Differences in Value Creation

Hedge Fund versus Private Equity Activism
A cross-national comparison between Germany and Sweden

Björn Hendrik Henatsch* Korbinian Kummer†

Master's Thesis

Department of Finance

Stockholm School of Economics

May 2019

Abstract

Shareholder activism is on the rise all across the globe. Two of the most prominent and active players in the field are private equity investors and hedge funds. This paper analyzes announcement returns for a hand-collected sample of activist campaigns following the financial crisis in Germany and Sweden. The observed announcement returns differ markedly between both activist funds and countries. Positive abnormal returns driven by the private equity sample are assumed to be related to a potential buy-out expectation and a typically longer-commitment. A greater magnitude of the share price reaction in Sweden is interpreted under consideration of the corporate governance settings in the respective country and run by investors from both fund types as well as activist defense advisors. The activist business model appears to be at a greater acceptance stage in Sweden and the shareholder value-oriented governance setup allows blockholders to actively influence Swedish corporations.

Keywords: Activism, Private Equity, Hedge Funds, Abnormal Return, Value Creation

Supervisor: Per Strömberg, Professor of Finance and Private Equity

* 41015@student.hhs.se

† 40985@student.hhs.se

Acknowledgement: We would like to thank our supervisor, Per Strömberg for his insightful remarks throughout the process of writing this thesis as well as Michael Halling for his guidance on how to conduct the statistical analysis. We also would like to thank Accendo Capital, Altor Equity Partners, Cevian Capital, Lazard, McKinsey & Company as well as Navos Capital for participating in our interview campaign.

Table of Contents

1. Introduction

Activist investing – as characterised by investment funds becoming active participants in a corporation's governance – is by no means a new phenomenon in the US but over the last decade has started to gain traction in Europe. Following the adoption of shareholder rights directives by the European Union encouraging shareholder participation, the number of activist campaigns has increased drastically. According to the latest annual review by Activist Insight, this development is also accompanied by a significant increase in value of activists' stakes. Those large-scale campaigns are not only launched by the European branches of American hedge funds, but also by European funds that have grown to be sizable players – albeit there are still very few compared to the US. Speaking to executives from Cevian Capital, the largest and most renowned European activist, we learned that the lagged development of the European activist landscape stems from a reciprocal problem inherent to the fund-raising process. Building a long-term capital base often requires an outstanding track record only achievable with sufficiently large assets under management – a requirement that is beyond reach for many activist funds lacking the corresponding track record. Instead, what Europe has seen is an increase in greenfield activist funds replicating the approaches of their large-scale peers in the small- and mid-cap segment as well as private equity funds pushing into the space of public minority investments. Most recent examples are the Nordic private equity powerhouse, EQT joining forces with the public market fund Zeres Capital or Triton enforcing its public minority mandate.

Shareholder activism has always been under great public scrutiny and draws much media attention. Most of the criticism, however, is based on supposition and anecdotal evidence questioning investment funds superiority in creating shareholder value or claiming that they merely distract corporate management from its day-to-day operations (Brav et al., 2008). This is surprising, since financial activism has come a long way from its early days in the 1980s when corporate raiders like Victor Posner and Carl Icahn aggressively used their voting rights to discipline corporations. Most of the then prevalent measures are less common now and involved publicly denouncing management's ability and asking for their replacement and *greenmail*; whereby an activist threats a firm's leadership with a hostile takeover and liquidation to achieve a share repurchase at a significant premium (Macey & McChesney, 1985). Since then, financial activism has become significantly more important. Target companies equipped themselves with anti-takeover response strategies and advisors like consultancies and investment banks offered their services to position firms to prevent takeovers.

Most notably, however, activism itself developed and now varies greatly by fund. Their strategies, investment horizon, industry focus, operational set-up as well as aggressiveness and the degree of publicity all set them apart. Whereas, the latter tend to be more prominent in the US. In fact, these days, most hedge funds have become much more constructive in their approach and prefer this to be reflected in the terminology as well. For example, Froese (2017) highlights that Carl Icahn is now referred to as an *activist investor*[1] and Cevian Capital's website labels the investor as an *active ownership investment firm* (2019).

