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The Exit Behaviour of Private Equity Investors post IPO: Evidence from the Nordics

AUTHOR:

Jenny Klamer*

ABSTRACT:

This paper analyses the exit behaviour of private equity (PE) firms in portfolio companies following initial public offerings (IPOs). I use a dataset of 80 PE-backed IPOs, whereof 21 venture capital-backed and 59 buyout-backed, in the Nordic region from 2002 to 2015, to draw a detailed roadmap of PE investors' divestment processes. With the help of hand-collected data about each exit process, I document the timing and aggressiveness of the exit strategies, and analyse how PE firms time their post-IPO exit versus bull and bear markets. My results indicate that PE firms in the Nordic countries remain invested in their portfolio companies for a substantial period of time after the IPO, and that the PE investors adjust their exit behaviour over time, exiting their portfolio companies quicker and slightly more aggressively in bull markets than in bear markets.

Keywords: Initial Public Offering, Private Equity, Venture Capital, Exit

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*Student of MSc Finance at Stockholm School of Economics. Email: 22105@student.hhs.se

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1. Introduction

The European initial public offering (IPO) markets have shown considerable activity growth during the last couple of years, with 2015 being the most active year since the pre-crisis record levels of 2007 (PwC report, 2015; 2016). The Nordic IPO markets have also experienced a strong recovery, seeing high-profile IPOs such as that of ISS (Denmark) and Com Hem (Sweden) in 2014, Pandox (Sweden) in 2015, and Ahlsell (Sweden) and Dong Energy and Nets (Denmark) in 2016. The IPO markets have benefited from favourable stock market conditions and valuation levels, powered by the continuously low interest rate environment, increasing investors' appetite for new investment opportunities. Financial sponsor-backed IPOs, as a large subgroup of IPOs, have also seen immense growth in recent years, in both absolute numbers but also as a share of all IPOs (Baker & McKenzie report, 2015). The Nordic private equity (PE) market remains one of the most significant in Europe, having the third highest concentration of assets under management per capita in relation to other European economic regions (Mueller, 2014). Sweden in particular has the largest PE market in the region, also being the second most active one in Europe, only behind the United Kingdom (UK) in relative terms (EVCA report, 2015). Close to 50% of all Swedish IPOs in the last 15 years have been PE-backed (SVCA report, 2015).

While there is ample evidence concerning the choice of exit channel, such as trade sales versus IPOs versus liquidations (examples include Das, Jagannathan, and Sarin, 2003; Schmidt, Steffen, and Szabó, 2010; Harford and Kolasinski, 2014), very little is known about the actual way in which PE investors dispose of their shares and board seats held in portfolio companies. A relevant example is the recent IPO of Kotipizza Group OYJ on the Finnish stock market: In 2011 a PE investor acquired a majority stake in the company and in 2015 they took the company public. The investor group did not only refrain from selling shares in the IPO, but even subscribed for more shares in the company and maintained their position as Kotipizza Group's largest shareholder. The IPO itself can therefore hardly be called an exit. The real exit came 18 months after the IPO when they sold their 63% stake in the company in an accelerated book-building process.

Although previous research has developed a solid understanding of PE investors' share sales at portfolio companies' IPOs (such as Barry et al., 1990; Lerner,

1994; Gompers and Lerner, 1998; Lin and Smith, 1998; Cao, 2011; Krishnan et al., 2011), the existing papers predominantly focus on venture capital (VC) firms or disregard the exit process in the time after the IPO or following the end of lockup periods.

Two recent papers have taken first steps to fill this research gap. Fürth and Rauch (2014) and Visnjic (2013) both study the divestment processes of buyout funds in the United States (U.S.), concluding that the IPO itself is not the actual exit. In fact, buyout funds dispose of their shares in the portfolio company gradually over time, driven both by investor and portfolio company specific characteristics. Studying the U.S. PE market for this type of problem formulation is preferable for many reasons, one being the level of transparency. In the U.S., each step of the PE funds' exit processes in listed companies has to be reported publicly by means of Securities and Exchange Commission (SEC) filings. These filings allow the authors of the aforementioned studies to trace every single step of the exit process, both in terms of share sale transactions at and following the IPO, as well as in terms of the board exits of the PE fund managers in their portfolio companies. In the Nordic countries, major shareholders are required to report to the financial authorities in respective country when a purchase or sale of shares in a listed company leads to their stake reaching or passing certain thresholds. However, it is the shareholder who decides upon the content of the notification, meaning that in many cases, only limited information is disclosed. Similarly, only limited information on changes to board composition in the firms is made available. According to Spliid (2013), Nordic PE-backed IPOs have not been analysed in separate academic studies despite the great role of PE players in the IPO market and high importance of PE investors as capital providers in the region.

I argue that examining PE investors' exit behaviour is important due to the likely large impact a successful portfolio company exit has on value creation by the PE managers. The business model of PE funds consists of purchasing large equity stakes in companies, and then restructuring these companies' operations and funding structures. For this business model to create value, PE funds must exert a great amount of influence on the portfolio companies in order to perform the desired restructurings as well as monitoring these restructurings closely. This is usually done in two ways: 1) holding the majority of the portfolio companies' voting rights and 2) placing PE managers on the companies' boards of directors. Towards the end of the

investment period, the PE fund is then presented with the difficult challenge of divesting the portfolio company successfully in order to generate investor value through the sale price of its equity stake. The divestment process is vital for the PE funds' performance. Only a profitable sale of the portfolio companies' shares will realize return value for the funds' investors. The investor thus faces two challenges: 1) choosing the optimal timing for its divestment and 2) especially in the case of an IPO, minimizing the adverse market impact the divestment has (regarding both the IPO and the post-IPO share sales). Thus, a successful exit is an integral part of the PE investment process.

It is the goal of this paper to shed more light on the exit process of PE[1] investors after the IPO, extending previous research with findings on the Nordic PE markets. Specifically, I attempt to answer two distinct questions. First, when and how do PE investors dispose of their portfolio firms' shareholdings and leave the companies' boards? In addition, how do PE investors time their exit process versus bull and bear markets? To perform my analyses, I consider a dataset of 80 PE-backed IPOs on the main lists of the Nordic stock markets between 2002 and 2015. The sample includes 21 VC-backed IPOs and 59 buyout-backed IPOs. The analysis is comprised of two consecutive steps. As a first step, I construct a detailed exit "roadmap" for each PE investment in my sample. This roadmap contains the exact date and size of each share sale transaction through a PE investor. Next, I analyse how PE investors choose to time their divestment versus two different market environments – bull and bear stock markets. Also, I analyse to what degree the different steps of the exit process influence each other.

I obtain three major results. First, similar to buyout funds in the U.S., PE firms in the Nordic countries appear to dispose of their ownership stakes and board seats gradually over time. Instead of selling the ownership stakes early to exit the companies shortly after the IPO, I find that PE firms in the Nordic countries stay invested in their portfolio companies for an average of 2.6 years after the IPO. Although the PE firms sell some shares at the IPO itself, almost a majority of the sales transactions occur in the period following the post-IPO lockup period. This contradicts the general perception that PE firms realize returns as quickly as possible

[1] For the purpose of this paper, 'PE investor' encompasses both buyout firms and venture capital (VC) firms.

by a sudden divestment of their total shareholdings at or around the expiration of the lockup period. In addition, PE investors in the Nordic countries adjust their exit behaviour over time, exiting their portfolio companies quicker and slightly more aggressively in bull markets than in bear markets. This also confirms results from the U.S. buyout fund market, and is an interesting finding as it extends the body of research which previously has only confirmed that market-timing occurs when considering the IPO itself as an exit. Moreover, I find only low and insignificant correlations between the pre-IPO investment period and the main post-IPO exit indicators. This result is of interest as it might be suspected that the length of the pre-IPO period should have some relationship with the subsequent post-IPO strategy of the exit. Particularly since the remaining results point to the fact that the exit process is actively planned and executed.

The remainder of the paper is structured as follows. Section 2 gives an overview of the specific characteristics of the investment period and the divestment period, and how it differs between VC- and buyout investors. Section 3 summarise existing literature surrounding the exit behaviour of PE firms post IPO. In Section 4 and Section 5, I discuss the data and methodology for my study. Section 6 reports my results, compares them to other academic research and discusses potential explanations for my findings. Finally, Section 7 outlines the main conclusions of the study, discusses some limitations to it, and suggests further studies on the topic.

2. Background on the PE Investment Lifecycle

2.1 Investment Period

The initial investment kicks off the investment period. At that point in time, buyout investors commonly buy their controlling stake at once. In contrast, VC sponsors build up their investment over several investment rounds. A central difference is therefore the fact that while the typical VC investment increases in size towards the IPO, buyout sponsors keeps their stake constant. This differentiating way of building up the equity stake can be attributed to the substantially different investment approaches. (Visnjic, 2013)

VC sponsors typically purchase an equity interest in firms which are in their early or expansion stage. Subsequently they support the entrepreneur in implementing its growth strategy. However, follow on investments are normally conditional on certain strategic and operational achievements and are therefore staged. (Visnjic, 2013) Another common feature is a syndication of VC investments (Lerner (1994), Gompers (1995), Gompers and Lerner (2001)). In contrast, buyout investors typically invest in mature, cash generating firms. They commonly use leverage to purchase close to all outstanding equity in a recapitalization of the company. In the subsequent restructuring period, they employ a set of operational, organizational and governance changes to improve operational efficiency. (Kaplan and Strömberg (2009), Guo et al. (2011))

Dissimilarities in the investment period become apparent by looking at some key facts like the evolution of the average stake or the duration of the investment period. Visnjic (2013) report that in his sample of PE backed IPOs from 1996 to 2005 in the U.S., buyout investors on average have a significantly larger stake in their portfolio companies compared to their VC counterparts, with an average equity interest of nearly 75%, compared to 48% for VC investors. The investment process itself differs in his sample in such that buyout investments are almost always purchased at once while venture capital investments, as previously mentioned, are staged over multiple investment rounds. As a consequence, the stake of the VC sponsor increases towards the IPO.

In terms of duration, Visnjic (2013) finds that the investment period is on

average significantly shorter for buyout investments with 35 months compared to 44 months for VC investments. Due to the fixed lifetime of PE funds, this difference could impact the exit strategy of the investor after the IPO, i.e. timing and channel.

