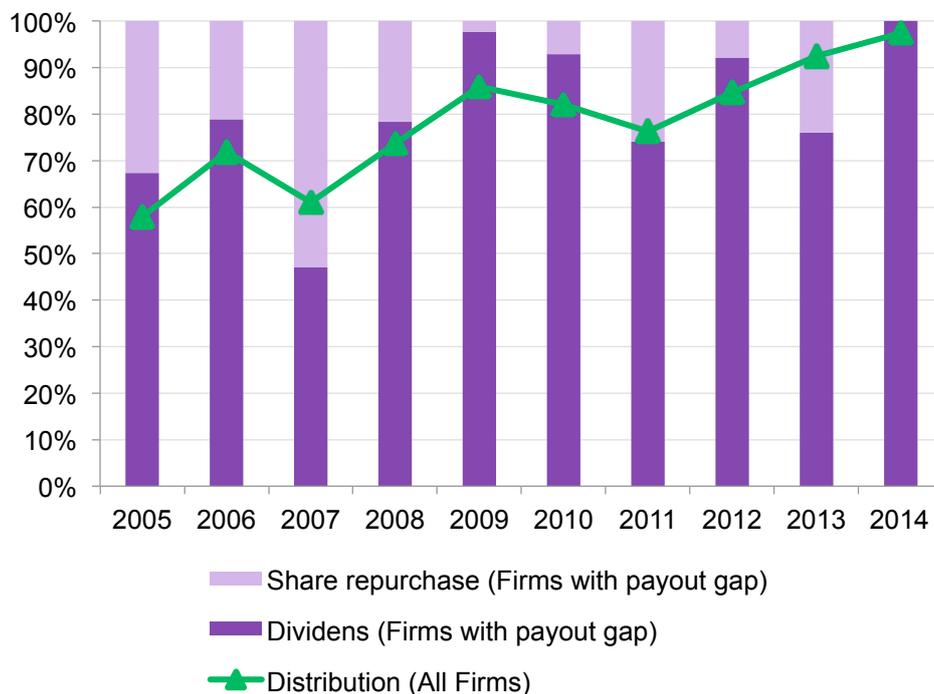
The above observations, concerning Chart 3A and 3B as well as Table 3A are based on 4,550 data points, please refer to Table 3B in the appendix for a yearly breakdown of the number of data points.

6.4 How Firms with Payout Gaps Return Cash to Investors

By looking at how much money was returned by share repurchases compared dividends from firms with a payout gap. We can understand their relative distribution. As Chart 4 illustrates, most firms prefer dividends. Dividends account for a majority of cash returned during all ten years surveyed, with the exception of 2007, when share repurchases accounted for 53% of all cash returned to investors.

The third series indicate where the split between share repurchases and dividends takes place when looking at all firms, not just the ones with a payout gap.

Chart 4: Distribution between dividends and share repurchases for firms with payout gaps



The above observations, concerning Chart 4 are based on 4,550 data points, please refer to Table 4 in the appendix for a yearly breakdown of the number of data points.

6.5 Probit Model

In Statistic 1A the output of the regression is shown. There are 2186 included observations in the regression. Since firms who did not do any payouts are of no interest, they are excluded from the data sample in the regression.

Out of the 9 estimated coefficients all except one has a significant p-value on the 1 % level. The only parameter where the null hypothesis cannot be rejected is *Strategic Holdings*. The parameter estimations of $\ln(\text{Capex})$, $\ln(\text{Debt})$, $\ln(\text{Market to book})$, $\ln(\text{Operating Cash Flow})$ and $\ln(\text{Dividends})$ show a very high significant level with a p-value of 0 which indicates a strong relation between the payout gap and the mentioned explanatory variables.

For the original EViews extract please refer to Statistic 1B in the Appendix.

Statistic 1A: Binary Probit Regression Model

Binary Probit Model (Quadratic Hill Climbing)	
Dependent Variable: Payout gap exist	
Coefficient	Value
Intercept	1.594938***
<i>S.E</i>	(0.221855)
ln(Capex)	0.173754***
<i>S.E</i>	(0.024595)
ln(Cash)	-0.071376***
<i>S.E</i>	(0.025963)
ln(Debt)	0.149911***
<i>S.E</i>	(0.017538)
ln(Market to Book)	0.194843***
<i>S.E</i>	(0.047145)
ln(Operating Cash flow)	-0.675223***
<i>S.E</i>	(0.042448)
<i>Size</i> · 10 ⁻⁶	0.026000***
<i>S.E</i>	(0.000728)
Strategic Holdings	-0.001552
<i>S.E</i>	(0.001298)
ln(Dividends)	0.336025***
<i>S.E</i>	(0.033383)
Pseudo-R ²	0.141737
No. of Observations	2186

***p<0.01, **p<0.05, *p<0.1

In order to interpret the estimated coefficients, the average marginal effects are presented below in Table 5. Please refer to Statistic 2 in the Appendix for the original EViews excerpt.

Table 5: Average Marginal Effect

Coefficient for	Average Marginal Effect
ln(Capex)	0.058449
ln(Cash)	- 0.024010
ln(Debt)	0.050429
ln(Market to book)	0.065543
ln(Operating Cash Flow)	- 0.227139
$\frac{Size}{10^6}$	0.00759
Strategic Holdings	- 0.000522
ln(Dividends)	0.113036

The different variables' average marginal effects on the probability of a payout gap can be seen in the table above. The variables $\ln(cash)$, $\ln(operating\ cash\ flow)$ and *strategic holdings* shows a negative relation with the probability of a payout gap. This means that for 1 unit increase in these variables, all else equal, the probability of a payout gap decreases with the respective marginal effect.

The two variables with the greatest (absolute) independent marginal effects are $\ln(dividends)$ and $\ln(operating\ cash\ flow)$. A one unit increase in $\ln(operating\ cash\ flow)$, *ceteris paribus*, will lead to a reduction of 22.71 percent probability of a payout gap while a 1 unit increase in $\ln(dividends)$ will lead to an increase of the payout gap probability by 11.3 percent.

Since the pseudo R^2 -value has no natural interpretation in a Probit model as R^2 in an OLS regression, the goodness of fit is presented in *Statistic 2*.

In the first four subintervals the predicted number of observations differ quite a bit in comparison with the actual observations. In relative terms, the first group underestimates the number of payout gaps by $\frac{19,53}{43,47} = 44.9\%$,

while in the last group the predicted number of estimation is only underestimated by $\frac{1,03}{197,97} = 0.5\%$.

Statistic 2: Goodness of Fit – Evaluation for Binary Spec.

Goodness-of-Fit Evaluation for Binary Specification
 Andrews and Hosmer-Lemeshow Tests
 Equation: PROBIT_MODEL
 Date: 05/31/15 Time: 16:19
 Grouping based upon predicted risk (randomize ties)

	Quantile of Risk		Dep=0		Dep=1		Total Obs	H-L Value
	Low	High	Actual	Expect	Actual	Expect		
1	0.0062	0.2912	155	174.522	63	43.4780	218	10.9492
2	0.2923	0.3945	152	143.348	67	75.6525	219	1.51185
3	0.3952	0.4672	147	123.734	71	94.2661	218	10.1171
4	0.4692	0.5304	128	109.512	91	109.488	219	6.24319
5	0.5306	0.5822	112	97.3063	107	121.694	219	3.99299
6	0.5824	0.6286	93	86.0303	125	131.970	218	0.93275
7	0.6287	0.6828	64	75.7960	155	143.204	219	2.80744
8	0.6828	0.7500	49	62.1922	169	155.808	218	3.91529
9	0.7501	0.8316	24	46.0374	195	172.963	219	13.3567
10	0.8325	1.0000	20	21.0282	199	197.972	219	0.05562
	Total		944	939.505	1242	1246.49	2186	53.8822
H-L Statistic			53.8822		Prob. Chi-Sq(8)		0.0000	
Andrews Statistic			67.4356		Prob. Chi-Sq(10)		0.0000	

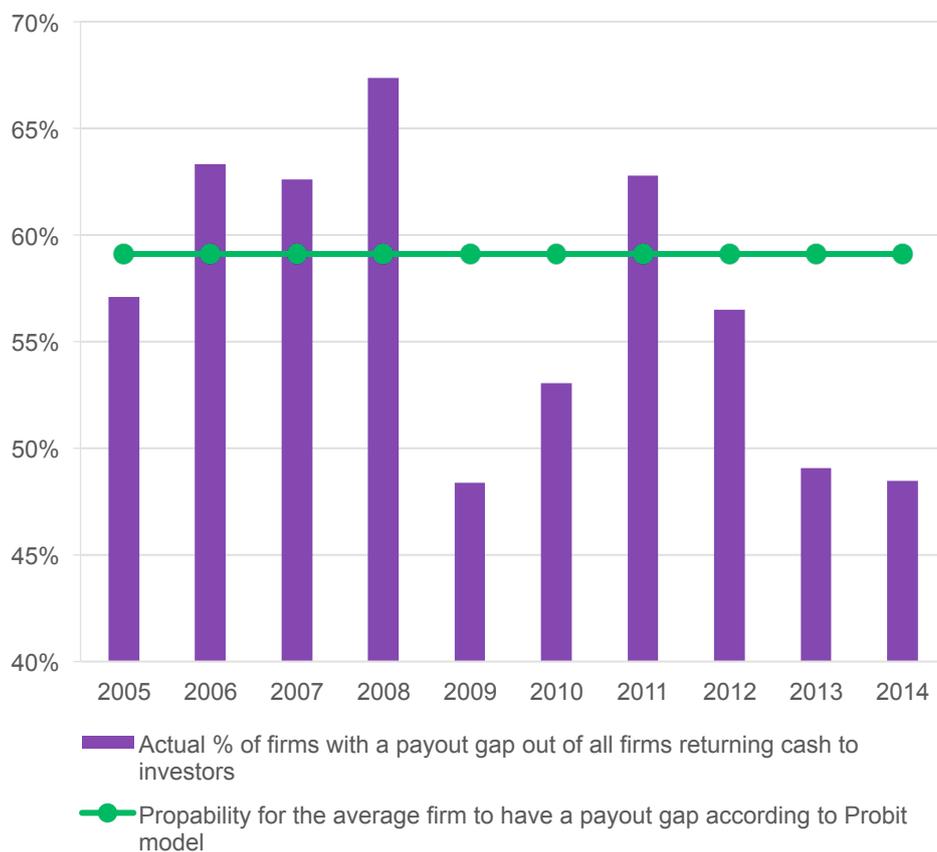
Table 6 presents the mean values of all the explanatory variables. Only firms that made payouts are included in the average calculations. This can be interpreted as the sample average firm's explanatory variables. By taking these values into the regression model, the probability of the average firm to have a payout gap is 59.11 %.

Table 6: Average Firm Variables

Variable	Average Value
ln(Capex)	9.211281
ln(Cash)	10.26252
ln(Debt)	10.96369
ln(Market to book)	0.612626
ln(Operating Cash Flow)	10.44994
Size	1,992,757
Strategic Holdings	35.65999
ln(Dividends)	9.317793

As can be seen in the chart 5, the calculated probability of having a payout gap of the average firm is plotted against the actual percentage of firms that had a payout gap while returning cash to the investors over the studied time period.

Chart 5: Comparison between actual percentage of firms with a payout gap while returning cash to investors and the average probability of a payout gap estimated by Probit model.



The calculated probability of the average firm is located close to the actual numbers over the years. In the years 2006-2008 as well as 2009 the actual percentage of payout gap firms were higher than the predicted probability of the average firm. While during the remaining six years in the time period, the actual count of payout gap firms was fewer.

7 Analysis

In this chapter we are analysing and discussing the results of our study in the light of the theory that have been presented. The chapter is founded on the questions asked in chapter 1.3 while each question constitutes a separate section of this chapter.

7.1 To What Extent Does Nordic Firms Raise External Capital to Finance Their Payouts?

The result of our study shows that between 30 to 60 per cent of the firms surveyed do raise capital externally each year to finance their payouts, as illustrated in Chart 1A. Moreover as brought up in the result and illustrated by Chart 1C a qualified majority, 74 per cent, of the firms surveyed, have, at some point during the ten year span raised capital externally to finance their payouts. This is in stark contrast to the commonly accepted theory as well as research by, inter alia, Grullon et al. (2002), DeAngelo et al. (2006), Ross et al. (2013) and Miller and Rock (1985). They all, to some degree, state that the basic idea behind making payouts relies on a firm's will and/or ability to return free cash flows to investors, therefore payouts, in general, are financed by a firm's free cash flow. Thus, a firm should make payouts when the internal cash flow of the firm is sufficient enough to fund the payout. Even when the free cash flow is sufficient enough, the firms are not obliged to make payouts, but may prioritize to use the free cash flow for investment purposes or as cash reserves.

However, our study have shown that many firms within the Nordic stock markets do not behave as accordingly, returning only superfluous free cash flows to their investors. In fact, despite not having free cash flows sufficient to finance the payouts, they still engage in share repurchases and provide investors with dividends. This is even clearer when looking only at firms that are returning cash to investors, the percentage surge by close to 20 point

during all of the surveyed years. In fact most of the payout paying firms surveyed engage in such behavior for seven out of the ten years. These results are surprisingly similar to the results presented by Farre-Mensa et al. (2015) despite the fact that we are looking at an entirely different market.

By looking at our own extended definition of payout gap in Chart 1A and 1B, we do see a significant amount of firms that did not even have enough cash reserves from earlier years to finance their payouts. As seen in Chart 1C, over 50 percent of the firms would, at some point in time during the sample period, technically speaking, have to declare bankruptcy due to their payout amount if they did not raise money on the capital market simultaneously. Although it is more likely that the firms in that case would reconsider the payout level instead, it is a remarkably high amount. The results of this study, most definitely, indicate underlying incentives for this behavior.

Moreover, the article by Farre-Mensa et al. (2015) show, like Chart 2A-B, that firms rely on the capital markets to finance their payouts. The charts illustrates that it is not only a large number of firms with a payout gap but also a large nominal payout amount each year that is financed externally.

As illustrated in Chart 2C, firms with a payout gap make dividends or repurchases to a smaller extent than firms without a payout gap, meaning that the payout multiplier is less than one during nine out of ten of the observed years. We can thus conclude that the payout payers, with a payout gap, on average gives less back to investors in nominal terms. This result is in line with the research of Miller and Rock (1985). Their research namely state that dividends will become larger if the surplus cash flow increases, while dividends will be smaller if it decreases primarily due to a higher amount of external financing.