"The companies themselves have become more aware that there are activist investors out there and I would say that there is a cultural difference at play when I compare the US and Sweden, where in Sweden the investors tend to be less hostile. The idea of an activist 'campaign' in Sweden does not really exist in the same way as it does in the US. In Sweden what you see is that we have adapted our strategy is to be more of a long-term value adding holder."

Mark Shay, Partner, Accendo Capital

With an increase in public scrutiny, activist investing also drew academic attention leading to a vast, yet mostly US focused research body. For example, Kahan & Rock (2007), Brav et al. (2008) as well as Klein & Zur (2009) all show a positive impact of activist funds on the target company's stock price. The dissent between public opinion and academic evidence for value creation is summarized in the introductory words of Mietzner, Schweizer, and Tyrell (2011) highlighting that all hedge funds and private equity investors are referred to as *institutional investors* regardless of how constructive their approach is. First, this motivated our paper to build on the work by Barclay and Holderness (1992), Cronqvist and Fahlenbrach (2009) as well as Mietzner and Schweizer (2013) to carefully differentiate between investor types and to exclude hedge fund strategies that don't rely on active ownership, i.e. merger arbitrage (see section 3). Secondly, a blockholders´ reputation and investment rationale can only be evaluated under the specific corporate governance system of the respective market.
As mentioned earlier, activist campaigns have not only been the most prominent and successful in the Anglo-Saxon shareholder value based corporate governance systems, but also has most empirical literature focused in this jurisdiction. In contrast, this paper analyses the two distinct, stakeholder-based corporate governance systems prevalent in Germany and Sweden.

[1]See e.g. Morrissey (2011) in the New York Times

We largely follow Mietzner & Schweizer (2013) in their analysis to investigate whether the German stake-holder model with its strong employee representation negatively affects private equity and activist hedge fund investors in their ability to lower agency costs in Germany. We believe, however, that our paper is distinctive in three key areas as well as makes a significant contribution to the rather limited academic literature on active blockholders in Europe. First, this paper discusses and differentiates another mature stakeholder focused corporate governance system, i.e. the Swedish market. For while the distinction to the shareholder value based Anglo-Saxon corporate governance system has been made before in research (see, e.g. Brav et al, 2009; Clifford, 2008; Klein & Zur, 2009), we want to compare markets that have several similarities, albeit a difference on the blockholders´ ability to influence corporate policy is shown. Second, in Mietzner & Schweizer, it is not clear how activist hedge funds are distinguished from other hedge fund classes. Our approach argues that other market participants should be able to assume *a priori* that the blockholder will follow an activist campaign investment strategy. Third, we use an unprecedent dataset covering the period from 2007 to 2018, during which activist investing has grown enormously in Europe1[2].

"We have seen a significant increase in European activism campaigns over the recent years. While the rise in activity is mainly driven by incumbent activist hedge funds rooted in the US, such as Elliott, Third Point, and ValueAct, local funds, like Cevian, TCI and Active Ownership Capital, still represent an important part of the European market."

Rich Thomas, Head of European Shareholder Advisory, Lazard

We construct two hand-picked datasets, consisting of 231 German hedge fund and private equity public transactions from 2007 to 2018, as well as 115 in Sweden. To begin with, we construct a set of operational, financial, and ownership characteristics to evaluate if a subset of these draw either private equity or hedge fund investments in particular. Subsequently, we conduct an event study for each respective market to analyse whether the announcement of an activist hedge fund or private equity investor involvement is associated with an increase in stock price. We then related our announcement returns to pre-defined agency cost proxies to assess what drives the abnormal return. Part of interpreting our findings was also to conduct an interview campaign with both private equity and hedge funds investors active in Germany and Sweden as well as activist defence advisors. Finally, we compute buy-and-hold returns for up

[2] (Lazard, Review of Shareholder Activsm Report, Q1-2019).

to 300 trading days to evaluate long-term abnormal stock returns and to analyse if capital markets have over- or underreacted.

We identify three main findings: First, we saw positive abnormal returns after the announcement that a hedge fund or private equity fund had acquired a stake above the minimum reporting threshold for both markets. In Sweden as well as Germany, we found that our findings were driven by the private equity subsample whereas hedge fund announcement returns are less meaningful. Although these findings are consistent with prior literature, the returns of our sample are substantially lower.