I will come back to these features and how they compare in the summary statistics section of this paper. Table 4 indeed points out that, even for my sample, in the investment period some characteristics vary systematically among the different investment approaches. It is thereby important to keep the different investment approaches in mind during the analysis of the divestment period.

2.2 Divestment Period

The fact that investors do not dispose of any of their holdings prior to the IPO reveals the IPO as the peak of the investment cycle. Yet, selling of shares by investors at the IPO is muted. Even though literature did learn about this fact early (see for example Barry et al. (1990) and Megginson and Weiss (1991)), research focus has usually however been limited to the IPO transaction and a short period thereafter. Nevertheless, evidence suggests that the real exit takes place sometime after the IPO. Accordingly, the period after the IPO will be called the divestment period.

There are two main exit strategies after the IPO: the investor can either sell his stake gradually in the secondary market or via private negotiation with a potential buyer in a trade sale[2]. These specific exit strategies have wide consequences for the future distribution of control rights. Choosing either strategy will impact both the investor and the future of the portfolio company, since the distribution of control and the value of the company are interconnected (Stoughton and Zechner (1998)). The gradual selling of the stake on the market is chosen in order to avoid large price fluctuations[3]. With such a strategy the investor has no influence on the distribution of the shares among new owners and the future ownership structure of the company can therefore not be actively shaped. In contrast, if the firm is sold via a trade sale and the

[2] For the purpose of this paper, a trade sale is said to have occurred when the whole portfolio company is sold in an M&A transaction, with the requirement that the PE investor still holds a controlling stake in the firm, i.e. at least 20%.

[3] The shares can either be sold gradually to the open market or in so called 'block transactions' where the PE investor sells a block of shares (i.e. a relatively large amount that is not desired to be sold at once to the open market) to one or several investors. This sale process, including finding buyers for the shares, is usually managed by a broker/investment bank.

investor is in direct negotiation with a potential buyer, he is able to strategically choose the future ownership structure.

Besides the main exit strategies described above, investors can also sell their controlling stake in a seasoned equity offering (SEO) (Visnjic, 2013). In a seasoned issue additional securities are being issued from an established company whose securities already trade in the secondary market. Seasoned offerings may involve shares being sold by existing shareholders (non-dilutive), new shares (dilutive) or both. In case of an SEO exit, using underpricing investors have some impact on the allocation of shares (compare Brennan and Franks (1997)). Additionally, there is the possibility that the investment fails after the IPO and investors lose control. This might happen due to bankruptcy, a capital increase with heavy dilution, or transactions that are principally worthless to the investor (price is below 1% of the purchase price or the IPO price). Further, there are in total eight observations in my sample where the investor is still holding control at the time of the data collection.

The divestment period can be further separated into the pre- and post-lockup period. The IPO lock-up period is a contractual restriction that prevents insiders, including both PE investors as well as management and employees, who are holding a company's stock before it goes public, from selling the stock for a period typically lasting 180 days after the company goes public.

3. Literature Review and Hypotheses

Previous literature primarily focuses on the topics if and when IPOs take place. Only a minority acknowledges that investors actually do not back out of their investments at the IPO. Also, there is a more detailed understanding of VC exit processes, compared to buyout exits or private equity as a whole.

In one of the first papers on the subject, Barry et al. (1990) analyse 433 IPOs by VC-backed companies that took place between 1978 and 1987 and find that VC investments are maintained until well after the IPO, demonstrated by the relatively high amount of shareholdings retained by VC investors after the IPO. Their study shed some light on the IPO exit route for VC investments and how VC firms actually dispose of their holdings. The results were later confirmed by Lin and Smith (1998) and Brav and Gompers (2003). Strömberg (2007) looks at international buyout investment activity from 1970 to 2007. He finds that only 42% of the buyout funds' investments are exited within five years. Fürth and Rauch (2014) extend prior research, and use a dataset of 222 buyout-backed IPOs in the U.S. from 1999 to 2008 to draw a detailed roadmap of buyout investors' divestment processes. They find that buyout funds remain invested a substantial time after the lockup period and gradually dispose of their shares. They also find that the choice of exit strategy depends on the financial success of the deal for the buyout fund, as well as characteristics of both the portfolio and investor companies.

Gill and Walz (2016) reveal that VC-backed companies are significantly more likely to be targets for takeover deals and taken off the exchange, compared to non VC-backed firms. They argue that these sales can be interpreted as delayed trade sales, i.e., even though the portfolio company was taken public, the ultimate goal was not necessarily to sell shares to the public. As many as 69% of the VC-backed companies in their sample were taken over and delisted from the stock exchange, while 22% of non-VC-backed companies were.

Visnjic (2013) examines PE investors' exit strategy, in terms of exit channel and exit timing, relating to 1487 PE backed IPOs in the U.S. between 1996 and 2005. He finds strong evidence that PE investors strategically choose whether to sell their position en bloc in a trade sale or gradually to dispersed shareholders on the secondary market. According to his research, severe governance differences between

the two groups of exit strategies at IPO and evolving from IPO to exit suggest that PE investors anticipate and actively plan an eventual trade sale well in advance.

When it comes to exiting in different market environments, Lerner (1994) reveals that VC firms' exit behaviour is a highly strategic and thoroughly planned part of the investment process. His results indicate that IPO exits only take place when stock market valuations are high. By timing the IPO to a high-value market, the VC investor can minimize the dilution of the ownership stake. In times of stock market turmoil or low valuations, VC investors tend to choose secondary sales or trade sales as exit scenarios for their investments. In a follow-up paper, Gompers (1996) confirms that the exit is a strategically important part of the investment process for VC investors. Furthermore, Cao (2011) finds that market timing is critical for reverse leveraged buyouts (RLBO), and that fund managers drastically shorten the investment period if favourable market conditions allow for a lucrative exit via the IPO route. Investors are in a good position to influence the timing of the IPO, through having large equity stakes, control rights and board seats. Often, investors have more experience with IPOs than normal managers, and might therefore be better at timing the IPO (Lerner, 1994). Lastly, Fürth and Rauch (2014) are the first to extend this body of research by demonstrating that different market environments may also play a role in the exit strategies of PE investments after IPOs. Their results indicate that buyout funds exit their portfolio companies quicker and slightly more aggressively in bull markets than in bear markets.

Based on above discussion of previous studies, the different findings can be summarized into the following hypotheses:

H1: PE firms retain a large equity stake in their portfolio companies until well after the IPO

H2: PE firms do not exit all their board seats until well after the IPO

H3: VC-backed companies do more often get sold gradually on the secondary market compared to buyout backed companies

H4: Buyout backed companies are more often involved in a trade sale compared to VC-backed companies

H5: PE firms exit their portfolio companies quicker and more aggressively in bull markets than in bear markets

H5.1: There are fewer single share sale transactions of lower magnitude in bear markets compared to bull markets

H5.2: The time between each share sale is shorter in bull markets than in bear markets

4. Research Data

4.1 Sample Selection

The core dataset is a sample of 80 PE-backed companies which publicly listed stock on the Nordic stock markets through an IPO over the period 2002-2015 (referred to as "portfolio companies" for the purpose of this paper). As Westerholm (2006) argues, it is reasonable to analyse these countries together, as three of them (Sweden, Denmark and Finland) are under the same OMX umbrella and all of them are partners in the NOREX alliance, which harmonizes systems and regulations between the stock exchanges. I also followed the author and chose to exclude Iceland's stock market, as it is an outlier in terms of liquidity and its all-share index comprises only 15 listings in the Thomson Reuters Datastream database (Datastream). The lower boundary of 2002 was set in an attempt to exclude the potentially distorting effect on findings of the preceding Dotcom bubble (past studies repeatedly cite the significant influence this relatively short period had on results (Levis, 2011)), and due to the difficulty of finding electronically available documents (IPO prospectus, annual reports etc.) further back in time. The upper boundary of 2015 was set relatively recent in time versus the date of this paper in order to include recent years of so called 'hot issue' markets, but still early enough in order to allow for the main bulk of the PE investors to have finished their exit processes.

4.1.1 Initial Sample Generation

A list of all IPOs performed in the Nordic countries between 2002-2015 was retrieved from the financial database Zephyr. This list was cross-checked with a similar list retrieved from Bloomberg. The total screening of 413 companies obtained from these databases was subsequently reduced with those listings that stem from i.-v. in Table 1.

Table 1. Statistics on the Formation of the Final Sample

The table shows the process of generating the base sample size and subsequently the final sample size after all required criteria to be included are met.

Screening and exclusions	**Number of firms**
Zephyr Screening, all IPOs between 2002-2015	413
Less:	
i. Secondary listings	-48
ii. Listings on lists other than the main market lists	-12
iii. List transfers into main lists	-31
iv. Listings of closed-end funds and real estate investment trusts (REITs)	-10
v. Listings of Norwegian savings banks that issued equity certificates	-15
	297
Less:	
Non-backed IPOs	-192
Base sample	**105**
Less:	
IPO prospectus not available	-16
Investor has no controlling stake before IPO	-5
Investor sells control in IPO	-4
Final sample	**80**

Exclusions on criteria i. and iii. were performed as the shares of these listed companies were already priced on the market beforehand, which would distort comparisons to initial listings. Exclusions on criteria ii. were made to get a sample with as coherent profitability, size, and accounting requirements as possible prior to the listing. I have included stocks listed on the former Oslo SMB list, as these shares were transferred to Oslo Børs when the Norwegian stock exchanges were restructured in 2007, as well as when Oslo Axess was established for shares that did not meet the listing requirements of Oslo Børs. Additionally, shares listed on the former I and NM lists in Finland were included, as they became part of the OMX Nordic list together with shares from other Nordic main lists when the OMX Nordic Exchange opened a common presentation of Swedish, Danish and Finnish listed firms. Next, excluding closed-end funds and REITs (criteria iv.) is a common practice (Ritter, 1991; Loughran and Ritter, 1995). I excluded Norwegian savings banks that issued equity certificates (criteria v.), as those differ from common shares, e.g. in terms of

ownership rights on the company's assets.