7.1.1 What Methods are Used to Bring in Capital?

According to previous research, a firm can benefit from the market through two market timing strategies; either by issuing shares when the firm is

overvalued and then pay dividends, or by issuing equity when the firm is overvalued and then repurchase the shares when the firm is undervalued.

Chart 3A-B illustrates that issuing debt is a more common choice than issuing equity. These results are in line with the pecking order theory, which implicates that a firm always use their retained earnings for financing purposes in the first place rather than issuing debt or equity. While the equity, if underpriced, is considered more expensive than underpriced debt, debt will be chosen beforehand. If the equity on the other hand is believed to be overpriced, issuing equity would be preferable. Since equity rarely is considered being overpriced due to the negative impact on the stock price, debt will reasonably be chosen beforehand anyway. In addition, Myers and Majluf (1984) state that it is better to, when financing payouts externally, issuing debt instead of issuing equity.

The observed levels in Table 3A and Chart 3B show that close to half of the firms with a payout gap rely solely on debt to finance their payouts. There is no certain right or wrong regarding the level of optimal leverage, since it depends on factors such as the industry the company operates in. Furthermore, firms have to do trade-off decisions since there are tax shield benefits to gain from the usage of leverage. However, if the EBIT exceeds the interest payments there are no further tax shield gains to be made. It should be stressed though, that the more debt a firm uses, the higher the risk is to fall into financial distress. With this in mind, raising too much debt while, at the same time, using the raised capital to finance payouts, obviously, can be considered a risky strategy.

The results from Table 3A and Chart 3B gives us reason to believe that one underlying reason to externally finance payouts may be to use the payout as a tool for capital structuring. To raise debt continuously over time, only to see the capital leave the firm through payouts, will render the firms with an increased level of leverage. However, this assumes that the value of the equity portion remains constant, which might not always be the case. In fact, stock operation like repurchases, regardless of how they are financed, are likely to affect the value of a firm's equity.

Noteworthy in this paper is the large loss of data of share repurchases that may skew both the data and the analysis of it.

7.1.2 What Methods are used to Return Capital to Investors?

Brav *et al.* (2005) state that repurchases have become an important form of payout due to the flexibility of repurchases in relation to dividends. The repurchases namely “allows managers to alter payout in response to the availability of good investment opportunities, to accommodate time-varying attempts to affect EPS or stock valuation, to offset stock option dilution, or simply to return capital to investors at the appropriate time.”. In addition, there are tax shield benefits to gain for unlevered firms by making a leveraged recapitalization.

Even though Brav *et al.* (2005) state that repurchases have become more important, they also state that dividends should prevail over repurchases as the primary way to return cash to investors, which is more in line with the result illustrated in Chart 4.

If we compare the observed relationship between dividends and share repurchases for all firms in Chart 4 to the results of Farre-Mensa *et al.* (2015), we can note that their observations are more evenly distributed between dividends and repurchases with them overlapping at some points.

Our results indicates that dividends have been the predominant payout form during the entire period of the study and have, steadily, been growing the last years to reach a very dominant level, leaving repurchases at less than a tenth of aggregate payouts. While this offers little additional context as to why that many firms have a payout gap, we can conclude that dividend is indeed the primary vehicles by which Nordic firms prefer to return cash to investors.

7.2 What are the Reasons to Externally Finance

Payouts

Researchers who discuss the financing of payouts mean that funding payouts even though the cash flow is low, is not recommended and is seen as “uneconomic and pointless” (Miller and Rock, 1985). The question that remains is therefore why our study, but also the study by Farre-Mensa *et al.* (2015), show that firms make payouts even though they cannot finance it through their free cash flow. We have identified four topics, each contributing a bit of insight as to what are likely

7.2.1 Increase in Leverage

Some of the results, for example Chart 3A-B, indicates that one of the reasons to finance the payouts through externally raised capital is to increase the leverage of a firm. We base this opinion on, *inter alia*, the reasoning made by Farre-Mensa *et al.* (2015), who state that financing payouts through the issuing of debt result in leverage increases since one of the advantages of making payouts, while issuing debt, is that it increases a firm’s leverage without increasing its cash holdings or depleting it. Firms might namely finance their payouts through the issuing of debt to manage their capital structure and cash holdings in a way that is hard to do through payouts or by raising debt individually. As we have stated earlier there are also tax shield benefits to gain from leveraging while distribute payouts, which may be correlated to adding leverage for payout-financing purposes.

7.2.2 Signaling

Another reason to why the firms raise capital externally to finance their payouts could be that the firm would like send signals to the market saying that the firm is doing well. As some researchers state, dividends can reveal information regarding a firm’s prospects, while changes in the dividend rate often generates changes in the market price. Thus, public firms show tendencies of prioritizing payouts due to the pressure on the managers of showing positive results in the short run.

In addition, the usage of signaling for payout financing purposes may derive from information asymmetries. Since insiders have superior information when information asymmetries are at hand, they may have incentives for increasing payouts if they know that difficult times awaits for the firm.

However, we cannot see that signaling would be the predominant reason to why a firm would like to make payouts when their cash flow is low due to the cost of raising capital externally. We rather think of it as an extra reason among other more significant reasons. Farre-Mensa *et al.* (2015) argue that there is no ground for the statement that the signaling considerations is the main reason to why the firms make payouts even though they do not have a free cash flow sufficient for making the payouts. There are also previous studies indicating that payout policies are neither used to signal the strength of the firm as well as the ability of the firm to bear the costs of external capital if needed, nor to separate a firm from its competitors, as to the academic signaling sense. However, it has been stated that the signaling can affect the dividends in the sense that it makes firms hesitant to reduce their dividends, since not cutting dividends can separate a well-performing firm from competitors.

To signal that a firm is doing well might also result in an increase in earnings-per-share, which we think constitutes a reason to make payouts even though the free cash flow is low. By financing the payouts with debt is an easy way for firms to boost their earnings per share and a firm that has the same EPS as another company but could do so with less equity is considered more efficient and a “better” firm by the market, which encourages this external payout financing phenomena. Since there is a general belief that firms that make higher payouts are more profitable it is intuitively to think that firm engage in this kind of activities for signaling reasons.

On the other hand, our results indicates that payouts dropped significantly during the time of the financial crisis, a factor that speaks against payouts being made for signaling purposes. Intuitively, to signal that the firm is doing well during bad times such as a major crisis by making payouts would

be applicable to the signal theory. Since our findings are rather speaking for the opposite, that the payouts turned downwards, it weakens the implication regarding the impact of signaling.

7.2.3 Engagement in Market Timing

Farre-Mensa *et al.* (2015) also argues that one potential explanation to firms operating with a payout gap is to engage in market timing activities. They conclude that there are two possible scenarios in which firms could leverage externally financed payouts to do so; “First, managers can issue shares when their firm is overvalued and pay dividends throughout; such a policy makes existing shareholders better off, and it results in equity-financed dividends. Second, managers can issue equity when their firm is overvalued and repurchase shares when the firm is undervalued; if this cycle of over- and undervaluation takes place during the same year, it naturally results in equity-financed repurchases” (Farre-Mensa *et al.*, 2015) While this seems to be a logical conclusion the result of our study does not indicate that this is a likely explanation to why such a significant part of the Nordic firms maintain a payout gap. Mostly because as illustrated by Chart 4 share repurchases have been quite rare, with the exception of 2007, but they are necessary in both above stated scenarios. In addition we can see that repurchases as a percentage of total payouts have decreased over the course of the last years further watering down this as a plausible explanation for why so many firms have a payout gap. At least in the markets surveyed in this study.

7.3 Firm Characteristics Used to Predict the Probability of a Firm Having a Payout Gap

The second part of our empirical study aimed to explain what variables could potentially contribute to the probability of a firm having a payout gap. From the Probit model we do see that we managed to find significant variables that partially explains the probability of a payout gap. It is really interesting that we do find firm characteristics among our data sample that

actually contributes to the probability of a firm having a payout gap. However it is difficult to interpret the goodness-of-fit since the pseudo-R2 in the Probit is lacking a simple interpretation. One potential reason to the rather low pseudo-R2 of 0.141737 is due to the number of explanatory variables, it is intuitively to think that there are more than our nine chosen variables that affect the probability of a payout gap. If we instead look at the Hosmer-Lemeshow test it visualize, in our opinion, a rather good fit of the data, especially in the later subintervals. This means that our model is rather accurate in predicting the probability of payout gap and we can assume that our linear-log Probit model is well-specified.

If we look at our estimated payout paying average firm's probability of a payout gap of 59.11 percent it is rather surprising to see that the value is over 50 percent. This means that a payout payer average firm during a ten-year period would, statistically speaking, have an active payout gap in six out of the ten years. We do not believe this fact is the general belief about payout payers and hope this observation shear some new light on how firms' payout are financed.

In the table below, all the variable we presented in the Results have been labeled discreetly. The following sections will discuss each outcome in relation to the previously presented variables and their results and our initial hypothesis concerning the variables.

Table 7: Variable Relation in Probit Model

Variable	Hypothesis	Result:
Capex	Positive	Positive
Cash	Negative	Negative
Debt	Positive	Positive
Market to book	Positive	Positive
Operating Cashflow	Negative	Negative
Size	Positive	Positive
Strategic Holdings	Negative	Not significant
Dividends	Positive	Positive

7.3.1 Capex

In Statistic 1A we can infer that capex has a significant effect on the probability of a payout gap. The relation between capex and payout gap is positive, which is intuitively. The results of the regression is in line with our hypothesis. If a firm has high capital expenditures and still make payouts it is naturally to believe the firm may have to raise external capital to fund the payouts.

7.3.2 Cash

A firm's cash reserves is one out of two significant explanatory variables in our regression model that shows a negative relation with the probability of a payout gap. This is also an expected result since there are costs associated with raising external capital firms would deplete their own cash reserves before financing their payouts externally.

7.3.3 Debt

Statistic 1A infer that debt has a significant effect on the probability of a payout gap. Just like the relation between capex and payout gap, the relation between debt and payout gap is positive, which is intuitively and in line

with our hypothesis. If a firm issues debt to a great extent, it is not foreign to assume that the firm also uses the capital raised through debt to finance its payouts, if making payouts.

7.3.4 Market to Book

When it regards the market to book-ratio, it can be stated that also this ratio has a significant effect on the probability of a payout gap, please refer to Statistic 1A. The fact that the relation between market to book and payout gap is positive, is not a surprisingly result and is in line with our hypothesis. We assume that firms that have a high market to book value are, in order to keep their high valuation, willing to make payouts even if there is not enough cash. A firm with a high market to book value might namely meet investors with high expectations when it regards the value and the amount of payouts made, while the firms can end up in a situation where they neither have the possibility to diminish the value of the payouts, nor the actual amount of payouts made.

7.3.5 Operating Cash Flow

The second and last significant explanatory variable that shows a negative correlation with the probability of a payout gap is operating cash flow. This result does not surprise us and are in line with our hypothesis. If a firm internally can generate a lot of cash, it is a sign of a prosperous firm and do not need external financing to the same extent to operate the business and it seems rather contra-intuitively to use more expensive, external capital, to finance the payouts.

7.3.6 Size

The size of a firm, *i.e.* the total turnover, has a significant effect on the probability of a payout gap, which is shown in Statistic 1A. The same occurs for the size as for most of the variables above, namely that the relation between size and payout gap is positive. This result is in line with previous research but is interesting since we, intuitively, were not sure to what extent the size would affect the probability of payout gap. However, it

feels rather logical that the size of a firm, *i.e.* the size of the total turnover, does affect a firm's choice of making payouts. A firm with a high total turnover would probably have many stakeholders, which the firm has to take into account when making different decisions, but also has to please. The stakeholders might expect the firm to make payouts to a greater extent than they do when the firm is smaller.

7.3.7 Strategic Holdings

This was the only variables that did not show a significant relation with the probability of a payout gap. This means that institutional investors did not have as big impact in the decision of not distributing payouts when the internal funding was not enough as we expected. However we do see tendencies that institutional investors are against external financed payout since the estimated parameter is negative but we cannot make any deeper analysis of this variable since it is not statistically significant distinct from zero.

7.3.8 Dividends

As mentioned earlier, we only included dividends in the model to test the legitimacy of the regression model. It should come to no surprise to anyone that dividends has a strongly positive relation with the probability of a payout gap. This is the single most contributing variable to the probability of a payout gap and is statistically significant with a p-value of 0.0000 and this result is not of a big surprise to us.

7.4 Variable Impact

To conclude this section, we can say that the firms with a high market to book-ratio, which also make dividends to a higher extent are the ones with the highest probability of having a payout gap. Meanwhile, the firms with a lot of cash and a positive operating cash flow are the ones with a significantly lower probability of having a payout gap.

7.4 Further Research

Beyond the discussion regarding the question asked in the beginning of this research, the result of this study have generated some other thoughts when it regards the externally financed payout that we think is crucial to mention.

When gathering the data of the targeted firms in Chart 1A-B and Chart 2A, we could see that the graphs, in the year following the crash of 2008, diverged from the general pattern, i.e. an effect likely to the financial crisis. Chart 1A-B illustrate the firms with a payout gap, and during the year of 2009 the amount of firms having a payout gap decreased remarkably. The reasons to this tendency could be many, but it can be concluded without a doubt that the number of firms (Chart 1A-B) as well as the relative size of externally financed payouts in relation to the total amount returned to investors decreased drastically during the financial crisis. This is also true when looking at the figures for the U.S market produced by Farre-Mensa et al. (2015). A further study looking particularly at the causes behind this collapse by looking holistically at cash surpluses, or lack thereof, and firm payout behavior seems fully warranted.

Our research is limited to the Nordic stock markets. Since a similar study already have been made in the U.S., it would be interesting to see if the phenomenon of externally financed payouts is as widespread throughout the rest of Europe, The Nordic NASDAQ OMX stock markets is composed of firms from Denmark, Finland, Iceland and Sweden. Due to time limitations we have not been able to further investigate if there exist any differences regarding firms' behavior of payout financing between the countries. Another aspect that has not been taken into account in this study is whether the industry that the firms operate in has effect on their behavior relating to payouts. Both these topics would be great ways to expand on the research of this subject.