Second, in contrast to Mietzner & Schweitzer (2013), we found that activist hedge funds and private equity funds differ only marginally in their selection of potential targets and have become more similar in that regard in recent years (e.g. 6.1 and 6.3). A remaining differentiating factor is the size of the stake acquired, as hedge funds typically use a *syndication strategy* which requires a smaller stake in the company.

Third, we found negative buy-and-hold returns (BHARs) for both investor types in Germany, and substantially positive and significant long-term abnormal returns in Sweden for hedge funds as well as private equity funds. We related these findings to the different corporate governance systems prevalent in the respective markets. Due to the stakeholder system in Germany, there are several hurdles in place for an investor to influence the management. There are no significant differences in the BHARs between hedge funds and private equity funds in either market, which is in line with our findings of the Probit model.

The rest of the paper is structured as follows: In section 2, we discuss the agency problem laying at the root of financial activism, how its effects can be mitigated by corporate governance and ultimately, the idiosyncratic features of the German and Swedish governance models. Section 3 then describes activist campaigns in more detail by reviewing prior research and explains how we distinguished between investor types. Section 4 summarizes our data gathering process, while section 5 explains the empirical methodology. Our results are displayed in section 6, and we provide an overview on the limitations and further research that we have identified in section 7. Section 8 summarizes our findings.

2. A Principal-Agent Problem

Financial activism finds its beginning in the rise of agency theory as the predominant interpretation of corporate control. Jensen & Meckling (1976) define an agency problem as a contractual relationship in which one party (the principal) engages another party (the agent) to

perform services on its behalf for which they delegate certain control rights and decision-making authority. If both parties then only act in their best interest, it is reasonable to assume that the agent's and principal's actions will not always be fully aligned.

The agency-problems at-hand is endemic to our market economy (e.g. John & Senbet, 1998). The separation of ownership and control (or put in a more corporate context 'financing and management') is the essential element underlying what is known as the contractual view of the firm (Coase, 1937; Jensen & Meckling, 1976 as well as Fama & Jensen, 1983). In this instance, an entrepreneur, or manager (agent), raises outside funding to either put the new capital to work or to cash out his holdings. Whereas the investors (principals) rely on the management's human capital to generate a return on investment. The agency problem in this context stems from misaligned managerial incentives and from the difficulties financiers have in assuring that their funds are being used in their best interest (Shleifer & Vishny, 1997).

Taking a step back, the neoclassical theory of a firm assumes that a manager is the sole owner of a company and that his only aim – in the absence of agency problems – is to maximise profits and/or shareholder value. (Mueller, 2006). However, Jensen & Meckling (1976) show in their classical paper that even sole-owning managers are more willing to maximise their utility through on-the-job-consumption rather than to increase firm value. Put simply, an owner-manager who wishes to enhance their own utility, may use company profits to unnecessarily upgrade the company car which is then also used for their own private use. This effect is aggravated when the owner decides to issue shares to outside investors. Where previously, the owner would suffer a 1:1 reduction in wealth as an owner for on-the-job-consumption, as a manager - post equity issuance - they would only incur costs equal to the fraction of the remaining ownership for the same consumption. If this is extended to a corporation with various sources of funding and even more stakeholders, it forms the now widely held view of a corporation as a nexus of contractual relationships among individuals as developed by Jensen & Meckling (1976).

Investors and managers generally attempt to specify under contract the actions undertaken by corporate management to prevent shareholder (and creditors) from managerial malfeasance (Hart, 1995; Shleifer & Vishny, 1997). However, insufficient contractual alignment (i.e. incomplete contracts) and the pecking order of financing (i.e. different pay-off structures of residual claims on corporate assets) still give rise to potential agency problems (John & Senbet, 1998). Incomplete contracts require both parties to allocate residual control rights, i.e. decision-making authority in situations not foreseen by the contract which, in turn, can be misused by management in several ways (Hart, Hart, Moore, & Moore, 1990). They

include most commonly (Mueller 2006): theft of a company's assets, excessive managerial compensation, manipulation of earnings, the consumption of perks, and empire building. Jensen & Meckling (1976) theoretically categorise the costs associated with these problems in three different categories. First, monitoring costs incurred by the principal for establishing incentives to limit divergence from his interest. Second, bonding costs to ensure that the agent does not undertake actions harming the principal. Lastly, what the authors refer to as a 'residual loss', which is the reduction in welfare experienced from the divergence between the agent's decisions and those that would have actually maximised shareholder value.