4.1.2 Classification of New Listings

The initial screening of 297 companies post-exclusions was subsequently divided into three groups dependent on pre-listing ownership structure: non-sponsored IPOs, VC-backed IPOs and buyout-backed IPOs. I choose to distinguish between VC- and buyout-backed companies due to the severe differences in the investment approach, as outlined in the background. However, establishing whether a company belonged to the VC- or buyout backed group prior to its IPO proved to be a challenge for several reasons. First of all, there is an overall paucity of publicly available information on private equity deals. Moreover, as Cao and Lerner (2009) and Schöber (2008) note, lines between VC and buyout firms have become increasingly blurry, making the distinction between these two subgroups even more demanding. On a similar note, Wright and Robbie (1998) observe a trend of VC firms, which formerly invested exclusively into early-stage transactions, expanding into a broader range of financing activities such as management buyouts and buy-ins. Additionally, private equity companies tend to invest through a variety of funds with the ultimate ownership often being hard to establish. Therefore, to be as precise as possible, I individually research each IPO in order to first establish the involvement of a private equity sponsor prior to the IPO, and second to distinguish between VC- and buyout-backed IPOs.

For an IPO to be defined as private equity-backed, I require, similar to Schöber (2008), that the private equity sponsors own a significant equity stake in a portfolio company prior to the IPO. My threshold calls for an ownership by an individual financial sponsor of at least 10% of total share capital. Thus, even if the combined pre-IPO ownership of multiple private equity players in a particular company was above 10%, this company was classified as non-backed. On a similar note, a PE investor that had less than a 10% stake in a portfolio company at the time of the IPO was excluded from my sample, i.e. its exit process was not tracked. Information on the pre-listing ownership structure was primarily obtained from the listing prospectuses retrieved from either the company websites, Morningstar, Bloomberg or the financial supervisory authorities of the respective country. In case I could not retrieve the listing prospectus, I used annual reports, the ORBIS database,

corporate press releases and publications in the financial press to cross-check the pre-listing ownership. In other instances, I have excluded these listings from my sample, as I could not determine the necessary pre-listing conditions due to lack of data.

For determining the VC or buyout designation, a number of sources were used to classify each observation manually and cross-check the information retrieved among them, including Bloomberg, Preqin, Argentum Market Database, the Factiva news database and the corporate website of the PE investor. The pre-listing ownership data was then cross-checked with membership lists of the Swedish (SVCA), Norwegian (NVCA), Danish (DVCA) and Finnish (FVCA) Venture Capital & Private Equity Associations. For some of the cases when the company is not listed as a current member of these associations, I have determined that an owner is a of either type private equity fund based on highly indicative company names (e.g. *Four Seasons Private Equity*, that was part of the Odim ASA listing in 2005) or company descriptions (e.g. *Apax and Index Ventures,* that backed Genmab A/S in 2002). If despite my best efforts, I was either not able to clearly assign an IPO to one of our three sub-groups or clearly establish stockholdings of the involved private equity companies, the IPO was excluded from my analysis.

From the base sample of 105 companies that remained after excluding the non-backed companies, a further 25 observations were dropped due to either a missing IPO prospectus, or due to not meeting the requirement of a >10% stake in the portfolio company post-IPO or due to selling its entire stake in conjunction with the IPO. This leaves me with a final sample of 80 companies, of which 21 are VC-backed, and 59 are buyout backed.

4.2 Governance, Company and Market Data Collection

The shareholdings and board seats of PE investors at the time of the IPO are determined through the listing prospectus as well. To obtain the dates and magnitudes of all post-IPO share sales, I make use of an initial dataset obtained from the financial markets platform Dealogic comprising of detailed information on IPO follow-on deals, in the form of accelerated bookbuild offerings. This dataset includes pricing date, issuer name, deal value in euro, financial sponsor, selling shareholder, offer

price, and shares outstanding pre- and post-deal. To collect all remaining share sales, I manually tracked the selling process for each company. For companies listed on Oslo Børs, these are made publicly available at newsweb.no as "mandatory notification of trade" or "flagging of insider shareholdings". For Swedish companies sales may be found in the "Stock exchange information" database provided by Finansinspektionen which contains major shareholding notifications from companies listed on the exchange. Listed companies and shareholders are responsible for the content. Other share sales have been identified through a general internet search, from business news articles with information that can be confirmed in at least one other news article. Board exits are determined on an annual basis through the annual reports.

I collect all exit event data from January 2002 to April 2017. This means that the shortest exit period covered in the paper is one year and four months for the IPOs that took place in December 2015. Eight IPOs still had an active PE investor at the end of my observation period[4]. Additional data, such as the lockup periods, are obtained through the listing prospectus. The portfolio companies' balance sheet and profit & loss (P&L) data are obtained from Datastream.

4.3 Data Source Discussion

I concede that a justified critique to my paper is the limited sample size. Due to the difficulty of obtaining data prior to 2002, and due to many observations being dropped because of a missing IPO prospectus, it was not possible to obtain a larger sample size. Ideally, the data collection would have been cut off prior to 2015 in order to allow for a larger share of PE firms in the sample to have completed their exit process. On the other hand, as all databases turned out to be considerably inadequate, a manual collecting of data was required to ensure accurateness of the data. A much larger sample size than 80 would have implied an even more time-consuming process of manually classifying firms as VC or buyout, and manually collecting the specifics of the exit process variables.

A disadvantage of the small sample size is unfortunately evident in my data in

[4] Of these, four were listed in 2015 and one was listed in each of the years 2014, 2013, 2010, and 2005.

the form of an outlier bias. This can be seen when comparing the mean with the median figures in the summary statistics. I have chosen not to exclude any of the outliers, but instead show transparency by reporting both mean and median figures in the univariate tests performed in this paper.

Another limitation to my analysis is the risk of selection bias in the sample selection process. Selection bias can arise when members of the target population is excluded from the sample due to the nature of the sampling process (Keller, 2009). This can in turn distort the validity of the inference, as sample characteristics may deviate from those of the actual population. For my paper, a potential selection bias might be that the sample of PE-backed IPOs is biased towards large, profiled IPOs backed by renowned PE-sponsors, as there is typically more information available about such IPOs in comparison to smaller, less profiled IPOs. As a number of observations were dropped in my sample selection due to insufficient data, there is a risk that my final sample used in the paper excludes relevant observations.

Finally, another limitation might be source inconsistency, as my dataset is created based on numerous different sources in order to create a sample that is as large and coherent as possible. When comparing and cross-checking the information obtained from the different sources, I occasionally discovered minor variations related to the information presented. I therefore acknowledge that the input applied in my statistical testing procedures and analysis, may consist of minor errors.

4.4 Summary Statistics

4.4.1 General Sample

The sample constitutes 80 IPOs that occurred during the years of 2002 through 2015 on the Nordic stock markets. As shown in Table 2, I find that 21 (26%) companies received VC financing and 59 (74%) were backed by buyout investors. Regarding stock exchange distribution, the majority of the firms listed on the Stockholm and Oslo stock exchanges (45% and 38% respectively), while only 8 (11%) and 6 (8%) of the firms listed on the Copenhagen and Helsinki stock exchanges respectively. Panel B of Table 2 gives an overview of the industries of the sample portfolio companies. It shows that buyout backed companies dominate the consumer services, industrials and

consumer goods divisions with a 100%, 95%, 91% share respectively and VC-backed companies dominate the technology and health care divisions with an 86% and 63% share respectively.

Table 2. Annual Distribution of IPOs and Stock Market and Distribution of Industry

The following table displays annual distribution of IPOs and stock market and distribution of industry. Panel A reports that of the 80 PE-backed firms that went public between 2002 and 2015, 21 were VC-backed IPOs and 59 were BO-backed IPOs. 36 of the firms listed on the Stockholm stock market, whereas 30, 8 and 6 firms listed on the Oslo, Copenhagen and Helsinki stock markets respectively. Panel B provides the industry distribution based on the one-digit ICB.

Panel A

Year	Total Number of PE-backed IPOs	Number per IPO type		Number per Stock Market			
		VC-backed	BO-backed	OMXS	OSE	OMXC	OMXH
2002	3	0	3	3	0	0	0
2003	0	0	0	0	0	0	0
2004	5	2	3	1	4	0	0
2005	13	8	5	2	10	0	1
2006	10	3	7	5	3	1	1
2007	10	4	6	3	6	1	0
2008	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0
2010	5	1	4	2	0	3	0
2011	2	1	1	2	0	0	0
2012	0	0	0	0	0	0	0
2013	6	2	4	2	3	1	0
2014	10	0	10	5	3	2	0
2015	16	0	16	11	1	0	4
Total	**80**	**21**	**59**	**36**	**30**	**8**	**6**

Panel B

Portfolio Company Industry	All IPOs	VC-backed	BO-backed
Oil & Gas	6	3	3
Basic Materials	4	0	4
Industrials	20	1	19
Consumer Goods	11	1	10
Health Care	16	10	6
Consumer Services	11	0	11
Telecommunications	1	0	1
Financials	4	0	4
Technology	7	6	1
Total	**80**	**21**	**59**

The summary statistics for my final data set are presented in Table 3. The average in-sample deal is syndicated with 1.3 PE firms as investors, with 1.8 firms on average for VC-backed companies, and 1.1 firms for BO-backed companies.

The portfolio companies hold about €500 thousands in total assets, generating about €654 thousands in revenue at the time of the IPO with a net income of €6.5 thousands[5]. Buyout companies are significantly larger than VC companies measured by total revenues or total assets. The companies' leverage, calculated as debt over equity, is 3.0, on average. Buyout companies have a significantly higher debt level at the time of the IPO and show better profitability ratios. Valuation measured by market-to-book is on average higher for buyout companies.

Table 3 further shows that the buyout group outpace their VC backed counterparts both in terms of the size of the IPO and the relative amount of shares sold at the IPO. Companies belonging to the buyout group do on average less frequently state that they will use the proceeds for general corporate purposes and acquisitions. In contrast they do more often indicate that the proceeds will be used for growth funding or for paying back corporate debt.

[5] Both the VC group and BO group sample means are driven by outliers, see median for comparison.

Table 3. Characteristics

Depicted are summary statistics on general information about the PE firms, portfolio companies and the IPO. The upper part of the table presents the number of PE firms and funds invested in the portfolio company. The middle part reports portfolio company-specific information: The portfolio company board size and details on operational data (last FY before the IPO). The lower part reports details on IPO characteristics, as explained in Appendix.