We have also not made any further investigations regarding how firms that have raised capital to finance payouts did perform on the stock market after doing so. It would be interesting to see if there are any possible differences

between the performance of the firms that finance their payouts with the free cash flow and the ones that does it with external funds.

8 Conclusions

The purpose of this paper was to investigate if firms listed on the Nordic stock market raise external funds in order to finance payouts. Our findings indicate that there are a significant amount of firms that engage in this kind of behavior. The study, *inter alia*, shows that the firms with a high market to book-ratio, which also make dividends to a higher extent are the ones with the highest probability of having a payout gap. Meanwhile, the firms with a lot of cash and a positive operating cash flow are the ones with a significantly lower probability of having a payout gap.

The test results regarding the chosen variables that we thought were to be correlated with financing payouts externally showed that our initial perception concerning the firms characteristics, related to the phenomenon, were intuitively correct since we were able to prove significance in seven out of the eight studied variables.

We have shown that the most common way of raising capital externally is through the issuing of debt, while the distribution of dividends is the most commonly used payout policy. The question that remains is though why firms choose to finance their payouts though externally raised capital, even though the concept of externally financing payouts contravenes the theory of how to finance payouts.

We think that the reasons behind this behavior are many and rather complex and we have not been able to pinpoint one certain key driver behind the phenomenon. However, desires such as the will to increase the leverage of a firm and a firm's need to send signals to the market do have an impact. The fact that there is no clear answer to why firms would choose to make a payout policy decision that is so counterintuitive to both the theory, as well as the results of many researches, makes us believe that further studies within the area would be preferable. This phenomenon is namely comparatively uncharted, why we think that more studies within the area are to come.

Table of References

Electronic

Aktiespararna (2013), *Utdelning förnuftigare än återköp*,
<http://www.aktiespararna.se/sajt/kontakt/lokalavdelningar/lok/aktiespararna/OrebroSydnarke/Borskronika/Utdelning-fornuftigare-an-aterkop/> (retrieved 2015-05-25)

Asker, J., Farre-Mensa, J. and Ljungqvist, A. (2014) *Corporate Investment and Stock Market Listing: A Puzzle?* New York University, Stern School of Business.

Bansal, R., Dittmar, R.F. and Lundblad, C.T. (2005) *Consumption, Dividends, and the Cross Section of Equity Returns*, *The Journal of Finance*, Vol. 60, No. 4, 1639-1672.

Bhattacharya, S. (1979), *Imperfect information, dividend policy, and "the bird in the hand" fallacy*, *Bell Journal of Economics* 10, 259-270.

Brav, A., Graham, J.R., Harvey, C.R. and Michaely, R. (2005) *Payout policy in the 21st century*, Duke University.

DeAngelo, H., DeAngelo L. and Stulz, R. (2006), *Dividend policy and the earned/contributed capital mix: A test of the life-cycle theory*, *Journal of Financial Economics* 81, 227-254.

Denis, D.J. and Denis, D.K. (1993), *Managerial discretion, organizational structure, and corporate performance: A study of leveraged recapitalizations*, *Journal of Accounting and Economics* 16, 209-236.

Dougherty, C., (2011), *Introduction to Econometrics*, Oxford University Press. Oxford.

Farre-Mensa, J., Michaely, R. and Schmalz, M. (2015), *Financing Payouts*, Harvard Business School.

- Grullon, G., Michaely, R. and Swaminathan, B. (2002), *Are dividend changes a sign of firm maturity?*, Journal of Business 75, 387-424.
- Grullon, G., Paye, B., Underwood, S. and Weston, J. (2011), *Has the propensity to pay out declined?*, Journal of Financial and Quantitative Analysis 46, 1-24.
- Harrell, F.E. Jr. (2001), *Regression modeling strategies*, Springer-Verlag. New York
- Jensen, M.C. (1986), *Agency costs of free cash flow, corporate finance and takeovers*, American Economic Review 76, 323-329.
- Myers, S.C. and Majluf, N.S. (1984), *Corporate financing and investment decisions when firms have information that investors do not have*, Journal of Financial Economics, 13, 187-221, North-Holland.
- Miller, M. and Modigliani, F. (1958), *The Cost of Capital, Corporation Finance and the Theory of Investment*, The American Economic Review, Vol. 48, No. 3, 261-297.
- Miller, M. and Modigliani, F. (1961), *Dividend Policy, Growth and the Valuation of Shares*, Journal of Business, 34, 411-433.
- Miller, M. and Rock, K. (1985), *Dividend policy under asymmetric information*, Journal of Finance 40, 1031-1051.
- Ross, S.A., Westerfield R.W. and Jaffe, J. (2013), *Corporate Finance*, 10th ed., New York: McGraw-Hill/Irwin.
- University of Strathclyde, *Goodness of Fit Measures*, <https://www.strath.ac.uk/aer/materials/5furtherquantitativeresearchdesignandanalysis/unit6/goodnessoffitmeasures/> (retrieved 2015-05-26)
- Wruck, K.H. (1994), *Financial policy, internal control, and performance: Sealed Air Corporation's leveraged special dividend*, Journal of Financial Economics 36, 157-192.

Printed

Berk, J. and DeMarzo, P. (2014), *Corporate Finance*, Third edition, Boston, Pearson Education.

Bryman, A. and Bell, E. (2011), *Business Research Methods*, Oxford University Press, Oxford.

Lundahl, U. and Skärvad, P. (1999), *Utredningsmetodik för samhällsvetare och ekonomer*, Studentlitteratur AB, Lund.

Patel, R. and Davidson, B. (1994), *Forskningsmetodikens grunder*, Studentlitteratur, Lund.

Appendix

Charts

Chart 1A: Percentage of all firms that have a payout gap

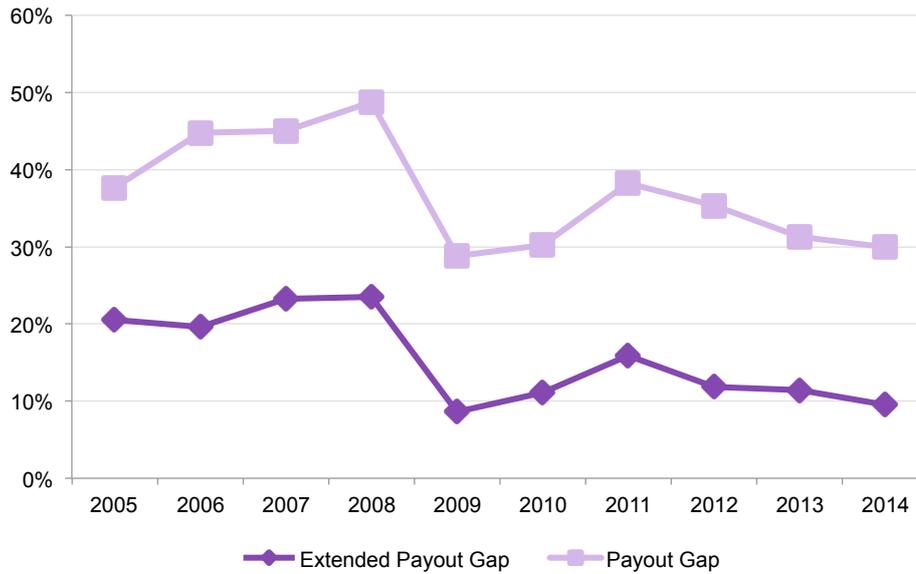


Chart 1B: Percentage of firms that were returning cash to investors while also having a payout gap

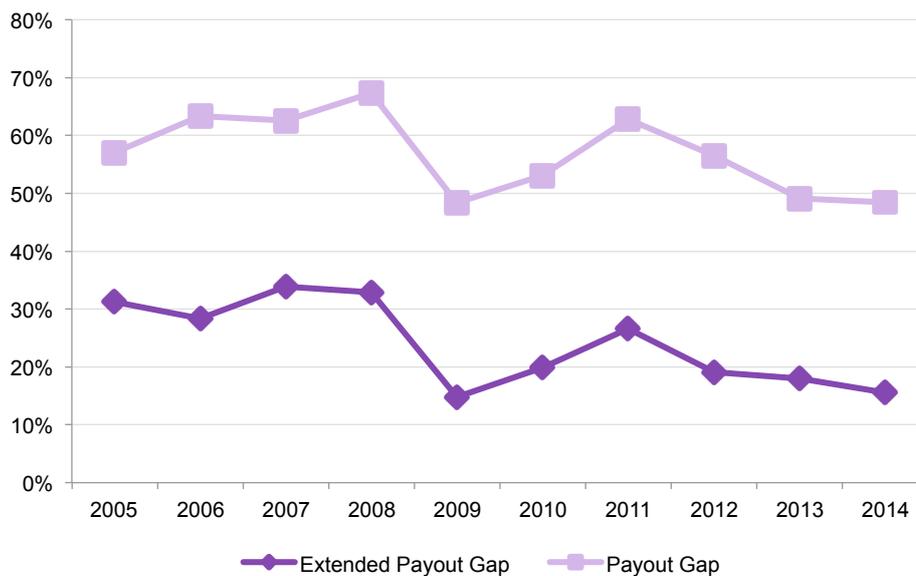


Chart 1C: Percentage of firms that has a payout gap during at least one of the ten years