Assessing the magnitude of the above-mentioned costs is particularly hard for two reasons. Managers generally attempt to conceal the losses from owners and more importantly, it is very difficult to determine what the optimal amount of executive compensation, investment and benefits should be. Bebchuk & Grinstein (2005) find that the top five managers in US public companies earned $350 billion between 1993 and 2003 – or 6.6% of net income. This figure drastically increases to 9.8% of aggregated net income when only looking at the period from 2001 to 2003. More connected to the current subject, when applying the top-executive-to-average-employee ratio of the UK for the same period of time to the top managers of US firms, they find that executives of US firms were overpaid by more than $300 billion when compared to UK compensation levels. More recent reviews by Kaplan (2013) as well as Davis & Mishel (2014) indicate that the (inflation-adjusted) CEO compensation meaningfully decreased until 2009 when compared to its peak in the early 2000s but gained momentum again after the financial crises with the CEO-to-worker compensation ratio again drastically deteriorating. When analysing the optimal level of investment, Mueller & Reardon (1993) find that roughly 700 companies in their sample wasted c. $1000 billion dollars between 1970 and 1988 on projects that return less than their cost of capital by estimating their marginal q[3]. This list of actual costs incurred is completed by the amounts of money simply stolen from executives, excessive usage of perks as well as potential losses potentially arising from a restatement of earnings (Mueller, 2006).

Drawing together the consequences of the separation of ownership and control as well as of incomplete contracts, it becomes obvious that agency problems adversely affect the efficient operation of an enterprise, harm economic growth, and suggest that all shareholders (and various other stakeholder) greatly benefit from reducing the scale of the agency costs by enforcing corporate governance.

[3] Tobin's marginal q is the ration of the market value of an additional unit of capital to its replacement cost

2.1 Corporate Governance - Mechanisms for Controlling Management

The collection of mechanisms by which corporate stakeholders aim to control corporate management, to protect their interest and to also ensure to get a return on their contributed capital are broadly referred to as corporate governance. Even though definitions of corporate governance differ among researchers (e.g. Shleifer & Vishny, 1997 or Gillan & Starks, 2005), the empirical literature coherently classifies corporate governance mechanisms in two categories: either being internal or external to the company. This is visualized by the balance sheet model (Fig. 1) below from Gillan (2006)[4]. The left-hand side describes the basics of internal governance with the board of directors at its apex monitoring and advising on management's investing and financing decisions. Key responsibilities involve the hiring and firing process as well as developing appropriate compensation schemes for the top executives (Jensen, 1993). The right-hand side briefly sketches some of the external governance forces with the residual claimants, the shareholders, electing board members. Overall, it highlights again the separation between those who provide capital and those who manage it, creating the demand for corporate governance in the first place. Extending the balance sheet model (Fig. 2) to also include other stakeholders, as Gillan (2006) does in his review of corporate governance developments, then creates what is above describe as the contractual view of the firm.

In 1992, the Cadbury Committee, set up by the Financial Reporting Council of the London Stock Exchange, published the so-called 'Cadbury Report' which is internationally recognized as the catalyst for the development of European corporate governance codes. The code, which has been updated and extended several times since its initial publication, was divided into four areas of conduct. The role of the board of directors, their duties and composition, the role of non-executive directors, executive compensation and lastly, what has been crucial to the Committee for good governance, financial reporting and controlling. Most notably, however, the Cadbury Report introduced a regulatory approach known as 'comply-or-explain', meaning regulators set out a non-binding code of conduct that requires companies to publicly disclose their reasoning in case they wish to not comply, which became the new governance standard among many countries internationally. Effectively, this is assumed to let the market decide and sanction misconduct rather than forcing on legal regulations on all listed companies in a 'one size fits all' manner. At this point it is worth noting that both of the countries we are analysing in our paper apply this 'comply-or-explain' principle, with particularly Sweden being praised as a role model for governance practices.