	Full			**VC-backed**			**BO-backed**		
	mean	median	std.dev.	mean	median	std.dev.	mean	median	std.dev.
Investor									
Number of invested PE firms	1.3	1.0	0.6	1.8	2.0	0.8	1.1	1.0	0.3
Number of invested PE funds	2.6	2.0	1.6	2.9	2.0	1.8	2.5	2.0	1.9
Portfolio Company									
Board size	6.9	7.0	1.9	6.0	6.0	1.5	7.2	7.0	2.0
Total assets at IPO (th €)	508.3	240	876.4	61.1	10.0	170.0	660.2	353.0	965.3
Revenues at IPO (th €)	654.3	195.5	1,919.9	37.5	9.5	73.0	859.9	385.0	2,182.7
Income at IPO (th €)	6.5	4.5	29.9	-2.6	-1.0	6.3	9.5	6.5	33.9
Leverage at IPO (%)	3.0	1.0	13.8	0.2	0.0	1.2	4.1	1.0	16.0
Return on assets at IPO (%)	-6.0	2.0	30.8	-34.4	-14.5	51.7	3.7	3.0	5.7
# Employees	8,902	758	60,648	146	66	254	11,975	1,232	70,390
Market-to-book	3.6	3.0	3.2	4.7	3.0	4.2	3.3	2.5	2.8
Gross margin	24.2	32.0	63.4	-5.9	31.0	115.8	34.7	32.0	23.2
EBITDA margin	-16.0	11.0	161.4	-109.2	-3.0	310.4	15.0	12.0	12.3
EBIT margin	-21.3	8.0	160.8	-115.2	-14.0	309.0	10.0	9.0	9.2
NI margin	-27.4	2.0	160.2	-118.8	-9.0	309.0	3.1	3.0	6.9
IPO									
Size	8.9	9.0	0.7	8.6	9.0	0.8	9.0	9.0	0.6
Relative size (%)	66.9	55.5	60.8	45.3	46.0	21.9	73.0	56.5	66.7
Capital increase (%)	32.5	24.0	33.9	74.8	87.0	30.9	20.7	14.0	23.9
General	0.9	1.0	0.3	1.0	1.0	0.2	0.9	1.0	0.3
Growth	0.4	0.0	0.5	0.3	0.0	0.5	0.4	0.0	0.5
Debt	0.3	0.0	0.4	0.1	0.0	0.3	0.3	0.0	0.5
Acquisitions	0.3	0.0	0.4	0.4	0.0	0.5	0.2	0.0	0.4
Dividends	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

As described in the background section, typical PE investments can be split up into two distinct periods: The investment period covers the investment process and the private phase of the portfolio company, which probably is the time the PE investor is most actively managing his investment. The divestment period is characterized by the investor actively reducing his stake in the portfolio company and therefore his influence, until either the controlling stake or the entire position is sold. The two periods are separated by the IPO as normally no shares are sold beforehand. At the earliest the exit process starts with the IPO.

4.4.2 Investment Period

With an average equity interest of around 72% buyout investors on average have a larger stake in their portfolio companies compared to their VC counterparts, which averages around 48%.

Surprisingly, in terms of duration, the investment period is on average slightly longer for *buyout investments* with 5.6 years compared to 5.3 years for VC investments. This is the opposite to what could be expected from previous research on the U.S. PE market and intuition.

Table 4. Investment Characteristics (Right Before the IPO Takes Place)

Depicted are average figures for the full sample, the VC-backed as well as the buyout-backed sub samples. The last column contains t-values and asterisks indicating whether the VC-backed and buyout backed means differ significantly.

	Full			**VC-backed**			**Buyout-backed**			**VC vs. Buyout**	
	mean	median	std.dev.	mean	median	std.dev.	mean	median	std.dev.	t-value	sig.
Age initial	35.4	17.0	41.6	10.4	4.5	21.6	43.8	27.0	43.4	3.29	**
Age IPO	40.2	21.0	42.0	14.3	10.0	21.0	49.5	32.0	43.8	3.52	***
Investment duration	5.6	5.0	2.9	5.3	5.0	2.6	5.6	5.0	3.0	0.46	
# invested PE firms	1.3	1.0	0.6	1.8	2.0	0.8	1.1	1.0	0.3	-5.97	***
Investor stake (%)	66.0	67.0	26.7	48.2	50.0	27.3	72.3	76.0	23.7	3.85	***
Dilution (%)	91.1	86.0	78.3	81.3	80.0	19.3	94.6	89.0	90.5	0.67	
Director ratio (%)	30.9	29.0	15.9	33.6	31.0	15.9	30.0	29.0	16.0	0.88	

Table 4 shows that the average buyout backed portfolio company is significantly older than the average VC backed company. This is true, both at the time of the initial investment and at the IPO.[6] Given the nature of the distinct investment approaches, this has to be expected. VC portfolio companies are on average backed by 1.8 investors compared to 1.1 in the case of buyout backed companies, as already depicted in Table 3, and Table 4 shows that this difference is significant. Splitting up the sample into VC and buyout backed companies reveals two main differences: Average VC backed firms are significantly younger and smaller compared to average buyout backed firms. Even if this has to be expected, it could be important for the future analysis. In terms of dilution[7], the buyout investors' stake experiences higher

[6] The mean is distorted by outliers, for both the VC and BO sample.
[7] A simplified dilution factor is calculated by dividing the number of shares outstanding before IPO by number of shares outstanding after IPO

dilution effects (owing to a higher relative size of capital increases). Investors' representation among the board of directors, which can be seen as a proxy for the power of control by the investors, is larger in the case of VC backed firms.

4.4.3 Divestment Period

Table 5. Distribution of Exit Venues post IPO

The table depicts the distribution of exit venues after the IPO for the full sample, VC-backed and buyout backed sub samples. T-values give information on significance of differences in frequency between the two sub samples.

	Full		**VC-backed**		**Buyout-backed**		**VC vs. Buyout**	
	obs.	%	obs.	%	obs.	%	t-value	sig.
Gradual	60	75.0	14	66.7	46	78.0	0.85	
Trade sale	10	12.5	3	14.3	7	11.9	-0.08	
SEO	0	0.0	0	0.0	0	0.0	0.00	
Worthless	2	2.5	0	0.0	2	3.4	0.85	
Active	8	10.0	4	19.0	4	6.8	-1.62	
Total	**80**	**100.0**	**21**	**100.0**	**59**	**100.0**		

Table 5 reveals two main findings on the distribution of exit strategies: First, in contrast to VC-backed companies, buyout backed companies do more often get sold gradually on the secondary market. The share is 78% for buyout backed companies and 67% for VC backed companies. This result is the opposite to the finding in Visnjic's (2013) analysis of the U.S. PE market, where 60% of VC companies were sold gradually on the secondary market vs. only 24% of the buyout backed companies. This also means rejection of Hypothesis 3. Second, VC-backed companies are more often involved in a trade sale compared to buyout backed companies (share of 14% vs. 12%). This is also contradictory to Visnjic's findings, where the corresponding share was 22% vs. 28%, and this rejects Hypothesis 4. These results are interesting as they point out a major difference between the U.S. and the Nordic PE market. In addition, Visnjic (2013) found that the share of investors selling their controlling stake through an SEO was 34% for the buyout group vs. 7% for the VC group. In the Nordic sample, none of the companies were exited through an SEO.

Table 6. Investor Stake pre- and post IPO

Depicted is aggregated investors equity stake in the portfolio company before and right after the IPO transaction. Relative shares are calculated by dividing the number of shares held after the IPO by the number of shares held before the IPO.

	Full sample	**VC-backed**	**BO-backed**	**Gradual**	**Trade sale**
Stake before	66.3%	48.2%	73.2%	61.5%	72.9%
Stake after	32.1%	26.9%	34.1%	28.6%	43.9%
Change in stake	-51.6%	-44.2%	-53.4%	-53.5%	-39.8%
Relative stake	73.1%	97.0%	64.0%	72.9%	75.3%

As stated earlier, investors' selling behaviour during the IPO reveals that overall, they do not sell a meaningful amount of shares. This fact clearly disqualifies the IPO from being the complete exit. However, depending on investment type and on the future exit strategy, there are minor differences in the selling behaviour at the IPO.

The first two rows in Table 6 might suggest that investors sell between 40 and 50% of their stake during the IPO. E.g. for the full sample the average equity stake declines from 66.3% before the IPO to 32.1% after the IPO. This corresponds to a 51.6% relative decrease in the stake. In Visnjic's (2013) analysis of PE exits in the U.S. analysis, the relative decrease was only 25.9%, based on the average equity stake decline from 58.3% to 43.2%. However, a large part of the decline happens because of dilution effects rather than active selling by the investors. As a consequence, a more reasonable measure of the selling decision is the change in the number of shares depicted in row four. In fact, these figures suggest that on average investors do not sell more than 30% of their shares during the IPO. Interestingly, the VC group companies do on average experience only 3% selling at the IPO. For the U.S. sample, these results were even stronger, revealing that on average investors hardly sell more than 1% of their shares during the IPO, across all the different columns (Visnjic, 2013). The most interesting difference between the Nordic and the U.S. sample is the relative stake sold by buyout backed companies, which for my sample is 64.0%, and for Visnjic's sample it is 97.4%.

5. Methodology

5.1 Exit Events of PE Investors

In the first step of my analysis, I begin by determining the characteristics of the full PE investment lifecycle by measuring the overall period it takes the PE funds to sell all shares and give up all board seats. As illustrated in Figure 1, I model the exit process on two different levels: 1) the actual period in which the PE firm investors lead the portfolio company to the IPO, and 2) the period following the IPO. The latter period is further separated into the pre- and post-lockup period. The investment period is calculated as the time in years from the initial investment until the IPO date. The divestment period is calculated as the time in years from the IPO until the final share sale of the PE investor in the respective portfolio company. I follow Fürth and Rauch (2014) and calculate the third indicator, the duration, as a weighted average of the time between each share sale, much like the regular bond duration. This variable is used as a value-weighted time indicator to account for differences in PE firms' exit behaviour[8]. I obtain the start dates for the investment lifecycle from either the IPO prospectus, Prequin, Argentum Market Database, or the website of the PE firm, which is the date on which the initial equity investment of the PE firm is made in the respective portfolio company. The end points of the investment lifecycles are obtained either from Dealogic or from Finansinspektionen, Newsweb or business media, as described in Section 3. I use the date of the last share sale transaction of each invested PE firm in each portfolio company as the ending date of the investment lifecycle.