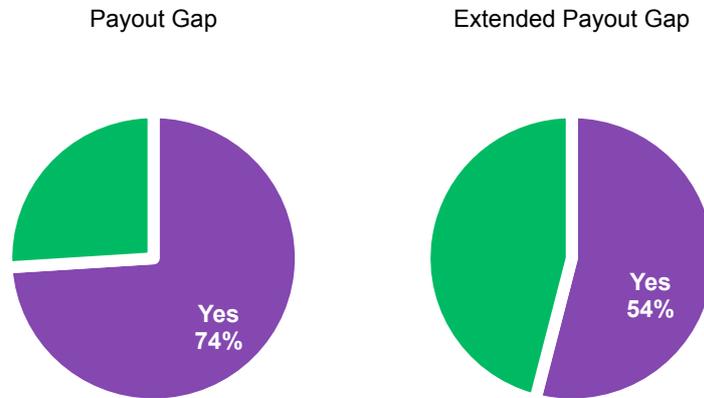


Chart 2A: Aggregate size payouts from firms

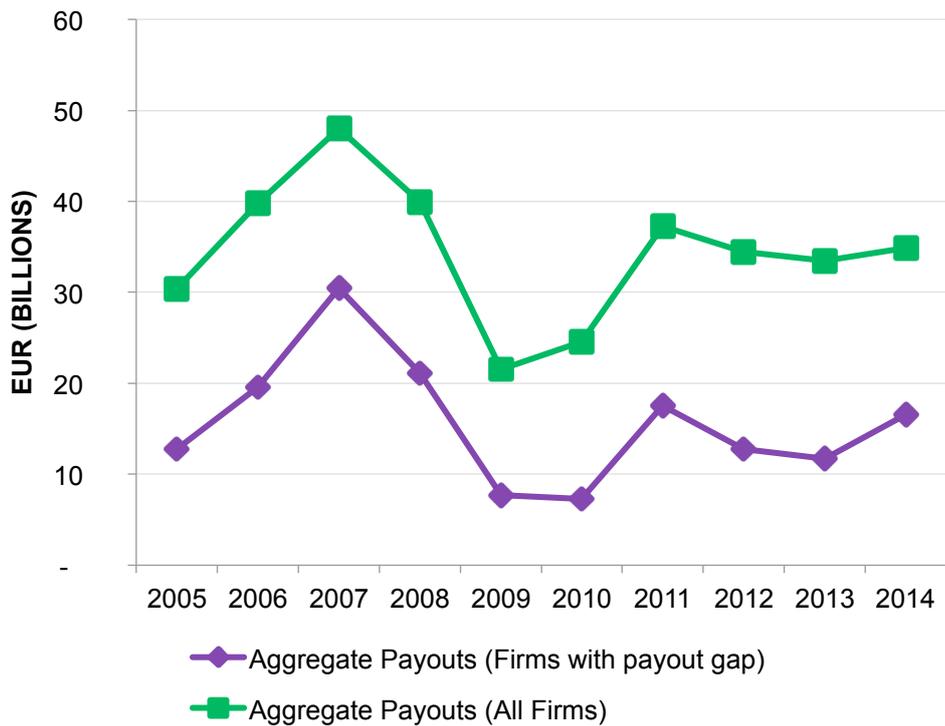


Chart 2B: Relative size of payouts from firms with payout gaps

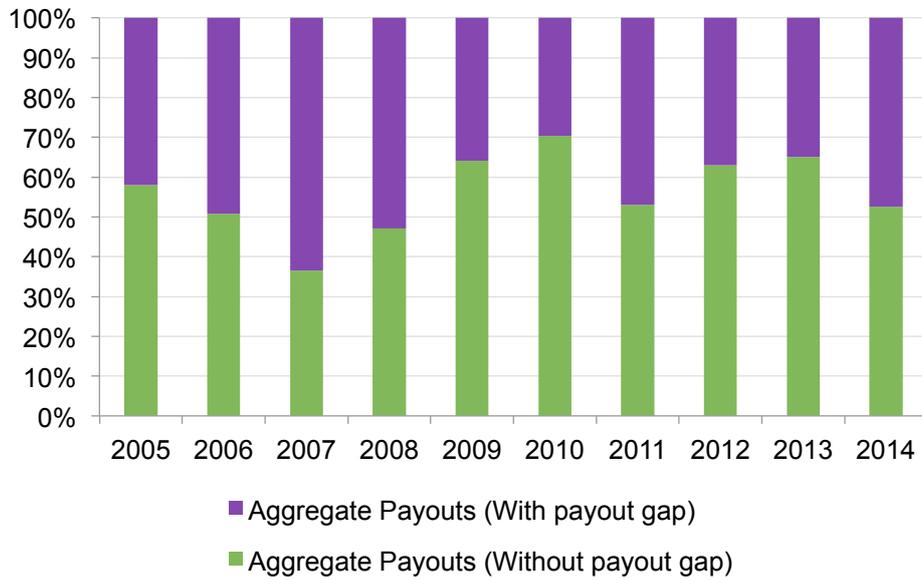


Chart 2C: Relative size of payouts from firms with payout gaps

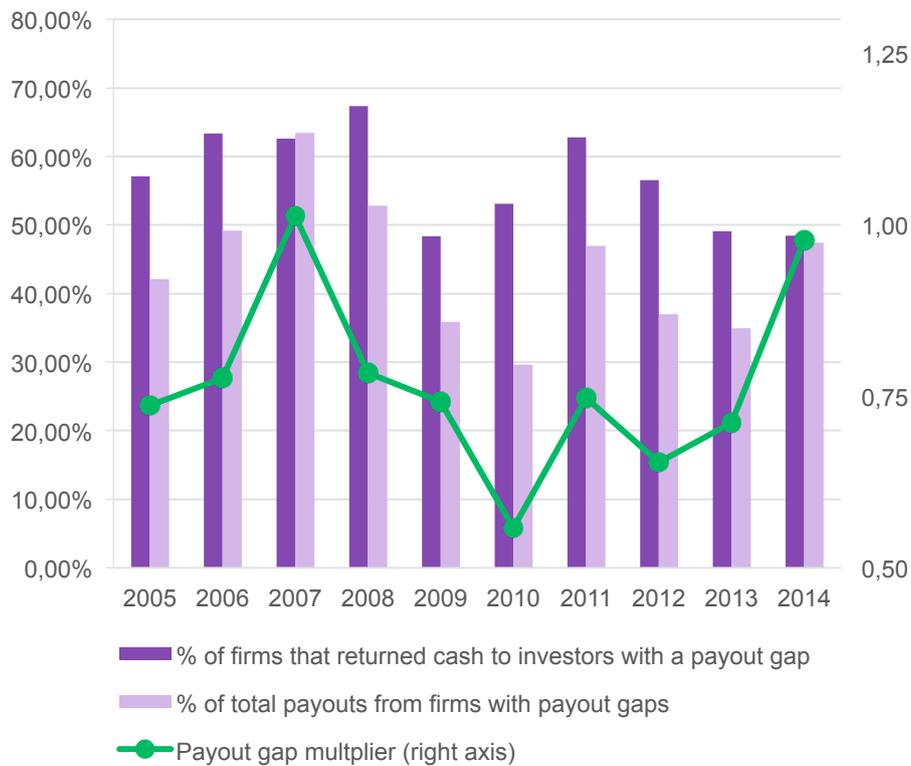


Chart 3A: Distribution between equity and debt raised to finance payout gaps

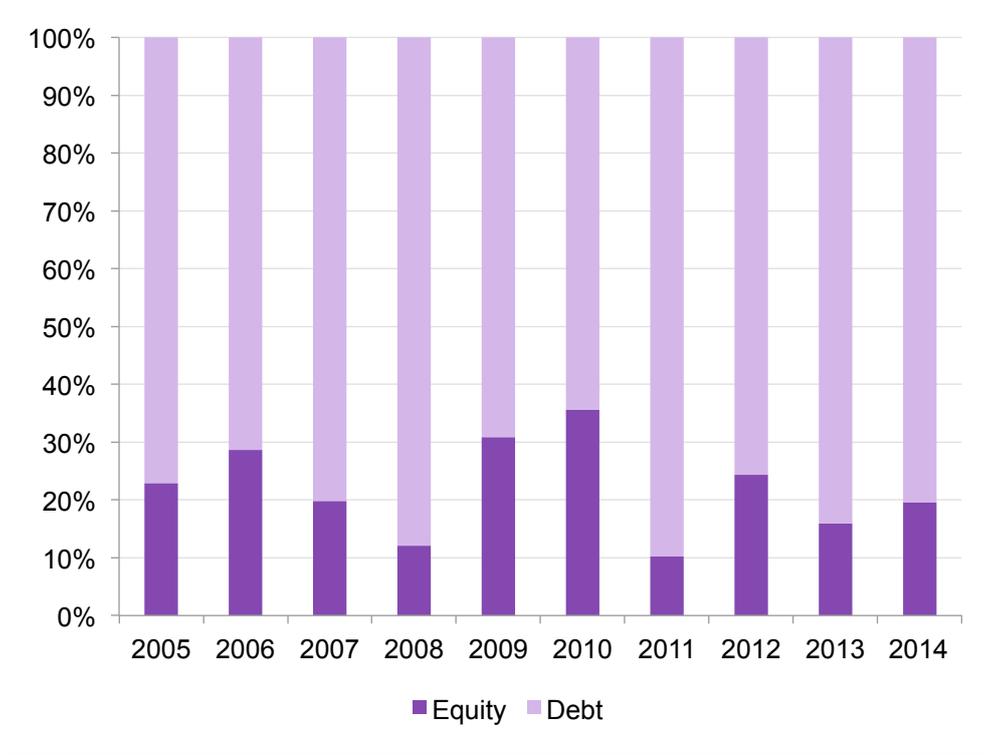


Chart 3B: Individual firm behavior for accruing capital while having a payout gap.

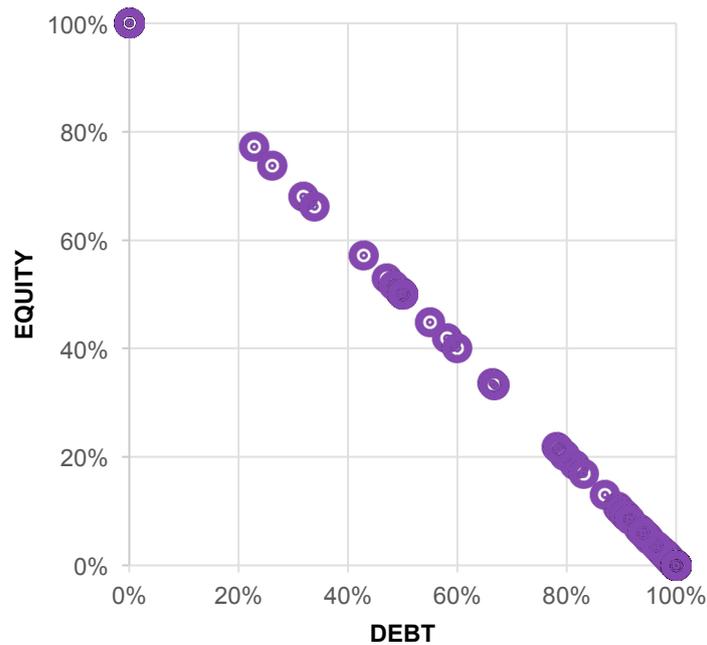
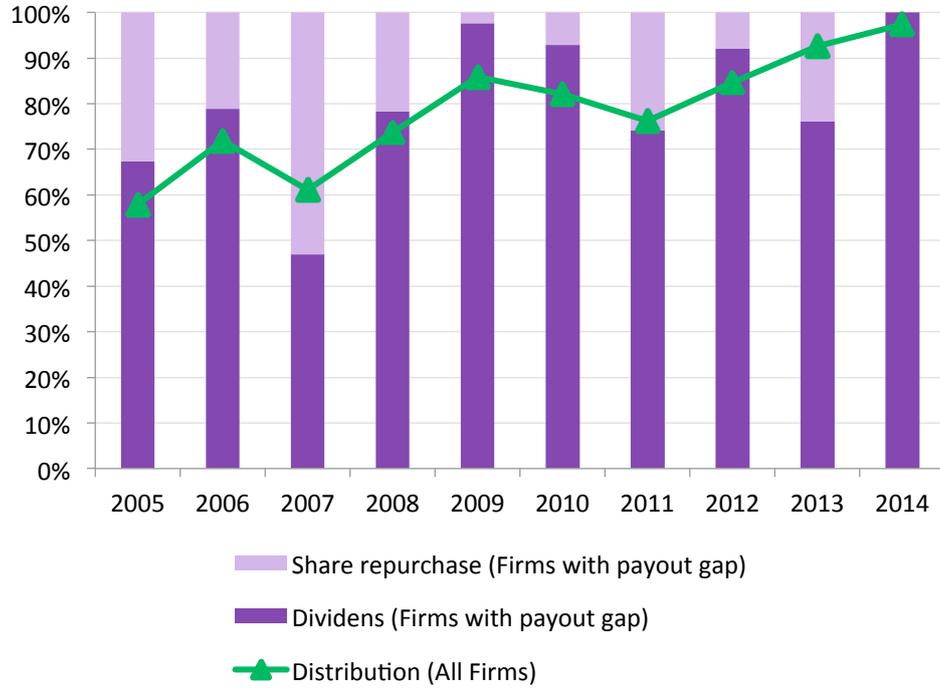


Chart 4: Distribution between dividends and share repurchases for firms with payout gaps



Statistics

Statistic 1A: Binary Probit Regression Model

Binary Probit Model (Quadratic Hill Climbing)	
Dependent Variable: Payout gap exist	
Coefficient	Value
Intercept	1.594938***
<i>S.E</i>	(0.221855)
ln(Capex)	0.173754***
<i>S.E</i>	(0.024595)
ln(Cash)	-0.071376***
<i>S.E</i>	(0.025963)
ln(Debt)	0.149911***
<i>S.E</i>	(0.017538)
ln(Market to Book)	0.194843***
<i>S.E</i>	(0.047145)
ln(Operating Cash flow)	-0.675223***
<i>S.E</i>	(0.042448)
<i>Size</i> · 10 ⁻⁶	0.026000***
<i>S.E</i>	(0.000728)
Strategic Holdings	-0.001552***
<i>S.E</i>	(0.001298)
ln(Dividends)	0.336025***
<i>S.E</i>	(0.033383)
Pseudo-R ²	0.141737
No. of Observations	2186

***p<0.01, **p<0.05, *p<0.1

Statistic 1B: Binary Probit Regression Model

Dependent Variable: PAYOUT_GAP_EXIST
 Method: ML - Binary Probit (Quadratic hill climbing)
 Date: 05/31/15 Time: 15:15
 Sample: 2005 2014 IF PAYOUT>0
 Included observations: 2186
 Convergence achieved after 12 iterations
 Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1.534938	0.221855	6.918656	0.0000
LOG(CAPEX)	0.173754	0.024595	7.064732	0.0000
LOG(CASH)	-0.071376	0.025963	-2.749089	0.0060
LOG(DEBT)	0.149911	0.017538	8.547893	0.0000
LOG(MARKET_TO_BOOK)	0.194843	0.047145	4.132848	0.0000
LOG(OPERATING_CASHFLOW SIZE)	-0.675223	0.042448	-15.90688	0.0000
STRATEGIC_HOLDINGS LOG(DIVIDENDS)	2.26E-08	7.28E-09	3.099630	0.0019
	-0.001552	0.001298	-1.195504	0.2319
	0.336025	0.033383	10.06584	0.0000
McFadden R-squared	0.141737	Mean dependent var	0.568161	
S.D. dependent var	0.495446	S.E. of regression	0.446942	
Akaike info criterion	1.182040	Sum squared resid	434.8718	
Schwarz criterion	1.205465	Log likelihood	-1282.969	
Hannan-Quinn criter.	1.190602	Deviance	2565.938	
Restr. deviance	2989.689	Restr. log likelihood	-1494.844	
LR statistic	423.7503	Avg. log likelihood	-0.586903	
Prob(LR statistic)	0.000000			
Obs with Dep=0	944	Total obs	2186	
Obs with Dep=1	1242			

Statistic 2: Average Marginal Effect in Probit Model

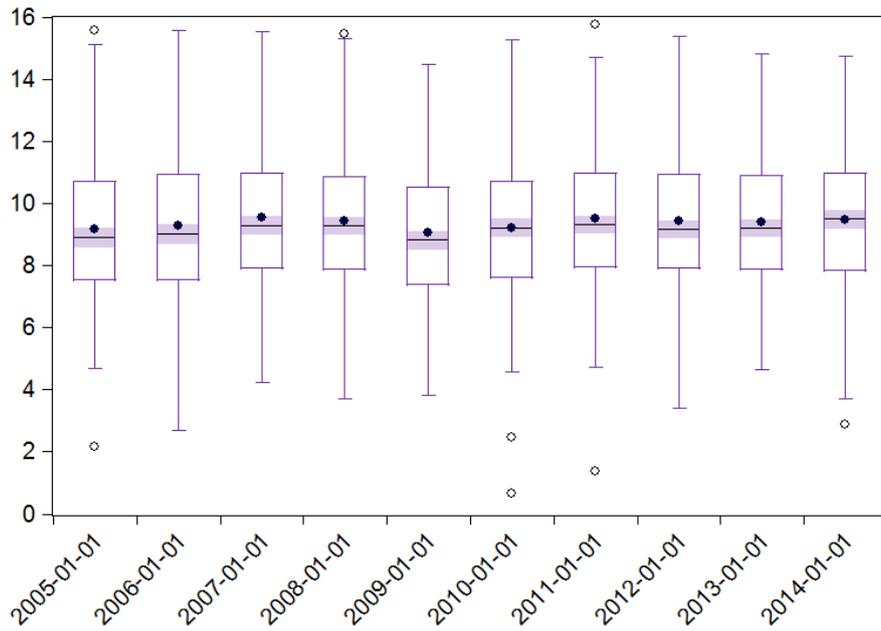
intercept	0.516341
ln(capex)	0.058449
ln(cash)	-0.024010
ln(debt)	0.050429
ln(market_to_book)	0.065543
ln(operating cf)	-0.227139
size	7.59E-09
strategic holdings	-0.000522
ln(dividends)	0.113036

Statistic 3: Goodness of Fit – Evaluation for Binary Model

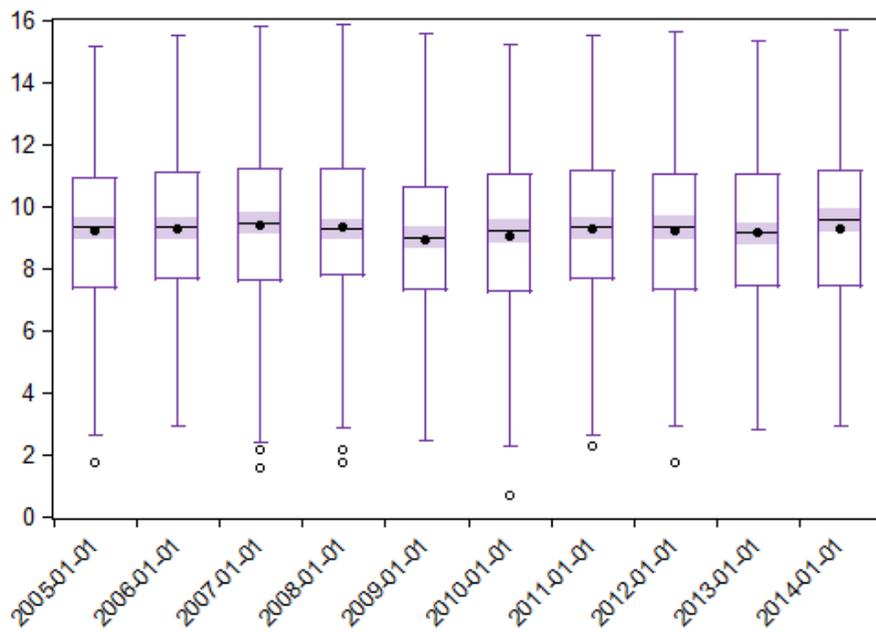
Goodness-of-Fit Evaluation for Binary Specification
 Andrews and Hosmer-Lemeshow Tests
 Equation: PROBIT_MODEL
 Date: 05/31/15 Time: 16:19
 Grouping based upon predicted risk (randomize ties)