[4] Adopted from PowerPoint slides accompanying Ross et al. (2005)

The remainder of this section briefly summarizes the most prevalent internal and external corporate governance mechanisms before reviewing the national corporate governance codes as well as the empirical literature for Germany and Sweden, respectively.

Fig. 1. *Corporate governance and the balance sheet model of the firm*

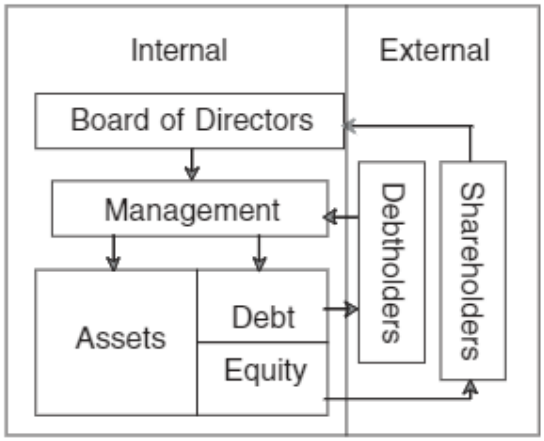
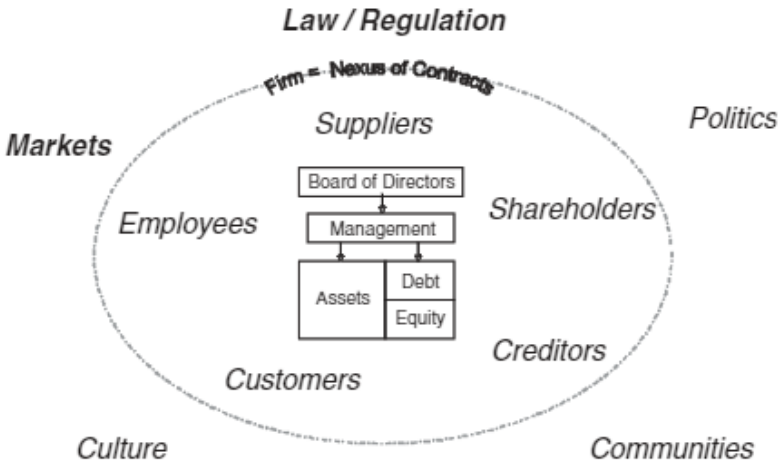


Fig. 2. *Corporate governance: Beyond the balance sheet model*



2.1.2 Internal Governance Mechanisms

Internal mechanisms of corporate governance encompass a corporation's board of directors as well as its compensation scheme and ownership structure. The board of directors, however, is the central governance mechanism for shareholders to influence top management (John & Senbet, 1998). Its directors are usually elected at an annual general meeting to govern the firm and to prevent shareholders from managerial malfeasance. The accordance of shareholder and

board interest, in turn, is supposed to be achieved by linking compensation to firm value. Thus, in theory, the board of directors helps to resolve the agency conflicts resulting from the separation of ownership and control. Besides their pure monitoring function, directors are typically ascribed with giving strategic advice to management as well as with the hiring and firing authority – often in response to poor performance (Adams, Hermalin, & Weisbach, 2010). Accordingly, a board's effectiveness is measured by how well it performs its monitoring and advisory roles.

The board's effectiveness is heavily debated and has been the subject of theoretical and empirical literature several times. Among the first were Berle & Means (1932) who doubted that directors could be effective monitors by claiming that: "[…] *control will tend to be in the hands of those who select the proxy committee and by whom, the election of directors for the ensuing period will be made. Since the proxy committee is appointed by the existing management, the latter can virtually dictate their own successors*." One can infer that management's influence on the selection process of the board is assumed to sustain the underlying agency issue. However, Hermalin and Weisbach (2003), state that boards are not just a product of legal regulation but indeed a market solution to agency problems arising from organizational structure. Empirical literature provides the required evidence by relating monitoring effectiveness to performance measures and identifies several demographic characteristics (e.g., degree of independence, gender split or separation of CEO and chairman) of boards that are determining its effectiveness (Finegold, Benson, & Hecht, 2007; John & Senbet, 1998; Kiel & Nicholson, 2003; Levrau, 2004). Under the shareholder perspective which deems shareholder value and owner interest as the main goals of corporate governance, De Andres, Azofra and Lopez, (2005) state that those board characteristics can be grouped into three main categories: size, composition as well as internal functioning.