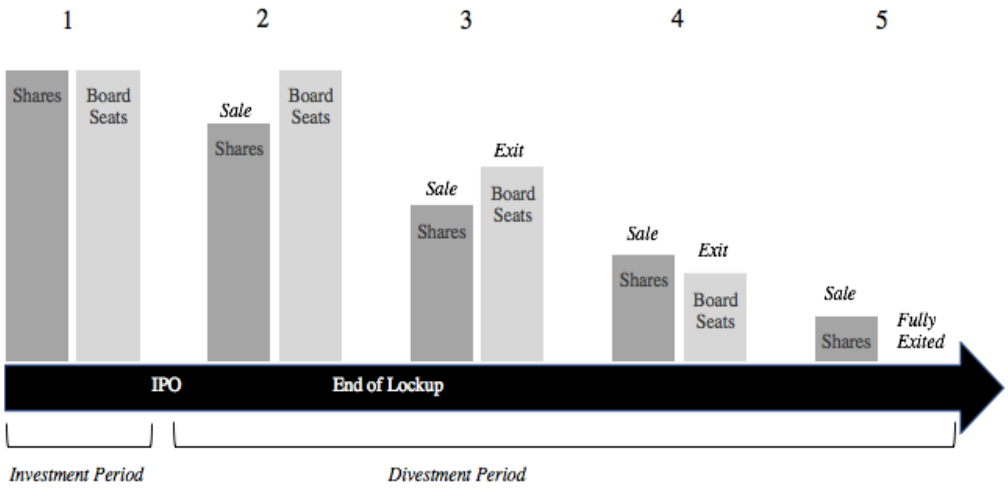
To gain a deeper understanding of the strategies behind the exit process, I also determine the timing and aggressiveness of the post-IPO exit process. Both are being measured by using data on the actual dates and volumes of share sale transactions. Through the data collection process I have obtained the exact date, size, transaction value (for share sales: number of shares sold multiplied by the share price), and the relative value of the shares in relation to the shares held in the firms after the IPO

[8] The duration is calculated as: $\frac{\Sigma Time\ x\ Transactin\ Value}{\Sigma\ Transaction\ Values}$, where the time factor is measured in years and the transaction value is measured as the amount of shares sold times the share price. Two PE firms might have identical divestment periods; however, one firm might sell most of its shareholdings at an early point in time after the IPO, while a competing firm might hold onto the largest portion of its holdings until the end of the divestment period. Following my calculation, the latter firm would have a higher duration indicating a longer active investment in the portfolio company.

takes place. This data reveals when an exit transaction takes place and by how much each exit reduces the shareholdings. Using this data, I follow Fürth and Rauch (2014) and construct two additional indicators of the exit strategy that serve as proxies for the aggressiveness with which the PE firms sell their shareholdings and exit the boards of their portfolio companies. The first variable I construct measures the average time between each single share sale transaction, starting with the first post-IPO share sale. By disregarding the overall holding period and concentrating on the timing of the share sales relative to each other, this variable indicates whether PE firms "pump" their shares quickly and in short frequencies into the market, or if they decide to sell the shares slowly, but constantly, leaving longer intervals between each sale transaction. I use this variable as an indicator for the overall aggressiveness of the exit strategy[9].

Figure 1. PE Exit Events – Overview and Explanation

The displayed figure explains a hypothetical PE exit process. There are two kinds of exit events: First, every single share sale transaction in which the PE investor sells shareholdings in the portfolio company at or following the relevant portfolio company's IPO, and second, each time one (or several at once) PE firm managers leave the portfolio companies' board of directors. I thereby differentiate between exits at IPO (2) and those exits at (3) or after (4), the expiration of the share lockup period (usually 180 days following the IPO), until the PE firm owners reach a 0% ownership (5).



[9] One could argue that it would be more accurate to also link the share sales to *how much* of the stake that is sold on a cumulative basis. I.e., a fund that sells 50% quickly is more aggressive than another fund that spreads out the share sales over a longer period of time.

5.2 Analysing Exit Timing versus Bull and Bear Environments

In the next step of the analysis of the exit process, I use all exit indicators as presented above to analyse changes in the PE firms' exit behaviour over time in accordance with varying market environments. It is conceivable that PE firms adjust their exit behaviour to those varying market environments. After all, the strength or weakness of stock markets at the time of a PE firm's exit is vital for the financial success of the sale of the PE firm's shareholdings in the portfolio company. As outlined in the literature review, previous research find that this holds true for the timing of the IPOs and RLBOs. Fürth and Rauch (2014) extended this body of research by demonstrating that different market environments also play a role in the exit strategies of PE investments after IPOs in the U.S., and I aim to investigate if the same holds for the Nordic market. I place my emphasis on different equity market periods, as opposed to economic growth or financial crisis periods. I measure bull and bear stock market periods using the common methodology in existing literature, that is, stock market peaks and troughs in six-month windows, separating stock market upward and downward movements (Pagan and Sossounov, 2003; Candelon, Piplack, and Straetmans, 2008; Chen, 2009). I determine the respective peak and trough dates using the MSCI Nordic Countries Index. This methodology yields four major market periods including two bull and two bear markets (as later demonstrated in Table 8). I use this segregation for the sample split in order to perform a univariate test in the form of a t-test, similar to those performed in the summary statistics section, to test whether the mean of two samples is the same.

5.3 Analysing the Relationship Between Exit Indicators

In the final step of my analysis, I determine the relationship between the different exit indicators. It may be the case that PE firms structure their pre-IPO period and post-IPO exit periods jointly, or structure their post-IPO exit strategy in accordance with the outcome of the pre-IPO period. To reveal possible joint relationships between the exit indicators I run a correlation analysis in which I try and determine how strongly the different exit indicators are linked to each other without having to postulate the

causalities between them.

This analysis could be the first step toward a more extensive analysis for understanding which possible factors that may influence the exit behaviour of PE firms on the Nordic market. Given my small sample size, performing any multivariate tests similar to those done by Fürth and Rauch (2014) and Visnjic (2013) on the U.S. market, might not generate any meaningful results in this paper and is therefore not considered.

6. Results and Analysis

6.1 Exit Events of PE Investors

Table 7 presents the investment characteristics and offers detailed insight into single share sales and board exit transactions. Panel A provides a general overview of the length of the investment lifecycle. I first review the time from the initial investment to the IPO (the investment period) and compare it to the time from the IPO to the final exit (the divestment period). I find that the divestment period is half as long as the investment period. The investment period lasts 5.4 years, while the divestment period is, on average, 2.6 years. This is similar to the finding in Fürth and Rauch (2014), where the divestment period is 2.8 years, although they found that the investment period for U.S. buyout funds is only 3.1 years. The finding for my sample is still interesting, as it contradicts the general perception and assumptions of most of the prior literature, which generally believes that PE firms quickly exit their portfolio firms following an IPO. Judging from my results, this does not seem to be the case. The length of the PE managers' board tenures further supports this finding. On average, PE firms remain active on their portfolio companies' boards for about 3.1 years after the IPO. Given the long post-IPO ownership periods, this is not unexpected. The PE firms retain some kind of insight into or control over their portfolio companies as long as they are actively invested in them. The duration of the divestment period (calculated as the weighted average of the time between each share sale, as explained in Section 5) is only slightly shorter at about 1.4 years, indicating that PE managers sell more of their shares in the second half of their divestment period. This compares to the U.S. results, where buyout funds remain active on their portfolio companies' boards for 3.2 years after the IPO, with a divestment duration of 2.3 years (Fürth and Rauch, 2014). Panel A also indicates that each PE firm in my sample holds, similar to U.S. buyout funds, 50% of the ownership rights in their portfolio companies prior to the IPO, along with approximately one fourth of the board seats. The shareholdings are reduced to 26% at the IPO (vs. 33% in the U.S.). In the three years subsequent to the IPO, both shareholdings and board seats are gradually reduced. Two things are of interest here. First, the divestment process is not performed in a few single steps, but gradually over time. In addition, the PE investors

still retain about 6% of the shares and 8% of the board seats three years after the IPO. The figures are 18% and 14% for U.S. buyout funds respectively. Apparently, PE investors are keen on remaining active investors in their portfolio companies for longer periods of time. These results support Hypotheses 1 and 2.

In Panel B, I examine the timing and magnitude of the actual share sales and board exits in relation to the IPO. The results in the table offer five main findings. First, PE firms reduce their total shareholdings (as recorded on the IPO date) by 30.3% per sales transaction. In addition, there is slightly more than a year (1.3 years) between each sale. Moreover, I find that it takes PE firms 1.5 years for the first share sales transaction to take place after the IPO. In this transaction, 14.1% of the PE firm's total remaining ownership stake in the portfolio company is sold. I also find that the last share sale takes place 2.4 years after the IPO with 17.8% of the holdings sold in this transaction. Lastly, the single highest share sale transaction takes place rather late in the divestment process, at an average of 2.3 years. PE firms sell 18.6% of the remaining holdings in their portfolio company in this transaction. These findings provide more depth to and support for the outlined exit strategies of PE firms presented in Panel A of Table 7. PE firms are in no rush to dispose of their shareholdings following an IPO, and hold on to larger stakes of their ownership rights for longer periods of time. In this exit process, each sales transaction is used to gradually reduce the ownership in the portfolio companies. Again, a similar pattern emerges in regard to board seats. The results are similar to the findings in the U.S., although the U.S. reduction in holdings and transaction values are of higher magnitudes.

Panel B also comprise information regarding the share sales transactions around the lockup dates. The lockup day sales are critical as the unlock day is the first opportunity for a PE investor to dispose of shares in the open market following an IPO. However, the results suggest that PE firms do not make use of this opportunity. As the first post-IPO sale takes place 1.5 years after the IPO, and given that the usual lockup periods are 180 days, PE firms tend to wait a substantial period of time after the end of the lockup period to initiate their first share sale. My results indicate that PE firms sell shares in only eight portfolio companies at the end of the lockup period. In Fürth and Rauch (2014) only two buyout funds out of 222 sell shares at the end of the lockup period. Boards are never existed at this time. My analysis reveals a second

interesting finding regarding exits at or around the end of the lockup periods. PE firms sell shareholdings during the lockup period in nine portfolio companies. This means that the IPO underwriters of nine portfolio companies must have allowed the PE firms to sell shares despite pre-existing lockup agreements[10]. Taking these results together, the exit process appears to be a very complex and strategic part of the investment lifecycle that does not end with the IPO or the end of the lockup period.

[10] It is the underwriter who can allow single pre-IPO shareholders to sell shares despite of the existing lockup agreement.