	Quantile of Risk		Dep=0		Dep=1		Total Obs	H-L Value
	Low	High	Actual	Expect	Actual	Expect		
1	0.0062	0.2912	155	174.522	63	43.4780	218	10.9492
2	0.2923	0.3945	152	143.348	67	75.6525	219	1.51185
3	0.3952	0.4672	147	123.734	71	94.2661	218	10.1171
4	0.4692	0.5304	128	109.512	91	109.488	219	6.24319
5	0.5306	0.5822	112	97.3063	107	121.694	219	3.99299
6	0.5824	0.6286	93	86.0303	125	131.970	218	0.93275
7	0.6287	0.6828	64	75.7960	155	143.204	219	2.80744
8	0.6828	0.7500	49	62.1922	169	155.808	218	3.91529
9	0.7501	0.8316	24	46.0374	195	172.963	219	13.3567
10	0.8325	1.0000	20	21.0282	199	197.972	219	0.05562
Total			944	939.505	1242	1246.49	2186	53.8822
H-L Statistic			53.8822		Prob. Chi-Sq(8)		0.0000	
Andrews Statistic			67.4356		Prob. Chi-Sq(10)		0.0000	

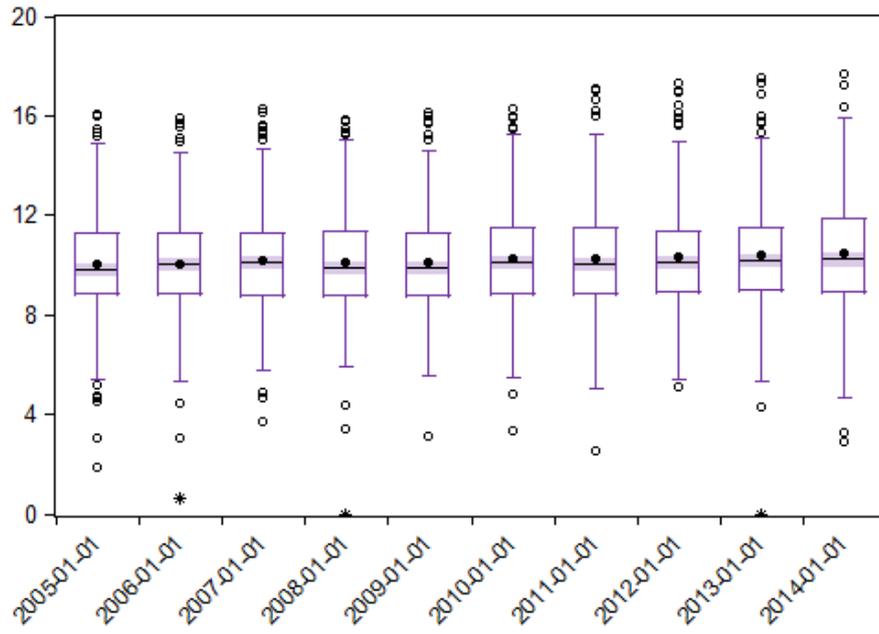
Statistic 4A: Payouts (ln)



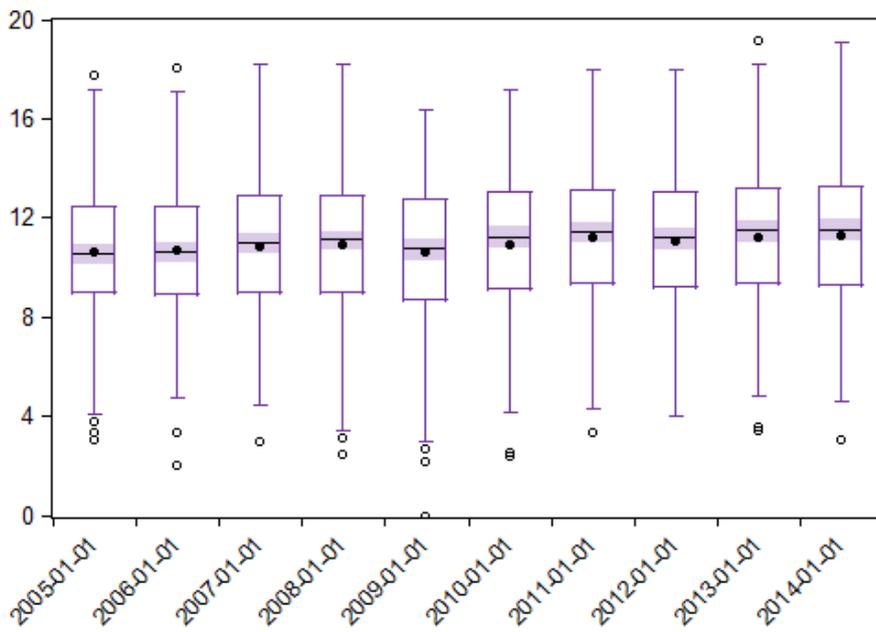
Statistic 4B: Capex (ln)



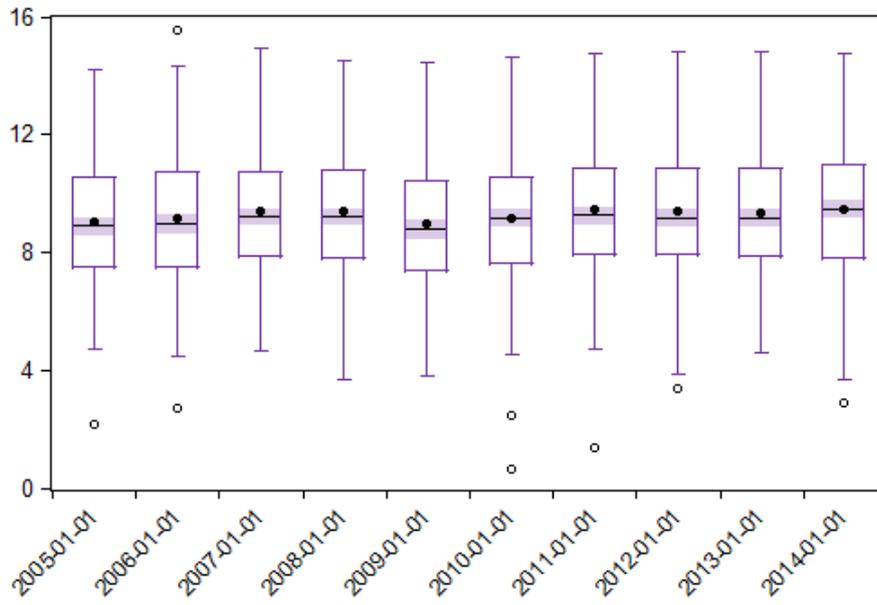
Statistic 4C: Cash (ln)



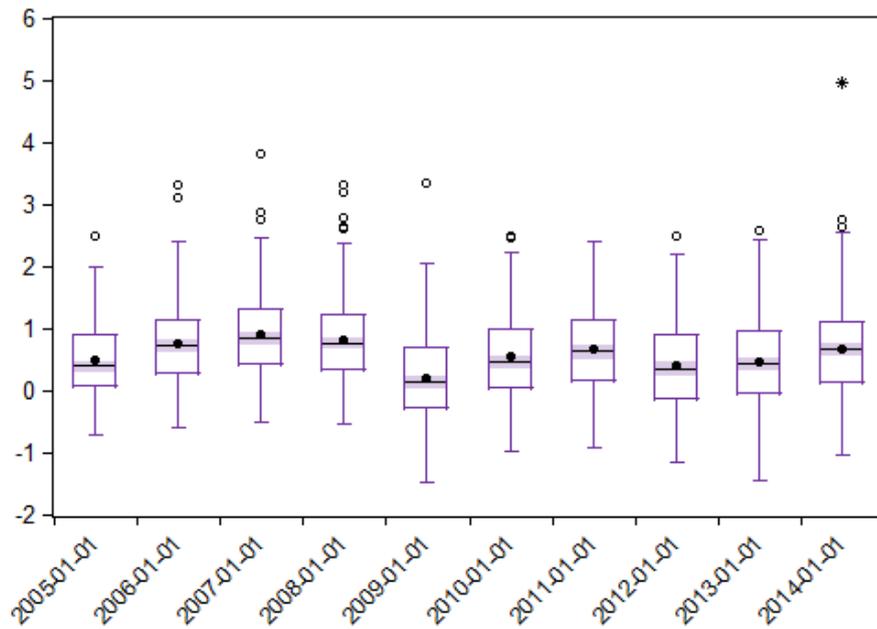
Statistic 4D: Debt (ln)



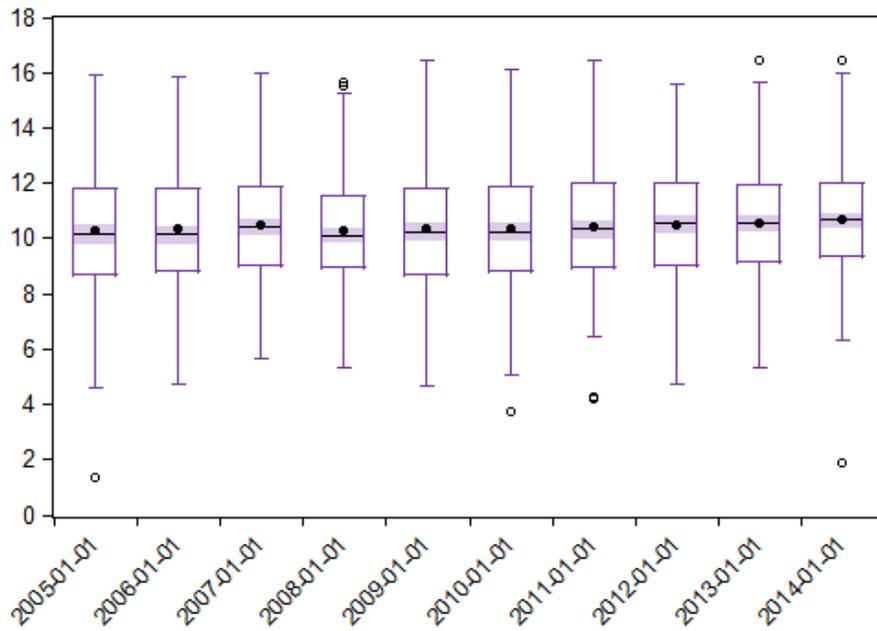
Statistic 4E: Dividends (ln)



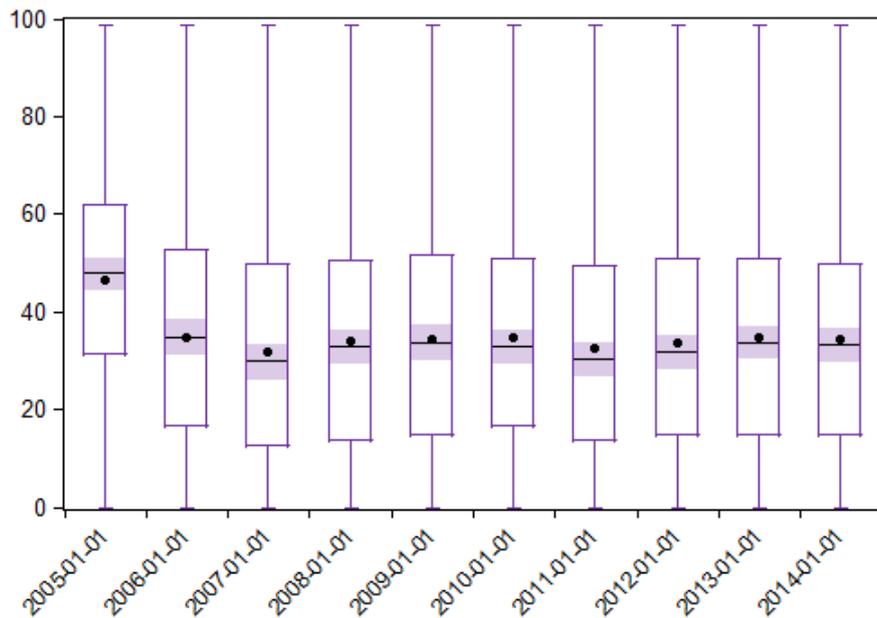
Statistic 4F: Market to Book Value (ln)



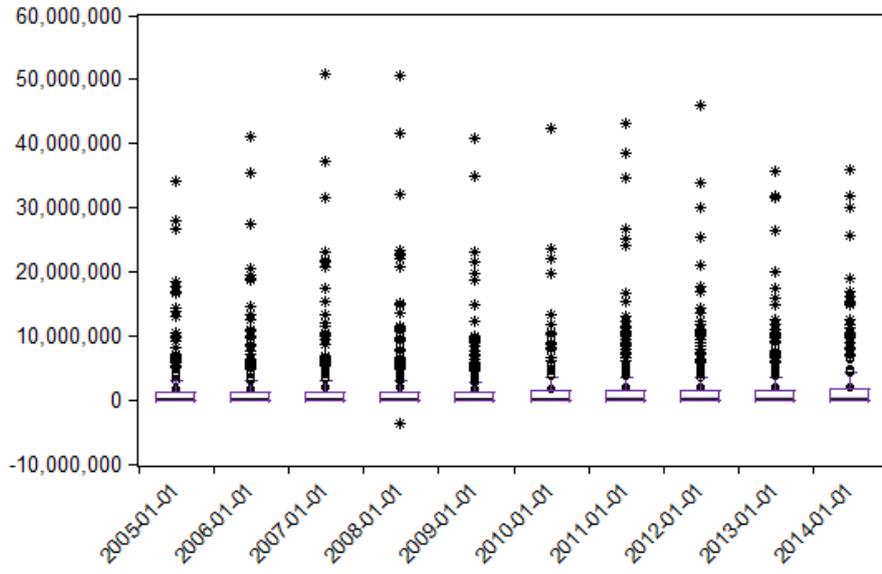
Statistic 4G: Operating Cash Flow (ln)



Statistic 4H: Strategic Holdings



Statistic 4I: Size (Earnings)



Tables

Table 1: Number of Observations in Chart 1A, 1B and 1C

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
419	434	455	463	478	495	502	508	507	481

Table 2: Number of Observations in Chart 2A, 2B and 2C

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
417	424	435	457	465	486	494	503	505	477

Table 3A: Method for accruing capital while having a payout gap.