Regarding board size, the literature finds both positive and negative relationships between size and performance for different size brackets (e.g. De Andres et al., 2005; Kiel & Nicholson, 2003). Generally, smaller boards are believed to enhance participation and cohesiveness but need to pass a certain minimum threshold to also ensure a diverse composition. Newell & Wilson (2000) range the ideal size between 5 and 9 directors which is consistent with more recent research that confirms a positive relation to performance for boards with an average size within that range (Garcia-Toreaet al., 2016; Huse et al., 2008).

In the field of board composition, board independence is among the most heavily researched characteristics and typically measured as the degree of outside directorship. In theory, outside directors, who are typically not full-time employees of the company, are more

concerned about their reputation in the directorial labour market[5] and, as a consequence, are thought to play a larger monitoring role in the board (Hermalin & Weisbach, 1998). Accordingly, Rosenstein & Wyatt (1990) find positive excess returns around the announcement day of an outside director for their US sample between 1980 and 1985. A study by Klein (2002) suggests that boards structured more independent of the CEO are more effective in managing the financial accounting process. Most notably, monitoring effectiveness manifests itself by directors' hiring and firing decisions, or more precisely, by CEO turnover (Adams et al., 2010). As supervision of CEOs and top management reveals important information for their ability assessment in poor performance situations, monitoring facilitates replacement decisions, but again depends largely on the board's degree of independence. Accordingly, Hermalin and Weisbach (1998) point out that the board and the CEO regularly bargain over the identity of new directors. Weisbach (1988) relates board composition, i.e. the insider-outsider ratio, to firm performance in a CEO turnover process. His findings indicate that turnover is more sensitive to firm performance in firms with outsider-dominated boards. However, the empirical literature cannot establish a significant relationship between board independence and subsequent positive corporate performance –irrespective if measured by accounting or stock market performance (see Finegold et al., 2007 and Hermalin & Weisbach, 2003 for surveys on the related economic literature). On that note, it is worth mentioning that the appointment of outside directorships often happens in response to poor performance and is thus subject to endogeneity. Even when controlling for this, board composition and performance appear to be unrelated (Bhagat et al., 2000). The list of analysed characteristics related to composition is completed by CEO duality, the presence of women on the board as well as director's experience. Very briefly, a CEO that also inherits the role of the chairman equips the top executive with substantial power over the board, reduces its strategic involvement (Ruigrok et al., 2006) and is found to have a negative impact on performance (e.g. (Coles et al., 2001). Regarding the gender split on corporate boards, the empirical literature establishes a positive relation between female directors and higher financial performance (e.g. Joecks et al., 2013; Erhardt et al., 2003). Adams & Ferreira (2009) attribute more intense monitoring influence to women since they attend board meetings more frequently and also engage in monitoring comities. Unsurprisingly, markets react more favourable to better qualified directors, either measured by accounting and finance knowledge (Defond et al., 2005) or industry experience (Fich, 2005). Shiah-Hou & Cheng (2012) confirm the economically positive impact of (outside) director experience to accounting and market

[5] Fama & Jensen (1983); Kaplan & Reishus (1990) provide related empirical evidence.

performance. Research also establishes a positive link between M&A outcomes and director's industry experience (e.g. Krollet al., 2008; Field & Mkrtchyan, 2017).