Table 7. The Exit Roadmap: Share Sales and Board Seats

This table displays the timing and magnitude of exit strategies (share sale transactions and director exits) for the 57 unique PE firms and 80 portfolio companies in my sample. Panel A presents the summary statistics of general ownership indicators. I report the investment period, divestment period, divestment duration (all calculated as explained in Section 5 and the Appendix), and the total time the PE managers spend on boards of their portfolio companies (in years). All numbers are mean, median, and standard deviation values calculated on the fund level, for both VC and BO. In Panel B, I report the actual exits in which the PE investors sell shares and give up board seats after the IPO. I report all exits post-IPO, the first single exit after the IPO, as well as the last and single highest exit. For each exit, I provide the magnitude (in form of the transaction value), the time between sales and board exits, and the relative reduction in holdings the exit triggers. I further report values on the exits in relation to the end of the lockup period after the IPO. Note that the wording "post IPO" refers to the point in time when the primary market equity offering has taken place, but secondary trading in the stock has not yet commenced.

Panel A. Ownership Summary

Year	Mean	Median	Std.Dev.
Investment Overview			
Investment Period	5.4	5.0	3.0
Divestment Period	2.6	2.0	2.3
Divestment Duration	1.4	1.0	1.6
Ownership (%)			
Before IPO	49.9	47.5	30.1
Post IPO	26.0	22.0	15.5
Ownership at the end of			
IPO year	23.2	20.5	17.1
IPO + 1 year	13.4	11.0	15.7
IPO + 2 year	8.9	0.0	15.4
IPO + 3 year	5.7	0.0	13.0
Board Seats (%)			
Post IPO	24.8	20.0	13.3
Board Seats at the end of			
IPO year	20.8	18.0	12.6
IPO + 1 year	15.3	14.0	12.9
IPO + 2 year	11.7	13.5	11.3
IPO + 3 year	7.5	0.0	10.1

Panel B. Divestment Process

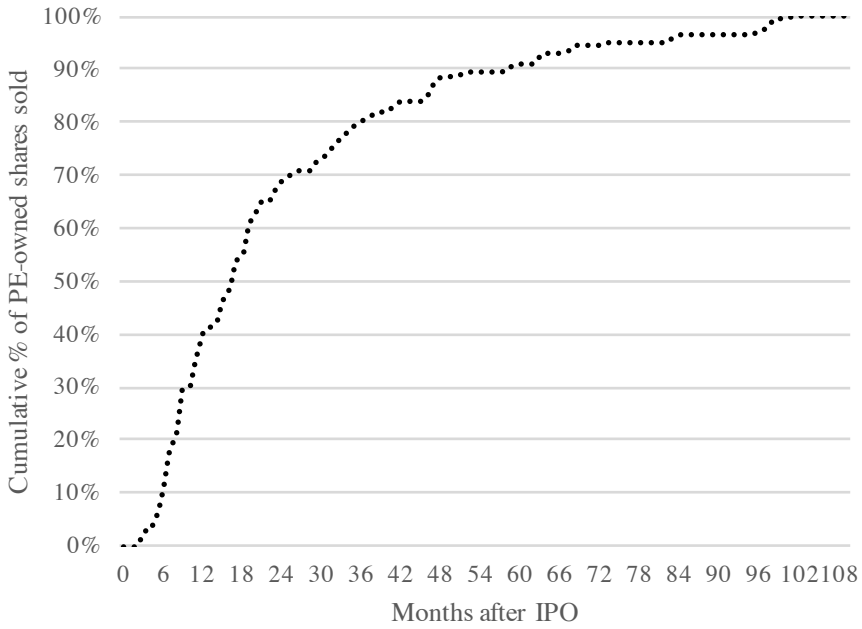
	# Firms	Mean	Median	Std.Dev.
All Share Sales post IPO				
Reduction in Holdings	68	30.3	27.5	13.7
Time Between Sale Transactions	53	1.3	1.0	3.6
Transaction Value	56	256.4	111.5	434.6
First Share Sale post IPO				
Years from IPO	74	1.5	1.0	1.4
Reduction in Holdings	74	14.1	12.0	10.2
Transaction Value	67	81.3	44.0	125.6
Last Share Sale post IPO				
Years from IPO	66	2.4	2.0	2.1
Reduction in Holdings	66	17.8	16.0	11.4
Transaction Value	62	104.2	47.0	163.1
Highest Share Sale post IPO				
Years from IPO	71	2.3	2.0	2.0
Reduction in Holdings	71	18.6	18.0	10.5
Transaction Value	65	100.5	45.0	138.4
Share Sale pre-Lockup				
Reduction in Holdings	9	16.4	16.0	12.2
Transaction Value	8	57.0	42.5	59.9
Share Sale at Lockup-End				
Reduction in Holdings	8	10.4	10.5	6.5
Transaction Value	7	141.4	15.0	250.8

Figure 2 provides a graphical illustration of the exit process for the PE-backed firms in my sample. Panel A shows that after six months, when the lockup period ends for most firms, selling activity accelerates. The majority of shares still retained after IPO are sold, on average, 17 months post IPO. After two years the investor on average has sold around 70% of his holdings. Selling activity softens thereafter. Panel B confirms that the investor on average sells only about half of his holdings at the IPO. 4% is sold pre-lockup, 27% is sold post-lockup, but within two years, and the remaining 15% is sold beyond two years.

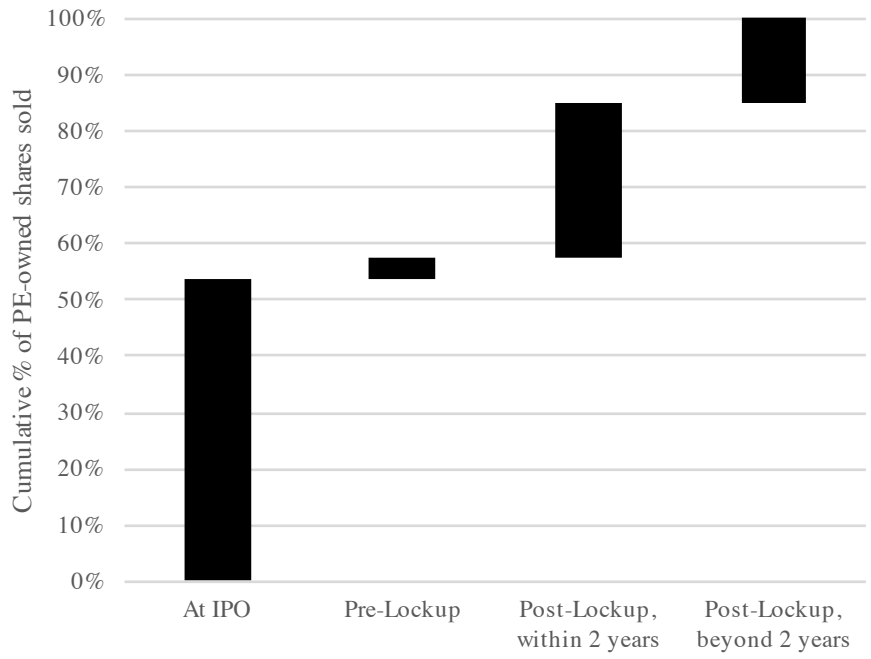
Figure 2. PE Equity Stake Evolvement Post IPO

The figures show the cumulative % of PE owned shares sold for the full sample and how it evolves over time. In Panel A, percentage stake is displayed on the y-axis and months after IPO is displayed on the x-axis, with 0 as the time of the IPO. In Panel B, percentage stake is displayed on the y-axis and different cut-offs in the divestment period post IPO is showed on the y-axis. Note, that both charts show the average shares for observations where the figures are available. Naturally the number of observations declines over time.

Panel A. PE Equity Stake Evolvement - Months After IPO



Panel B. PE Equity Stake Evolvement - Different Cut-Offs After IPO



6.2 Analysing Exit Timing versus Bull and Bear Environments

Table 8 provides a descriptive indication that PE investors adjust their exit behaviour over time. My results suggest that PE firms exit their portfolio companies quicker and slightly more aggressively in bull markets than in bear markets, supporting Hypothesis 5. There are fewer single share sale transactions of lower magnitude in bear markets (1.6 with an average of €31.2 million in proceeds) as compared to bull markets (with 2.3 transactions and €192.7 million in proceeds). This supports Hypothesis 5.1. The time between each share sale is longer in bull markets (0.7 years) than in bear markets (0.4 years). The reverse is true for the U.S. sample (Fürth and Rauch, 2014), and this rejects Hypothesis 5.2, but given the long periods of bull market environment vs. the short periods of bear market environments this result was not unexpected. The intuition is that shortening the exit process in bull market periods makes sense. High equity market valuations may allow for share sales at a premium to the original purchase price. In addition, bull market periods are usually accompanied

by phases of strong PE fundraising. Therefore, PE managers must divest existing portfolio companies to invest newly raised funds. In contrast, in equity bear markets fundraising is more difficult, valuable exit opportunities are scarce, and PE managers may be more inclined to wait for the markets to turn around before they sell their shares in the portfolio companies.

Given the results from Table 8, the stock market environment apparently plays a pivotal role in PE investors' exit decisions. This finding is further confirmed by two facts from the earlier stages of the PE investment lifecycle: on average more initial investments take place in bear periods, and on average more IPOs are taking place in bull periods, as displayed in the two last rows of Table 8.

Table 8. Exits in Different Market Environments

Table 8 contains information about the changes in exit behaviour in different (stock) market environments. I define bull and bear markets using stock market peaks and troughs (in six-month windows) represented by the index values of the MSCI Nordic Countries Index. I also report the mean values of all of the variables across the two aggregated bull and bear market periods. In addition, difference-in-means values are reported, comparing the means across the sample for the combined bull and bear markets, respectively. ***,**,* denote significance at 1%, 5%, and 10% respectively. In addition I report the number of initial investments and number of IPOs per bull or bear market, both being time-adjusted given the different lengths of the bull and bear periods.