No Debt / Only Equity	Mix of Debt and Equity	Only Debt / No Equity
10,77%	43,07%	46.16%

Table 3B: Number of Observations in Chart 3A & 3B

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
408	408	426	438	454	480	480	493	500	463

Table 4: Number of Observations in Chart 4

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
417	424	436	458	466	487	495	503	506	478

Table 5: Average Marginal Effect

Coefficient for	Average Marginal Effect
ln(Capex)	0.058449
ln(Cash)	- 0.024010
ln(Debt)	0.050429
ln(Market to book)	0.065543
ln(Operating Cash Flow)	- 0.227139
$\frac{Size}{10^6}$	0.00759
Strategic Holdings	- 0.000522
ln(Dividends)	0.113036

Table 6: Average Firm Variables

Variable	Average Value
ln(Capex)	9.211281
ln(Cash)	10.26252
ln(Debt)	10.96369
ln(Market to book)	0.612626
ln(Operating Cash Flow)	10.44994
Size	1,992,757
Strategic Holdings	35.65999
ln(Dividends)	9.317793

Table 7: Variable Relation in Probit Model

Variable	Hypothesis	Result:
Capex	Positive	Positive
Cash	Negative	Negative
Debt	Positive	Positive
Market to book	Positive	Positive
Operating Cashflow	Negative	Negative
Size	Positive	Positive
Strategic Holdings	Negative	Not significant
Dividends	Positive	Positive

Table 8: All Datastream variables and their respective code

Variable Name	Datastream Code	Short Description	Units
Share Buyback Amount	<i>X(ECSLDP048)-E</i>	The total monetary value of the shares repurchased by the company during the fiscal year. Please note: only quarterly data available	Euros (Nominal)
Cash Dividends Paid Total	<i>X(WC04551)-E</i>	The total common and preferred dividends paid to shareholders of the company.	Euros (000 ³)
Net Cash Flow Investing	<i>X(WC04870)-E</i>	The net cash receipts and disbursements resulting from capital expenditures, decrease/increase from investments, disposal of fixed assets, increase in other assets and other investing activities.	Euros (000 ³)
Net Cash Flow Operating Activities	<i>X(WC04860)-E</i>	The net cash receipts and disbursements resulting from the operations of the company. It is the sum of Funds from Operations, Funds From/Used for Other Operating Activities and Extraordinary Items.	Euros (000 ³)
Long Term Debt	<i>X(WC03251)-E</i>	All interest bearing financial obligations, excluding amounts due within one year. It is shown net of premium or discount.	Euros (000 ³)

Net Proceeds From Sale / Issue Of Common & Preferred	<i>X(WC04251)-E</i>	The amount a company received from the sale of common and/or preferred stock. It includes amounts received from the conversion of debentures or preferred stock into common stock, exchange of common stock for debentures, sale of treasury shares, shares issued for acquisitions and proceeds from stock options.	Euros (000 ³)
Market Cap	<i>X(MVC) -E</i>	MVC is the consolidated market value of a company displayed in millions of units of local currency. It is available as a time series for 17 countries (see below). History for those countries starts on 3rd January 2000, or on the base date of the security if that is later.	Euros (000 ³)
Cash & Equivalents Generic	<i>X(WC02005)-E</i>	CASH & EQUIVALENTS – GENERIC represents Cash & Due from Banks for Banks, Cash for Insurance companies and Cash & Short Term Investments for all other industries.	Euros (000 ³)
Strategic Number of Shares	<i>NOSHST</i>	The percentage of strategic holdings of 5% or more.	%
Price to Book	<i>PTBV</i>	This is the share price divided by the book value per share.	Ratio

Table 9: List of all surveyed firms

Firm Name	ICB	IS O	ICIN
OSTJYDSK BANK	Banks	DK	DK0010017607
A P MOLLER - MAERSK 'B'	Marine Transportation	DK	DK0010244508
AALBORG BOLDSPILKLUB	Recreational Services	DK	DK0010247014
AARHUSKARLSHAMN	Food Products	SE	SE0001493776
ARHUS ELITE 'B'	Recreational Services	DK	DK0010263722
ABB LTD N	Industrial Machinery	CH	CH0012221716
ACANDO 'B'	Computer Services	SE	SE0000105116
ACTIVE BIOTECH	Biotechnology	SE	SE0001137985
ADDNODE 'B'	Computer Services	SE	SE0000472268
ADDTECH 'B'	Electrical Equipment	SE	SE0005568136
ADMIRAL CAPITAL B	Real Estate Hold, Dev	DK	DK0060052843
AEROCRINE 'B'	Medical Equipment	SE	SE0000434292
AF 'B'	Business Support Svs.	SE	SE0005999836
AFARAK GROUP	General Mining	FI	FI0009800098
AFFECTO	Computer Services	FI	FI0009013312
AFRICA OIL	Exploration & Prod.	CA	CA00829Q1019
AHLSTROM	Paper	FI	FI0009010391
AKTIA 'R'	Banks	FI	FI4000058888
ALFA LAVAL	Industrial Machinery	SE	SE0000695876
ALK-ABELLO	Pharmaceuticals	DK	DK0060027142
ALLENEX	Biotechnology	SE	SE0000619181
ALLTELE ALLM.SVEN.TELAB	Fixed Line Telecom.	SE	SE0001625534
ALM BRAND	Full Line Insurance	DK	DK0015250344
ALMA MEDIA	Publishing	FI	FI0009013114
AMBU 'B'	Medical Equipment	DK	DK0060591204
AMER SPORTS	Recreational Products	FI	FI0009000285
ANDERSEN & MARTINI	Specialty Retailers	DK	DK0010283597
ANOTO GROUP	Computer Hardware	SE	SE0000547929
APETIT	Food Products	FI	FI0009003503
ARCAM 'B'	Industrial Machinery	SE	SE0005676160
ARCTIC PAPER	Paper	PL	PLARTPR00012
ARISE	Alt. Electricity	SE	SE0002095604
ARKIL HOLDING	Heavy Construction	DK	DK0010025113
REALIA	Real Estate Hold, Dev	DK	DK0010131309
ASIAKASTIETO GROUP	Specialty Finance	FI	FI4000123195
ASPO	Divers. Industrials	FI	FI0009008072
ASPOCOMP GROUP	Electrical Equipment	FI	FI0009008080
ASSA ABLOY 'B'	Building Mat.& Fix.	SE	SE0000255648
ASTRAZENECA	Pharmaceuticals	GB	GB0009895292
ATLANTIC PETROLEUM	Exploration & Prod.	DK	FO000A0DN9X4
ATLAS COPCO 'B'	Industrial Machinery	SE	SE0000122467
ATRIA 'A'	Food Products	FI	FI0009006548

ATRIUM LJUNGBERG 'B'	Real Estate Hold, Dev	SE	SE0000191827
AURIGA INDUSTRIES 'B'	Specialty Chemicals	DK	DK0010233816
AUTOLIV SDB	Auto Parts	US	SE0000382335
AVANZA BANK HOLDING	Investment Services	SE	SE0000170110
AVEGA GROUP 'B'	Computer Services	SE	SE0002180539
AXFOOD	Food Retail,Wholesale	SE	SE0006993770
AXIS	Computer Hardware	SE	SE0000672354
B&B TOOLS 'B'	Industrial Suppliers	SE	SE0000101362
BACTIGUARD HOLD	Medical Supplies	SE	SE0005878741
BANG & OLUFSEN 'B'	Consumer Electronics	DK	DK0010218429
ALANDSBANKEN 'B'	Banks	FI	FI0009001127
BANKNORDIK	Banks	DK	FO0000000088
BASWARE	Software	FI	FI0009008403
BAVARIAN NORDIC	Biotechnology	DK	DK0015998017
BE GROUP	Iron & Steel	SE	SE0001852211
BEIJER ALMA 'B'	Industrial Machinery	SE	SE0000190134
BEIJER ELECTRONICS	Electronic Equipment	SE	SE0000671711
BEIJER REF AB	Industrial Machinery	SE	SE0000112906
BERGS TIMBER 'B'	Forestry	SE	SE0000101297
BERLIN IV 'B'	Real Estate Hold, Dev	DK	DK0060085694
BESQAB PROJEKT & FASTIGH	Real Estate Hold, Dev	SE	SE0005991411
BETSSON 'B'	Gambling	SE	SE0005936911
BILIA 'A'	Specialty Retailers	SE	SE0000102295
BILLERUD KORSNAS	Paper	SE	SE0000862997
BIOGAIA 'B'	Biotechnology	SE	SE0000470395
BIOHIT 'B'	Medical Supplies	FI	FI0009005482
BIOINVENT INTL.	Biotechnology	SE	SE0000789711
BIOPORTO	Biotechnology	DK	DK0011048619
BIOTAGE	Biotechnology	SE	SE0000454746
BIOTIE THERAPIES	Biotechnology	FI	FI0009011571
BJORN BORG	Clothing & Accessory	SE	SE0005849437
BLACK EARTH FARMING SDB	Farm Fish Plantation	SE	SE0001882291
BLACKPEARL RESOURCES SDR	Exploration & Prod.	CA	SE0002060863
BLUE VISION	Real Estate Hold, Dev	DK	DK0060278737
BOCONCEPT HOLDING 'B'	Furnishings	DK	DK0060050201
BOLIDEN	General Mining	SE	SE0000869646
BONG	Business Support Svs.	SE	SE0000396061
BOULE DIAGNOSTICS (WI)	Medical Equipment	SE	SE0000437402
BRD KLEE 'B'	Industrial Machinery	DK	DK0010129089
BRODRENE HARTMANN 'B'	Containers & Package	DK	DK0010256197
BRONDBY IF	Recreational Services	DK	DK0010247956
BTS GROUP	Bus.Train & Employmnt	SE	SE0000805426
BUFAB	Industrial Suppliers	SE	SE0005677135

BULTEN	Auto Parts	SE	SE0003849223
BURE EQUITY	Specialty Finance	SE	SE0000195810
BYGGMAX GROUP	Home Improvement Ret.	SE	SE0003303627
CAPMAN 'B'	Specialty Finance	FI	FI0009009377
CARGOTEC 'B'	Comm. Vehicles, Trucks	FI	FI0009013429
CARLSBERG 'B'	Brewers	DK	DK0010181759
CASTELLUM	Real Estate Hold, Dev	SE	SE0000379190
CATENA	Real Estate Hold, Dev	SE	SE0001664707
CAVERION CORPORATION	Business Support Svs.	FI	FI4000062781
CAVOTEC	Divers. Industrials	SE	CH0136071542
CBRAIN	Software	DK	DK0060030286
CELLAVISION	Medical Equipment	SE	SE0000683484
CENCORP	Electronic Equipment	FI	FI0009006951
CHEMOMETEC	Medical Equipment	DK	DK0060055861
CHR HANSEN HOLDING	Biotechnology	DK	DK0060227585
CITYCON	Real Estate Hold, Dev	FI	FI0009002471
CLAS OHLSON 'B'	Home Improvement Ret.	SE	SE0000584948
CLOETTA 'B'	Food Products	SE	SE0002626861
COLOPLAST 'B'	Medical Supplies	DK	DK0060448595
COLUMBUS	Computer Services	DK	DK0010268366
COM HEM HOLDINGS	Fixed Line Telecom.	SE	SE0005999778
COMPONENTA	Industrial Machinery	FI	FI0009010110
COMPTEL	Software	FI	FI0009008221
CONCENTRIC	Industrial Machinery	SE	SE0003950864
CONCORDIA MARITIME 'B'	Marine Transportation	SE	SE0000102824
CONSILIUM 'B'	Electronic Equipment	SE	SE0000236382
COPENHAGEN NETWORK	Computer Services	DK	DK0060055515
COREM PROPERTY GROUP	Real Estate Hold, Dev	SE	SE0002257402
C-RAD 'B'	Medical Equipment	SE	SE0002016352
CRAMO	Business Support Svs.	FI	FI0009900476
CTT SYSTEMS	Aerospace	SE	SE0000418923
CYBERCOM GROUP EUROPE	Internet	SE	SE0000702169
DMPKBT.NORDEN	Marine Transportation	DK	DK0060083210
DANSKE ANDELSKASSERS BK.	Banks	DK	DK0060299063
DANSKE BANK	Banks	DK	DK0010274414
DANTAX RADIO	Consumer Electronics	DK	DK0015205637
DANTHERM	Building Mat.& Fix.	DK	DK0010223692
DEDICARE	Healthcare Providers	SE	SE0003909282
DFDS	Marine Transportation	DK	DK0010259027
DGC ONE	Fixed Line Telecom.	SE	SE0002571539
DIGIA	Computer Services	FI	FI0009007983
DIOS FASTIGHETER	Real Estate Hold, Dev	SE	SE0001634262
DJURSLANDS BANK	Banks	DK	DK0060136273