	Bear Market 1	Bull Market 1	Bear Market 2	Bull Market 2			
	01/01/2002-16/10/2002	17/10/2002-14/11/2007	15/11/2007-11/03/2009	12/03/2009-30/04/2017	Bull Markets Mean	Bear Markets Mean	Difference-in-Means
All Share Sales post IPO							
Number of Share Sales	-	1.9	1.6	2.7	2.3	1.6	0.7*
Reduction in Holdings (%)	-	22.3	14.9	31.7	26.6	14.9	11.7***
Transaction Value	-	104.7	31.2	280.7	192.7	31.2	161.5***
Time Between Share Sales	-	0.5	0.4	0.9	0.7	0.4	0.3**
Number of Initial Investments	8.0	8.7	3.8	1.9	5.3	5.9	-0.6**
Number of IPOs	5.3	7.1	0.0	5.6	6.4	2.7	3.7**

Given that the bull and bear periods are of different length, I perform one final analysis in which I depict number of share sales, percentage reduction in holdings and transaction value *per year*. Table 9 and the accompanying graphical illustration in Figure 3 complement and confirm the findings in Table 8. Interestingly, peaks in both number of share sales and transaction values are observed in the late phase of each bull market (2007 and 2016 respectively). The high average transaction value in 2014 is driven by share sales in Danish companies ISS and Pandora.

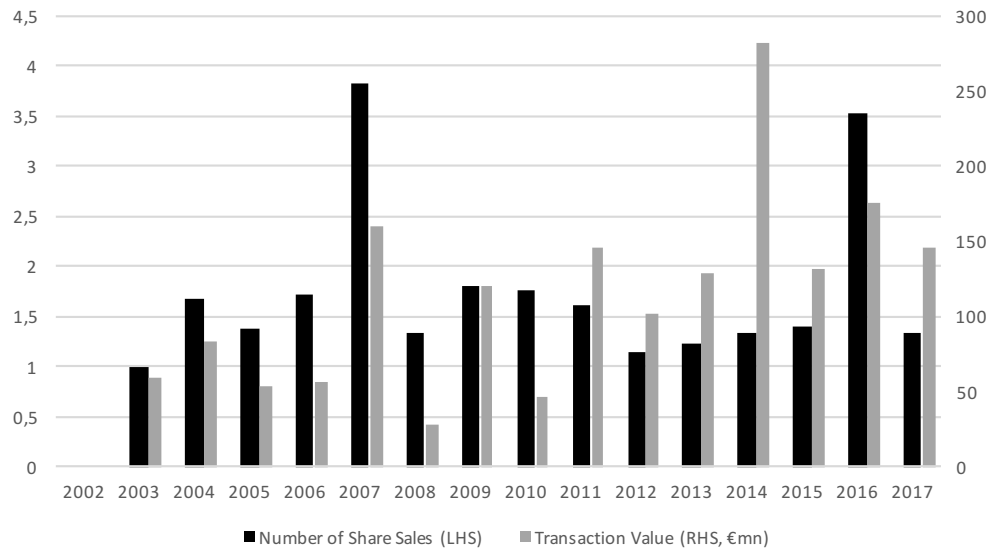
Table 9. Annual Distribution of Share Disposal post IPO

Table 9 contains information about the changes in exit behaviour per year. Depicted are the average number of share sales per company per year, and the average reduction in holdings and transaction value per share sale.

Year	Number of Share Sales		Reduction in Holdings		Transaction Value	
	# firms	mean	# firms	mean	# firms	mean
2002	0	-	0	-	0	-
2003	3	1.0	3	13.5	3	58.5
2004	3	1.7	3	13.5	3	83.7
2005	8	1.4	8	18.1	7	53.8
2006	7	1.7	7	14.7	8	55.8
2007	8	3.8	8	17.0	7	159.3
2008	6	1.3	6	12.1	5	27.3
2009	10	1.8	10	12.4	10	119.2
2010	4	1.8	4	9.5	4	45.5
2011	5	1.6	5	15.1	5	145.1
2012	7	1.1	7	14.6	7	101.7
2013	9	1.2	9	16.8	9	128.6
2014	12	1.3	12	19.3	12	281.8
2015	18	1.4	18	18.6	18	130.7
2016	17	3.5	17	33.5	16	175.3
2017	9	1.3	9	22.9	9	146.0

Figure 3. Annual Distribution of Share Disposal post IPO

Figure 3 illustrates the changes in exit behaviour per year. The left-hand y axis shows the average number of shares sales per company for a given year, and the right-hand y axis shows the average transaction value per share sale in million euros.



6.3 Analysing the Relationship Between Exit Indicators

In the final part of my analysis, I run a correlation analysis of the different exit indicators, as presented in Table 10.

Table 10. Correlation of Different Exit Indicators

The table provides the results of a correlation analysis of the different exit indicators. ***,**,* denote significance at 1%, 5%, and 10% respectively.

	Investment Period	Divestment Period	Divestment Duration	Exit Timing
Investment Period	1.00			
Divestment Period	-0.21	1.00		
Divestment Duration	0.02	0.89***	1.00	
Exit Timing	-0.01	0.09***	0.05***	1.00

I find two main results. First, there is a high correlation between the divestment period and the divestment duration, and between the divestment period and the exit timing. This is presumably unsurprising for two reasons. First, my descriptive results suggest that in different market environments, PE investors adjust their overall post-IPO exit strategies. The joint movement of the post-IPO exit indicators I see in the correlation analysis lends support to this finding. The exit process thus appears to be a strategized and planned part of the overall investment. On the other hand, this result is also unsurprising for technical reasons. The divestment period and duration are calculated similarly (see Table 1 in Appendix for a description of the variable construction). Moreover, a shorter average time between share sales should also cause the overall divestment period to be shorter, hence the quite strong positive correlation. This also explains the correlation of 0.05 between the duration and the exit timing. The variables are, therefore, technically correlated. My second main result is that there are no significantly high correlations between the other exit indicators. I find only low and insignificant correlations between the pre-IPO investment period and the main post-IPO exit indicators. This result is remarkable as it might be suspected that the length of the pre-IPO period should have some relationship with the subsequent post-IPO strategy of the exit. Particularly since the remaining results point to the fact that the exit process is actively planned and

executed. Longer periods prior to the IPO might call for a quick post-IPO unwinding to create distributions to the funds' investors, just as shorter pre-IPO periods might allow the fund to exit the companies in an unaggressive manner.

7. Conclusions

This paper analyses how PE investors exit their portfolio companies following IPOs. I specifically analyse when and how the PE firms divest their shareholdings and give up board seats in their portfolio companies, as well as how the exits are timed versus bull and bear market environments. To do so, I use a data set comprised of 80 PE investments, divided into 21 VC investments and 59 buyout investments, that went public in the Nordic region from 2002 to 2015.

I find three major results. First, I confirm the recent results obtained from the U.S. buyout fund market: PE firms in the Nordic countries dispose of their portfolio companies gradually and steadily over time, instead of selling most of their shareholdings at or shortly after the IPO. The PE investors in the Nordic countries deliberately choose to stay invested for an average of almost three years following the IPO. The same is true for board seats that are retained even longer than the share ownership. This result is especially interesting in light of PE funds' institutional backgrounds. Generating investor returns within the shortest possible period of time is among the main goals of PE firms. Therefore, it could be assumed that PE firms try to dispose of their investments as quickly and swiftly as possible. However, this does not seem to be the case. Second, PE investors in the Nordic countries adjust their exit behaviour over time, exiting their portfolio companies quicker and slightly more aggressively in bull markets than in bear markets. This also confirms results from the U.S. buyout fund market, and is an interesting finding as it extends the body of research which previously has only confirmed that market-timing occurs when considering the IPO itself as an exit. Third, I find only low and insignificant correlations between the pre-IPO investment period and the main post-IPO exit indicators. This result is of interest as it might be suspected that the length of the pre-IPO period should have some relationship with the subsequent post-IPO strategy of the exit. Particularly since the remaining results point to the fact that the exit process is actively planned and executed.

These results are the first of its kind in the Nordic region, and offer valuable insight into PE firms' investment and divestment strategies, encompassing both VC-backed firms and buyout backed firms. The findings are particularly relevant for professional investors.

While recognizing that the main limitation of my study is the small sample size, preventing me form conducting any meaningful multivariate tests, my study lays the groundwork for future research including more extensive analysis of the determinants of PE exit strategies. Another suggestion would be a thorough analysis of capital market reactions to PE firms' disposal of shares post IPO. Finally, it would also be of interest to perform qualitative interviews with professional PE investors to gain deeper insights into their exit behaviour.

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Appendix

Appendix Table 1: Variable Descriptions

The following table displays detailed explanations and measurement units for the main variables used in this paper.

Variable Name	Unit	Description
Exit Strategy Indicators		
Investment Period	Years	Length between the date of the first (initial) investment made by a PE firm in a portfolio company and the IPO date
Divestment Period	Years	Length between the IPO date and the final exit, measured as the last (recorded) share sale of the PE firm in the portfolio company
Divestment Duration	Years	Value-weighted (with the relative cash flows) length of the divestment period, comparable to a bond duration
Exit Timing	Years	Average (mean) length between the single share sale transactions of PE firms in portfolio companies after the IPO. Calculations start with the first post-IPO share sale and encompass all share sales until the last recorded share sale
Portfolio Company Variables		
Age Initial	Years	Age of the portfolio company at the time of the first investment in years
Age IPO	Years	Age of the portfolio company at the time of the IPO in years
Leverage at IPO	%	Leverage (calculated as debt over market equity as recorded on the balance sheet) of the portfolio company at the IPO
Return on Assets at IPO	%	Return on Assets (calculated as net income over total assets, as recorded on the balance sheet and P&L statement) of the portfolio company at the time of the IPO
Total Assets at IPO	Th. EUR	Total assets of the portfolio company (as recorded on the balance sheet) at the time of the IPO
EBITDA margin	%	EBITDA / revenues
IPO Variables		
General	Dummy	Indicating whether IPO proceeds are used for general corporate purposes
Growth	Dummy	Indicating whether IPO proceeds are used for funding growth
Debt	Dummy	Indicating whether IPO proceeds are used for paying back debt
Dividends	Dummy	Indicating whether IPO proceeds are used for paying dividends
Acquisitions	Dummy	Indicating whether IPO proceeds are used for acquisitions
Size	Log	Logarithm of (number of shares sold in IPO * IPO price)
Rel. size	%	Number of shares sold in IPO / shares outstanding
Cap. Increase	%	Number of new shares sold in IPO / number of shares sold in IPO

Governance Variables		
Stake after IPO	%	Investor equity stake in the portfolio company after the IPO transaction
Rel. stake	%	Investor number of shares held relative to the number of shares held before the IPO
Dilution	%	Shares outstanding pre-IPO / shares outstanding after IPO
Investment duration	Years	Years between initial investment and IPO
Director ratio	%	Share of directors belonging to the PE investor
# invested PE firms	#	Number of active PE investors that participated in the IPO transaction

Appendix Table 2: Sample Firms

The following table displays the portfolio companies included in the study, and some descriptive variables.