DALHOFF LAR.& HORNEMAN	Industrial Suppliers	DK	DK0060038933
DORO	Telecom. Equipment	SE	SE0000215493
DOVRE GROUP	Business Support Svs.	FI	FI0009008098
DSV 'B'	Trucking	DK	DK0060079531
DUNI	Nondur.Household Prod	SE	SE0000616716
DUROC 'B'	Electronic Equipment	SE	SE0000331266
DUSTIN GROUP	Specialty Retailers	SE	SE0006625471
EAST CAPITAL EXPLORER	Specialty Finance	SE	SE0002158568
EFORE	Electronic Equipment	FI	FI0009900054
EGETAEPER 'B'	Furnishings	DK	DK0060458206
EIK FASTEIGNAFELAG	Real Estate Hold, Dev	IS	IS0000020709
EIMSKIPAFELAG ISLAND	Marine Transportation	IS	IS0000019800
ELANDERS 'B'	Business Support Svs.	SE	SE0000119299
ELECSTER 'A'	Industrial Machinery	FI	FI0009900658
ELECTRA GRUPPEN	Specialty Retailers	SE	SE0001572520
ELECTROLUX 'B'	Dur. Household Prod.	SE	SE0000103814
ELEKTA 'B'	Medical Equipment	SE	SE0000163628
ELEKTROBIT	Software	FI	FI0009007264
ELISA	Fixed Line Telecom.	FI	FI0009007884
ELOS 'B'	Medical Equipment	SE	SE0000120776
ELTEL	Divers. Industrials	SE	SE0006509949
ENDOMINES	Gold Mining	SE	SE0001803131
ENEA	Computer Services	SE	SE0005851268
ENIRO	Publishing	SE	SE0000718017
ENQUEST	Exploration & Prod.	GB	GB00B635TG28
EOLUS VIND B	Renewable Energy Eq.	SE	SE0002109330
EPISURF MEDICAL	Medical Supplies	SE	SE0003491562
EQ	Specialty Finance	FI	FI0009009617
ERICSSON 'B'	Telecom. Equipment	SE	SE0000108656
ERRIA	Transport Services	DK	DK0060101483
ETRION	Alt. Electricity	CA	CA29786T1057
ETTEPLAN	Business Support Svs.	FI	FI0009008650
EWORK SCANDINAVIA	Business Support Svs.	SE	SE0002402701
EXEL COMPOSITES	Industrial Machinery	FI	FI0009007306
EXIQON	Biotechnology	DK	DK0060077758
EXPEDIT 'B'	Furnishings	DK	DK0015312474
FE BORDING 'B'	Business Support Svs.	DK	DK0010008028
FABEGE	Real Estate Hold, Dev	SE	SE0000950636
FAGERHULT	Building Mat.& Fix.	SE	SE0005935558
FAST EJENDOM DANMARK	Unclassified	DK	DK0060522746
FAST PARTNER	Real Estate Hold, Dev	SE	SE0000224446
FASTIGHETS BALDER 'B'	Real Estate Hold, Dev	SE	SE0000455057
FEELGOOD SVENSKA	Healthcare Providers	SE	SE0000381840
FENIX OUTDOOR INTL	Unclassified	SE	CH0242214887
FINGERPRINT CARDS 'B'	Electronic Equipment	SE	SE0000422107
FINNAIR	Airlines	FI	FI0009003230
FINNLINES	Marine Transportation	FI	FI0009003644

FIRSTFARMS	Farm Fish Plantation	DK	DK0060056166
FISKARS 'A'	Dur. Household Prod.	FI	FI0009000400
FJARSKIPTI	Mobile Telecom.	IS	IS0000020485
FLSMIDTH & CO.'B'	Building Mat.& Fix.	DK	DK0010234467
FLUGGER 'B'	Building Mat.& Fix.	DK	DK0010218189
FORMPIPE SOFTWARE	Software	SE	SE0001338039
FORTUM	Con. Electricity	FI	FI0009007132
F-SECURE	Software	FI	FI0009801310
FYNSKE BANK	Banks	DK	DK0060520377
G4S	Business Support Svs.	GB	GB00B01FLG62
G5 ENTERTAINMENT	Toys	SE	SE0001824004
GABRIEL HOLDING	Clothing & Accessory	DK	DK0060124691
GENMAB	Biotechnology	DK	DK0010272202
GERMAN HI.STR.PROPS.	Retail REITs	DK	DK0060093524
GETINGE	Medical Equipment	SE	SE0000202624
GEVEKO 'B'	Heavy Construction	SE	SE0000105264
GLASTON	Building Mat.& Fix.	FI	FI0009010219
GLOBAL HEALTH PARTNERS	Healthcare Providers	SE	SE0002579912
GLUNZ & JENSEN	Industrial Machinery	DK	DK0010249309
GN STORE NORD	Medical Equipment	DK	DK0010272632
GRANGES	Auto Parts	SE	SE0006288015
GREENTECH ENERGY SYS.	Alt. Electricity	DK	DK0010240514
GRONLANDSBANKEN	Banks	DK	DK0010230630
GUNNEBO	Electronic Equipment	SE	SE0000195570
GYLDENDAL 'B'	Publishing	DK	DK0010247600
H&H INTERNATIONAL	Building Mat.& Fix.	DK	DK0015202451
HAGAR	Broadline Retailers	IS	IS0000020121
HALDEX	Auto Parts	SE	SE0000105199
HARBOES BRYGGERI 'B'	Brewers	DK	DK0060014751
HB GRANDI HF	Farm Fish Plantation	IS	IS0000000297
HEBA 'B'	Real Estate Hold, Dev	SE	SE0000236515
HEMFOSA FASTIGHETER	Real Estate Hold, Dev	SE	SE0005731171
HEMTEX	Home Improvement Ret.	SE	SE0000698268
HENNES & MAURITZ 'B'	Apparel Retailers	SE	SE0000106270
HEXAGON 'B'	Electronic Equipment	SE	SE0000103699
HEXPOL 'B'	Specialty Chemicals	SE	SE0002452623
HIQ INTERNATIONAL	Computer Services	SE	SE0006886727
HKSCAN 'A'	Food Products	FI	FI0009006308
HMS NETWORKS	Telecom. Equipment	SE	SE0002136242
HOIST FINANCE	Specialty Finance	SE	SE0006887063
HOJGAARD HLDG.'B'	Heavy Construction	DK	DK0010255975
HOLMEN 'B'	Paper	SE	SE0000109290
HONKARAKENNE 'B'	Home Construction	FI	FI0009900104
HUFVUDSTADEN 'C'	Real Estate Hold, Dev	SE	SE0000170383
HUHTAMAKI	Containers & Package	FI	FI0009000459
HUSQVARNA 'B'	Dur. Household Prod.	SE	SE0001662230
HVIDBJERG BANK	Banks	DK	DK0060135978
I A R SYSTEMS GROUP	Software	SE	SE0005851706

IC GROUP	Clothing & Accessory	DK	DK0010221803
ICA GRUPPEN	Food Retail,Wholesale	SE	SE0000652216
ICELANDAIR GROUP	Airlines	IS	IS0000013464
ILKKA YHTYMA	Publishing	FI	FI0009800205
IMAGE SYSTEMS	Electronic Equipment	SE	SE0006421871
INCAP	Electrical Equipment	FI	FI0009006407
INDL.& FINL.SYS.'B'	Computer Services	SE	SE0000189946
INDUSTRIVARDEN 'C'	Specialty Finance	SE	SE0000107203
INDUTRADE	Electronic Equipment	SE	SE0001515552
INNOFACTOR	Software	FI	FI0009007637
INTELLECTA 'B'	Business Support Svs.	SE	SE0000135287
INTERMAIL 'B'	Business Support Svs.	DK	DK0010212224
INTRUM JUSTITIA	Specialty Finance	SE	SE0000936478
INVESTOR 'B'	Specialty Finance	SE	SE0000107419
INWIDO	Building Mat.& Fix.	SE	SE0006220018
ISS AS	Business Support Svs.	DK	DK0060542181
ITAB SHOP CONCEPT 'B'	Business Support Svs.	SE	SE0005992567
IXONOS	Computer Services	FI	FI0009008007
JEUDAN	Real Estate Hold, Dev	DK	DK0010171362
JM	Real Estate Hold, Dev	SE	SE0000806994
JUTLANDER BANK	Banks	DK	DK0060050045
JYSKE BANK	Banks	DK	DK0010307958
KABE HUSVAGNAR 'B'	Recreational Products	SE	SE0000107724
KAPPAHL	Apparel Retailers	SE	SE0001630880
KARO BIO	Biotechnology	SE	SE0000571416
KAROLINSKA DEVELOPMENT (WI)	Pharmaceuticals	SE	SE0002190926
KEMIRA	Specialty Chemicals	FI	FI0009004824
KESKISUOMALAINEN	Publishing	FI	FI0009007546
KESKO 'B'	Food Retail,Wholesale	FI	FI0009000202
KESLA 'A'	Comm. Vehicles,Trucks	FI	FI0009900237
KINNEVIK 'B'	Specialty Finance	SE	SE0000164626
KLOVERN B	Real Estate Hold, Dev	SE	SE0006593919
KNOW IT	Computer Services	SE	SE0000421273
KOBENHAVNS LUFTHAVNE	Transport Services	DK	DK0010201102
KONE 'B'	Industrial Machinery	FI	FI0009013403
KONECRANES	Comm. Vehicles,Trucks	FI	FI0009005870
KREDITBANKEN	Banks	DK	DK0010253764
KUNGSLEDEN	Real Estate Hold, Dev	SE	SE0000549412
LAGERCRAANTZ GROUP 'B'	Electronic Equipment	SE	SE0000808396
LAMMHULTS DESIGN GROUP	Furnishings	SE	SE0000386138
LAN & SPAR BANK	Banks	DK	DK0010201532
LAND & LEISURE 'B'	Hotels	DK	DK0010240860
LASSILA & TIKANOJA	Waste, Disposal Svs.	FI	FI0009010854
LATOUR INVESTMENT 'B'	Specialty Finance	SE	SE0000106320
LEMMINKAINEN	Heavy Construction	FI	FI0009900336

LIFCO B	Divers. Industrials	SE	SE0006370730
LINDAB INTERNATIONAL	Building Mat.& Fix.	SE	SE0001852419
LOLLANDS BANK	Banks	DK	DK0060000107
LOOMIS 'B'	Business Support Svs.	SE	SE0002683557
LUCARA DIAMOND	Diamonds & Gemstones	CA	CA54928Q1081
H LUNDBECK	Pharmaceuticals	DK	DK0010287234
LUNDBERGFÖRETAGEN 'B'	Specialty Finance	SE	SE0000108847
LUNDIN GOLD	Gold Mining	CA	CA5503711080
LUNDIN MINING SDB	Nonferrous Metals	CA	SE0001134529
LUNDIN PETROLEUM	Exploration & Prod.	SE	SE0000825820
INVSTSSL.LUXOR	Investment Services	DK	DK0010213628
MALMBERGS ELEKTRISKA 'B'	Electrical Equipment	SE	SE0000507659
MAREL	Industrial Machinery	IS	IS0000000388
MARIMEKKO	Clothing & Accessory	FI	FI0009007660
MARTELA 'A'	Furnishings	FI	FI0009900385
MATAS	Specialty Retailers	DK	DK0060497295
MEDA 'A'	Pharmaceuticals	SE	SE0000221723
MEDIVIR 'B'	Biotechnology	SE	SE0000273294
MEKONOMEN	Auto Parts	SE	SE0002110064
MELKER SCHORLING	Specialty Finance	SE	SE0001785270
METSA BOARD 'B'	Paper	FI	FI0009000665
METSO	Industrial Machinery	FI	FI0009007835
MICRO SYSTEMATION 'B'	Software	SE	SE0000526626
MIDSONA 'B'	Personal Products	SE	SE0000565228
MIDWAY HOLDINGS 'B'	Specialty Finance	SE	SE0000122673
MIGATRONIC 'B'	Industrial Machinery	DK	DK0010225127
MILLICOM INTL.CELU.SDR	Mobile Telecom.	LU	SE0001174970
MOBERG PHARMA	Pharmaceuticals	SE	SE0003613090
MODERN TIMES GP.MTG 'B'	Broadcast & Entertain	SE	SE0000412371
MOLS-LINIEN	Travel & Tourism	DK	DK0060135465
MONBERG & THORSEN 'B'	Heavy Construction	DK	DK0010224310
MONS BANK	Banks	DK	DK0060133841
MQ HOLDING	Apparel Retailers	SE	SE0003303460
MSC KONSULT 'B'	Computer Services	SE	SE0000395105
MULTIQ INTERNATIONAL	Computer Hardware	SE	SE0000353898
MUNKSJO	Paper	FI	FI4000048418
MYCRONIC	Electronic Equipment	SE	SE0000375115
N1	Specialty Retailers	IS	IS0000020584
NCC 'B'	Heavy Construction	SE	SE0000117970
NEDERMAN HOLDING	Building Mat.& Fix.	SE	SE0002000083
NEO INDUSTRIAL 'B'	Electrical Equipment	FI	FI0009800296
NESTE OIL	Integrated Oil & Gas	FI	FI0009013296

NET ENTERTAINMENT NE 'B'	Gambling	SE	SE0005876943
NET INSIGHT 'B'	Telecom. Equipment	SE	SE0000366098
NEUROSEARCH	Biotechnology	DK	DK0010224666
NEUROVIVE PHARMACEUTICAL	Biotechnology	SE	SE0002575340
NEW WAVE GROUP 'B'	Clothing & Accessory	SE	SE0000426546
NEWCAP HOLDING	Specialty Finance	DK	DK0010212570
NGEX RESOURCES	Gold Mining	CA	CA65339B1004
NIBE INDUSTRIER 'B'	Building Mat.& Fix.	SE	SE0000390296
NKT	Electrical Equipment	DK	DK0010287663
NNIT	Computer Services	DK	DK0060580512
NOBIA	Furnishings	SE	SE0000949331
NOKIA	Telecom. Equipment	FI	FI0009000681
NOKIAN RENKAAT	Tires	FI	FI0009005318
NOLATO 'B'	Divers. Industrials	SE	SE0000109811
NORDEA BANK	Banks	SE	SE0000427361
NORDFYNS BANK	Banks	DK	DK0010015072
NORDIC MINES	Gold Mining	SE	SE0001672809
NORDIC SER.PTNS.HDG.'B'	Restaurants & Bars	SE	SE0000476954
NORDIC SHIPHOLDING	Oil Equip. & Services	DK	DK0060083996
NORDICOM	Real Estate Hold, Dev	DK	DK0010158500
NORDJYSKE BANK	Banks	DK	DK0060034353
NORDNET 'B'	Investment Services	SE	SE0000371296
NORTH MEDIA	Publishing	DK	DK0010270347
NOTE	Electronic Equipment	SE	SE0001161654
NOVESTRA	Specialty Finance	SE	SE0005392529
NOVO NORDISK 'B'	Pharmaceuticals	DK	DK0060534915
NOVOTEK 'B'	Software	SE	SE0000567752
NOVOZYMES	Biotechnology	DK	DK0060336014
NP3 FASTIGHETER	Real Estate Hold, Dev	SE	SE0006342333
NTR HOLDING	Electronic Equipment	DK	DK0010027671
NUNAMINERALS	General Mining	DK	DK0060492577
NURMINEN LOGISTICS	Transport Services	FI	FI0009900187
NYHERJI	Computer Services	IS	IS0000000396
OASMIA PHARMACEUTICAL	Pharmaceuticals	SE	SE0000722365
ODD MOLLY INTL.	Clothing & Accessory	SE	SE0002017657
OEM INTERNATIONAL 'B'	Electrical Equipment	SE	SE0005876968
OKMETIC	Semiconductors	FI	FI0009009054
OLVI 'A'	Brewers	FI	FI0009900401
ONXEO	Pharmaceuticals	FR	FR0010095596
OPCON	Auto Parts	SE	SE0000426652
OPUS GROUP	Electronic Equipment	SE	SE0001696683
ORAVA RESIDENTIAL REAL ESTATE	Residential REITs	FI	FI4000068614
ORESUND INVESTMENT	Specialty Finance	SE	SE0000115610
OREXO	Pharmaceuticals	SE	SE0000736415

ORIFLAME COSMETICS SDR	Personal Products	LU	SE0001174889
ORIOLA-KD 'B'	Medical Supplies	FI	FI0009014351
ORION 'B'	Pharmaceuticals	FI	FI0009014377
ORTIVUS 'B'	Medical Supplies	SE	SE0000123085
OSCAR PROPERTIES	Real Estate Hold, Dev	SE	SE0005095601
OSSUR	Medical Equipment	IS	IS0000000040
OUTOKUMPU 'A'	Iron & Steel	FI	FI0009002422
OUTOTEC	Industrial Machinery	FI	FI0009014575
PA RESOURCES 'B'	Exploration & Prod.	SE	SE0005126729
PANDORA	Clothing & Accessory	DK	DK0060252690
PANOSTAJA	Specialty Finance	FI	FI0009800379
PARKEN SPORT & ENTM.	Recreational Services	DK	DK0010237643
PARTNERTECH	Electronic Equipment	SE	SE0000394165
PEAB 'B'	Heavy Construction	SE	SE0000106205
PER AARSLEFF	Heavy Construction	DK	DK0010243450
PKC GROUP	Electrical Equipment	FI	FI0009006381
PLATZER FASTIGHETER	Real Estate Hold, Dev	SE	SE0004977692
POHJOIS-KARJALAN KRJ.	Publishing	FI	FI0009900468
PONSSE	Comm. Vehicles, Trucks	FI	FI0009005078
POOLIA 'B'	Bus, Train & Employmnt	SE	SE0000567539
POYRY	Business Support Svs.	FI	FI0009006696
PRECISE BIOMETRICS	Electronic Equipment	SE	SE0001823303
PREVAS 'B'	Computer Services	SE	SE0000356008
PRICER 'B'	Electronic Equipment	SE	SE0000233934
PRIME OFFICE	Real Estate Hold, Dev	DK	DK0060137594
PROACT IT GROUP	Computer Services	SE	SE0000412991
PROBI	Biotechnology	SE	SE0001280355
PROFFICE 'B'	Bus, Train & Employmnt	SE	SE0000470700
PROFILGRUPPEN 'B'	Aluminum	SE	SE0000393860
QLIRO GROUP	Broadline Retailers	SE	SE0003652163
QPR SOFTWARE	Software	FI	FI0009008668
RAISIO	Food Products	FI	FI0009002943
RAMIRENT	Comm. Vehicles, Trucks	FI	FI0009007066
RAPALA VMC	Recreational Products	FI	FI0009007355
RATOS 'B'	Specialty Finance	SE	SE0000111940
RAUTE 'A'	Industrial Machinery	FI	FI0009004741
RAYSEARCH LABS. 'B'	Medical Equipment	SE	SE0000135485
RECIPHARM AB	Pharmaceuticals	SE	SE0005757267
REGINN HF	Real Estate Hold, Dev	IS	IS0000021301
REITIR HF	Real Estate Hold, Dev	IS	IS0000020352
REJLERS B	Business Support Svs.	SE	SE0000123671
RELLA HOLDING	Specialty Finance	DK	DK0016033889
RESTAMAX	Restaurants & Bars	FI	FI4000064332
REVENIO GROUP	Medical Equipment	FI	FI0009010912
REZIDOR HOTEL GROUP	Hotels	SE	SE0001857533
RIAS 'B'	Industrial Machinery	DK	DK0010125848

RINGKJOBING LANDBOBANK	Banks	DK	DK0060032068
RNB RETAIL AND BRANDS	Apparel Retailers	SE	SE0005223674
ROBLON 'B'	Electrical Equipment	DK	DK0060485019
ROCKWOOL 'B'	Building Mat.& Fix.	DK	DK0010219153
ROTTNEROS	Paper	SE	SE0000112252
ROYAL UNIBREW	Brewers	DK	DK0060634707
RTX	Telecom. Equipment	DK	DK0010267129
SAAB 'B'	Aerospace	SE	SE0000112385
SAGA FURS	Clothing & Accessory	FI	FI0009800551
SAGAX 'B'	Real Estate Hold, Dev	SE	SE0005127818
SALLING BANK	Banks	DK	DK0010017367
SAMPO 'A'	Prop. & Casualty Ins.	FI	FI0009003305
SANDVIK	Industrial Machinery	SE	SE0000667891
SANISTAL 'B'	Specialty Retailers	DK	DK0010245661
SANOMA	Publishing	FI	FI0009007694
SANTA FE GROUP	Business Support Svs.	DK	DK0010006329
SAS	Airlines	SE	SE0003366871
SCANDI STANDARD	Food Products	SE	SE0005999760
SCANDINAVIAN BRAKE SYS.	Auto Parts	DK	DK0060042612
SCANFIL	Electrical Equipment	FI	FI4000029905
AKTKT.SCHOUW & CO.	Divers. Industrials	DK	DK0010253921
SEAMLESS DISTRIBUTION	Software	SE	SE0000857369
SECTRA 'B'	Medical Equipment	SE	SE0006168530
SECURITAS 'B'	Business Support Svs.	SE	SE0000163594
SEMAFO	Gold Mining	CA	CA8169221089
SEMCON	Business Support Svs.	SE	SE0000379497
SENSYS TRAFFIC	Electronic Equipment	SE	SE0000567729
SHELTON PETROLEUM	Exploration & Prod.	SE	SE0000514572
SIEVI CAPITAL	Specialty Finance	FI	FI0009008924
SIF FODBOLD 'B'	Recreational Services	DK	DK0010128008
SIMCORP	Software	DK	DK0060495240
SINTERCAST	Industrial Machinery	SE	SE0000950982
SJOVA	Full Line Insurance	IS	IS0000024602
SKAKO	Industrial Machinery	DK	DK0010231877
SEB 'C'	Banks	SE	SE0000120784
SKANSKA 'B'	Heavy Construction	SE	SE0000113250
SKF 'A'	Industrial Machinery	SE	SE0000108201
SKF 'B'	Industrial Machinery	SE	SE0000108227
SKISTAR 'B'	Hotels	SE	SE0000241614
SKJERN BANK	Banks	DK	DK0010295922
SOFTRONIC 'B'	Computer Services	SE	SE0000323305
SOLAR 'B'	Electronic Equipment	DK	DK0010274844
SOLTEQ	Computer Services	FI	FI0009007991
SOPRANO	Computer Services	FI	FI0009012793
SOTKAMO SILVER	Plat.& Precious Metal	SE	SE0001057910
SP GROUP	Commodity Chemicals	DK	DK0010244771

SPAR NORD BANK	Banks	DK	DK0060036564
SPONDA	Real Estate Hold, Dev	FI	FI0009006829
SRV YHTIOT	Heavy Construction	FI	FI0009015309
SSAB 'B'	Iron & Steel	SE	SE0000120669
ROVSING	Business Support Svs.	DK	DK0060400398
SSH COMMUNICATIONS	Software	FI	FI0009008270
SUOMEN STJN.KIT.	Real Estate Hold, Dev	FI	FI0009900559
STOCKMANN 'B'	Broadline Retailers	FI	FI0009000251
STOCKWIK FORVALTNING	Telecom. Equipment	SE	SE0001159344
STORA ENSO 'R'	Paper	FI	FI0009005961
STRATEGIC INVS.	Specialty Finance	DK	DK0010271238
STUDSVIK	Divers. Industrials	SE	SE0000653230
SMARTGUY GROUP	Apparel Retailers	DK	DK0060046522
SUOMINEN	Nondur.Household Prod	FI	FI0009010862
SVEDBERGS I DALSTORP 'B'	Building Mat.& Fix.	SE	SE0000407991
SCA 'B'	Personal Products	SE	SE0000112724
SVENSKA HANDBKN.'B'	Banks	SE	SE0000152084
SWECO 'B'	Heavy Construction	SE	SE0000489098
SWEDBANK 'A'	Banks	SE	SE0000242455
SWEDISH MATCH	Tobacco	SE	SE0000310336
SWEDISH ORPHAN BIOVITRUM	Pharmaceuticals	SE	SE0000872095
SWEDOL 'B'	Specialty Retailers	SE	SE0001733841
SYDBANK	Banks	DK	DK0010311471
SYSTEMAIR	Building Mat.& Fix.	SE	SE0002133975
TAKOMA	Business Support Svs.	FI	FI0009901110
TALENTUM	Publishing	FI	FI0009900898
TALVIVAARA MNG.CO.	Nonferrous Metals	FI	FI0009014716
TDC	Fixed Line Telecom.	DK	DK0060228559
TECHNOPOLIS	Real Estate Hold, Dev	FI	FI0009006886
TECNOTREE	Computer Services	FI	FI0009010227
TELE2 'B'	Mobile Telecom.	SE	SE0005190238
TELESTE	Telecom. Equipment	FI	FI0009007728
TELIASONERA	Mobile Telecom.	SE	SE0000667925
TETHYS OIL	Exploration & Prod.	SE	SE0001176298
THULE GROUP	Recreational Products	SE	SE0006422390
TIETO OYJ	Computer Services	FI	FI0009000277
TIKKURILA	Building Mat.& Fix.	FI	FI4000008719
TIVOLI 'B'	Recreational Services	DK	DK0010040500
TK DEVELOPMENT	Real Estate Hold, Dev	DK	DK0010258995
TOBII AB	Computer Hardware	SE	SE0002591420
TOPDANMARK	Prop. & Casualty Ins.	DK	DK0060477503
TOPSIL SEMICON.MATS.	Semiconductors	DK	DK0010271584
TORM	Marine Transportation	DK	DK0060082915
TOTALBANKEN	Banks	DK	DK0060082758
TRACTION 'B'	Specialty Finance	SE	SE0000391716
TRADEDOUBLER	Media Agencies	SE	SE0001552357
TRAINERS HOUSE	Computer Services	FI	FI0009008122

TRANSCOM WW	Business Support Svs.	SE	SE0006168316
TRANSMODE	Telecom. Equipment	SE	SE0001471103
TRELLEBORG 'B'	Industrial Machinery	SE	SE0000114837
TRIBONA	Real Estate Hold, Dev	SE	SE0005126885
TRIGON AGRI	Farm Fish Plantation	SE	DK0060083566
TROAX GROUP	Iron & Steel	SE	SE0006732392
TRYGGINGAMIDSTODI N HF	Prop. & Casualty Ins.	IS	IS0000000586
TRYG	Full Line Insurance	DK	DK0060013274
TULIKIVI 'A'	Building Mat.& Fix.	FI	FI0009900583
UNIBET GROUP SDB	Gambling	SE	SE0001835588
UNIFLEX 'B'	Bus.Train & Employmnt	SE	SE0001283607
UNITED INTL.ENTS.	Farm Fish Plantation	DK	BSP951331318
UPM-KYMMENE	Paper	FI	FI0009005987
UPONOR	Building Mat.& Fix.	FI	FI0009002158
VAAHTO GROUP 'A'	Internet	FI	FI0009900708
VAISALA 'A'	Electronic Equipment	FI	FI0009900682
VALMET	Industrial Machinery	FI	FI4000074984
VATRYGGINGFELAG ISLANDS	Prop. & Casualty Ins.	IS	IS0000007078
VBG GROUP	Auto Parts	SE	SE0000115107
VELOXIS PHARMACEUTICALS	Biotechnology	DK	DK0060048148
VENUE RETAIL GROUP 'B'	Specialty Retailers	SE	SE0000396822
VESTAS WINDSYSTEMS	Renewable Energy Eq.	DK	DK0010268606
VESTJYSK BANK	Banks	DK	DK0010304500
VIBORG HANDBOLD KLUB 'B'	Recreational Services	DK	DK0016017171
VICTOR INTERNATIONAL	Real Estate Hold, Dev	DK	DK0010022367
VICTORIA PARK B	Real Estate Hold, Dev	SE	SE0005932795
VICTORIA PROPERTIES	Real Estate Hold, Dev	DK	DK0015216675
VIKING LINE	Travel & Tourism	FI	FI0009005250
VIKING SUPPLY SHIPS	Marine Transportation	SE	SE0000143521
VITEC SOFTWARE GROUP 'B'	Software	SE	SE0000514630
VITROLIFE	Biotechnology	SE	SE0000816043
VOLVO 'B'	Comm. Vehicles, Trucks	SE	SE0000115446
VOSTOK NAFTA INV.SDR	Specialty Finance	SE	SE0005191475
WALLENSTAM 'B'	Real Estate Services	SE	SE0000115008
WARTSILA	Industrial Machinery	FI	FI0009003727
WIHLBORGS FASTIGHETER	Real Estate Hold, Dev	SE	SE0001413600
WILLIAM DEMANT HLDG.	Medical Equipment	DK	DK0010268440
WULFF-GROUP	Industrial Suppliers	FI	FI0009008452
XANO INDUSTRI 'B'	Industrial Machinery	SE	SE0000119224
YIT	Heavy Construction	FI	FI0009800643

YLEISELEKTRONIIKKA PREF.	Electronic Equipment	FI	FI0009900724
ZEALAND PHARMA	Biotechnology	DK	DK0060257814