Firm	IPO Date	Country	VC/BO	PE Sponsor	Exit Venue post IPO	Exit date
ABILITY GROUP ASA	03/07/06	NOR	BO	Altor Equity Partners AB	Gradual	21/07/14
AEROCRINE AB	15/06/07	SWE	VC	HealthCap AB; Investor AB; Scandinavian Life Science Venture	Trade Sale	15/06/15
AFFECTOGENIMAP OYJ	27/05/05	FIN	VC	Eqvitec Partners Oy; Fenno Management OYJ	Gradual	02/10/07
ALFA LAVAL AB	17/05/02	SWE	BO	IK Investment Partners Ltd	Gradual	07/03/05
ALGETA ASA	27/03/07	NOR	VC	Advent Venture Partners Ltd, HealthCap AB; Incitia Ventures	Gradual	24/02/14
ALIMAK GROUP AB	17/06/15	SWE	BO	Triton Advisers Ltd	Active	N/A
APL ASA	18/03/05	NOR	VC	EnergyVentures; HitecVision AS	Gradual	26/08/05
ASETEK A/S	20/03/13	NOR	VC	D. E. Shaw & Co.; L.P; NorthZone Ventures AB; Sunstone Capital A/S	Active	N/A
ASIAKASTIETO GROUP OYJ	27/03/15	FIN	BO	Investcorp Bank BSC	Gradual	20/11/15
ATTENDO AB	30/11/15	SWE	BO	IK Investment Partners Ltd	Gradual	02/06/16
BALLINGSLÖV INTERNATIONAL AB	19/06/02	SWE	BO	EQT Partners AB	Gradual	12/03/03
BE GROUP AB	24/11/06	SWE	BO	Nordic Capital AB	Gradual	19/11/09

BIOTEC PHARMACON ASA	04/11/05	NOR	VC	Verdane Capital Advisors	Gradual	-
BIOVITRUM AB	15/09/06	SWE	BO	MPM Capital LP; Nordic Capital AB	Gradual	25/06/13
BJORGE ASA	17/12/04	NOR	BO	Norvestor Equity AS	Trade Sale	07/09/05
BRAVIDA HOLDING AB	16/10/15	SWE	BO	Bain Capital LLC	Active	N/A
BUFAB HOLDING AB	21/02/14	SWE	BO	Nordic Capital AB	Gradual	04/11/14
BYGGMAX GROUP AB	02/06/10	SWE	BO	Altor Equity Partners AB	Gradual	30/04/14
CAPIO AB	30/06/15	SWE	BO	APAX Partners LLP; Nordic Capital AB	Active	N/A
CHR HANSEN HOLDING A/S	03/06/10	DEN	BO	PAI Partners SAS	Gradual	11/01/12
CLAVIS PHARMA ASA	07/07/06	NOR	VC	MVM Life Science Partners Llp; Neomed Inc	Gradual	12/11/10
COM HEM HOLDING AB	17/06/14	SWE	BO	BC Partners Ltd	Gradual	27/04/17
CONSTI YHTIOT OYJ	11/12/15	FIN	BO	Intera Equity Partners Oy	Gradual	14/06/16
COOR SERVICE MANAGEMENT HOLDING AB	16/06/15	SWE	BO	Cinven Ltd	Gradual	26/05/16
DOCKWISE LTD	02/10/07	NOR	BO	3i Group Plc	Gradual	19/10/09
DOMETIC GROUP AB	25/11/15	SWE	BO	EQT Partners AB	Gradual	21/11/16
DUNI AB	14/11/07	SWE	BO	EQT Partners AB	Gradual	27/08/08
DUSTIN AB	13/02/15	SWE	BO	IK Investment Partners Ltd	Gradual	07/02/17
ELECTROMAGNETIC GEOSERVICES ASA	30/03/07	NOR	VC	Warburg Pincus LLC	Gradual	16/03/12
ELTEL AB	06/02/15	SWE	BO	3i Group Plc	Gradual	01/06/16
EUROPRIS ASA	19/06/15	NOR	BO	Nordic Capital AB	Gradual	03/03/17
EXIQON A/S	29/05/07	DEN	VC	Scandinavian Life Science Venture; Teknoinvest Management AS	Gradual	23/06/16
FINDEXA LTD	25/05/04	NOR	BO	TPG Capital LP	Trade Sale	05/12/05
FINNVEDENBULTEN AB	20/05/11	SWE	BO	Nordic Capital AB	Gradual	05/03/14
FUNCOM PRODUCTIONS A/S	13/12/05	NOR	VC	Nordic Venture Partners; Northzone Ventures AB; Teknoinvest Management AS	Gradual	-
FUTURE INFORMATION RESEARCH MANAGEMENT ASA	06/12/05	NOR	VC	Norvestor Equity AS; Segmentor ASA	Trade Sale	12/12/06
HEMTEX AB	06/10/05	SWE	BO	Priveq Partners AB	Gradual	13/03/07
INTRUM JUSTITIA AB	07/06/02	SWE	BO	IK Investment Partners Ltd	Gradual	30/08/05
INWIDO AB	26/09/14	SWE	BO	Ratos AB	Gradual	22/10/15

ISS A/S	13/03/14	DEN	BO	EQT Partners AB	Gradual	15/03/15
KAPPAHL AB	23/02/06	SWE	BO	Accent Equity Partners AB; Nordic Capital AB	Gradual	05/10/06
KONGSBERG AUTOMOTIVE HOLDING ASA	24/06/05	NOR	BO	FSN Capital Partners AS	Gradual	24/05/07
KOTIPIZZA GROUP OYJ	07/07/15	FIN	BO	Sentica Capital Partners Oy	Gradual	09/02/17
LIFECYCLE PHARMA A/S	13/11/06	DEN	VC	Alta Partners	Gradual	-
LINDAB INTERNATIONAL AB	01/12/06	SWE	BO	Ratos AB	Gradual	20/08/12
MAMUT ASA	10/05/04	NOR	VC	Northzone Ventures AB	Gradual	-
MATAS A/S	28/06/13	DEN	BO	CVC Capital Partners Ltd	Gradual	10/01/14
MQ HOLDING AB	18/06/10	SWE	BO	Capman Capital Management Oyj	Gradual	15/02/13
MUNKSJO OYJ	07/06/13	SWE	BO	EQT Partners AB	Gradual	03/12/14
NAPATECH A/S	06/12/13	NOR	VC	Ferd Capital AS; NorthZone Ventures AB	Gradual	-
NEAS ASA	23/03/07	NOR	BO	Reiten & Co Capital Partners	Trade Sale	27/05/15
NEDERMAN HOLDING AB	16/05/07	SWE	BO	EQT Partners AB	Gradual	31/10/07
NOBIA AB	19/06/02	SWE	BO	IK Investment Partners Ltd	Gradual	18/02/04
NORDAX GROUP HOLDING AB	17/06/15	SWE	BO	Vision Capital Partners	Gradual	14/02/17
NORDIAG ASA	14/12/05	NOR	VC	SåkornInvest AS; Sarsia Venture Management AS	Gradual	-
NORDIC NANOVECTOR ASA	23/03/15	NOR	VC	HealthCap AB	Active	N/A
NORWEGIAN ENERGY COMPANY ASA	09/11/07	NOR	BO	HitecVision AS	Gradual	08/05/09
ODIM ASA	18/11/05	NOR	BO	Verdane Capital Advisors	Gradual	09/05/06
OPERA SOFTWARE ASA	11/03/04	NOR	VC	Teknoinvest Management AS	Gradual	-
OREXO AB	09/11/05	SWE	VC	HealthCap AB	Active	N/A
ORIFLAME COSMETICS SA	24/03/04	SWE	BO	IK Investment Partners Ltd	Gradual	15/08/06
OW BUNKER A/S	28/03/14	DEN	BO	Altor Equity Partners AB	Worthless	07/11/14
PANDORA A/S	05/10/10	DEN	BO	Axcel Management A/S	Gradual	08/12/14
PIHLAJALINNA OYJ	04/06/15	FIN	BO	Sentica Capital Partners Oy	Gradual	11/05/16
POLIMOON ASA	26/04/05	NOR	BO	CVC Capital Partners Ltd	Gradual	15/11/06
PRONOVA BIOPHARMA ASA	11/10/07	NOR	BO	Herkules Capital AS	Trade Sale	31/01/13
RENEWABLE ENERGY CORPORATION ASA	09/05/06	NOR	VC	Hafslund Venture AS	Gradual	09/12/11
RENONORDEN ASA	16/12/14	NOR	BO	Accent Equity Partners AB; CapVest Ltd	Gradual	17/02/17
SALCOMP OYJ	17/03/06	FIN	BO	EQT Partners AB	Trade Sale	16/08/07
SANITEC OYJ	10/12/13	SWE	BO	EQT Partners AB	Trade Sale	11/02/15
SCANDI STANDARD AB	27/06/14	SWE	BO	CapVest Ltd	Gradual	13/11/15
SCANDIC HOTELS GROUP AB	02/11/15	SWE	BO	Accent Equity Partners AB; EQT Partners AB	Gradual	29/03/17
THULE GROUP AB	26/11/14	SWE	BO	Nordic Capital AB	Gradual	27/04/16

TRANSMODE HOLDING AB	27/05/11	SWE	VC	Amadeus Capital Partners Ltd; HarbourVest International Private Equity Partners; POD Investment AB	Trade Sale	08/04/15
TROAX GROUP AB	27/03/15	SWE	BO	FSN Capital Partners AS	Gradual	10/11/15
VIA TRAVEL GROUP	09/06/05	NOR	BO	NorgesInvestor	Trade Sale	30/09/05
WESTERN BULK ASA	25/10/13	NOR	BO	Kistefos Venture Capital	Worthless	03/03/16
XXL ASA	03/10/14	NOR	BO	EQT Partners AB	Gradual	09/09/15
ZALARIS ASA	20/06/14	NOR	BO	Reiten & Co Capital Partners	Active	N/A
ZEALAND PHARMA A/S	23/11/10	DEN	VC	Sunstone Capital A/S	Active	N/A