In order to harmonize conflicting interests and to prevent managers from pursuing private benefits, the board of directors is charged with determining the level of executive compensation by means of performance-related incentive contracts (Shleifer & Vishny, 1997). On top of an annual base salary, most executives are compensated with lump-sum bonuses that are related to current earnings as well as stock-related compensation. While the former might favour short-termism to meet the market's earnings expectations, compensation in the form of stock options is assumed to be more forward looking and rewards long-term performance upsides. However, it is important to point out that option plans fail to punish the downside and thus might encourage aggressive accounting (or other managerial) practices. Accordingly, Burns & Kedia (2006) find that the sensitivity of a top executive's option portfolio to stock price is significantly positively to the likelihood of misreporting/restatement - a relationship they could not find for any other compensation measure. This is consistent with the convexity of CEO wealth from option plans that limits the downside risk on detection and leads to more rigorous behaviour. Overall, a review by Core et al. (2003) of the empirical research on equity compensation for the US market finds no consensus on the performance consequences of equity ownership.

Ultimately, a corporation's ownership structure represents an almost equally important corporate governance mechanism, as control over a company generally increases with the degree of ownership (Denis & McConnell, 2003). In case of managerial equity ownership, an alignment of management and shareholder's interest naturally follows from the aforementioned reduction in private wealth in case of on the job consumption. However, the empirical literature quickly noticed that ownership is endogenously determined to reach a trade-off between cost advantages and disadvantages that are unique to the firm (Demsetz & Lehn, 1985); (Pindado & de la Torre, 2004) as well as that both managerial ownership and firm performance are determined by common, unobserved characteristics (Himmelberg et al., 1999). When controlling for the simultaneity in the value-ownership relation, neither Cho (1998) nor Demsetz & Villalonga (2001) can establish a significant influence of (insider) ownership on performance. Gugler & Weigand (2003) confirm previous findings regarding endogeneity but their research adds that the largest shareholder affects performance exogenously. That said, outside blockholders are assumed to be instrumental to good corporate governance because of their better monitoring capabilities. Holderness & Sheehan (1985) and Barclay & Holderness (1991) report an increase in executive turnover as well as positive stock market reaction

following block trades. Shome & Singh (2007) as well as Allen & Phillips (1998) provide backup for the beneficial influence on financial performance in the aftermath of a block trade. Bethel et al. (1998) find that block trades by activist investors are often followed by corporate restructurings, share price appreciation and operating profitably improvements. Nonetheless, not all blockholders act homogenously and often differ not only in their incentives but also in their capabilities to become active (Cronqvist and Fahlenbrach, 2009). Section 3.2 reviews shareholder activism in more detail, also distinguishing between active and passive blockholders. This paper conforms then with the more recent literature to also analyse differences among activist investors to influence agency costs.

2.1.3 External Governance Mechanisms

External governance mechanisms encompass takeover markets, gatekeepers and a country's legal system which regulates firm behaviour and determines how corporate governance evolves in a country. It goes without saying that the quality of government-imposed rules enforcing investor protection differ around the globe and tend to be less of an issue in countries with strong judicial systems. In that context, there is another set of important market participants that play a significant role in reducing economic incentives for managers to focus on their own interests. Intermediaries, or often so-called 'gatekeepers', provide services that can benefit the investor especially in countries where corporate governance is less imposed by law. Those include independent auditors providing outside assurance about a firm's financial condition and the appropriateness of its reporting, credit rating agencies signalling and translating a firm's creditworthiness, equity research analysts who assess business prospects as well as the media. However, when their integrity becomes compromised, market participants lose their confidence in the system. That said, research analysts need to provide company analyses that are unbiased or fully independent of their firm's investment banking activities and similarly rating agencies need to ensure that they are free of conflicts of interest even though they are compensated by the issuer they rate. In his review of corporate governance failures, Coffee (2005) points out that a gatekeeper's effectiveness is closely tied to the prevalent ownership structure in a respective economy. Historically, the US and the UK displayed a system of dispersed ownership that is particularly vulnerable to gatekeepers not detecting inflated earnings. Hence, the Sarbanes-Oxley act mandated to redesign the corporate circuitry and to install an independent auditing committee. However, this is assumed not work equally well in mainland Europe where ownership is more concentrated, and an independent audit committee is still more likely to act in the interest of a controlling shareholder. Similarly, equity research coverage

appears to be of greater relevance in systems with diverse ownership since lower trading volumes in companies with a compressed ownership structure might not generate enough commissions to justify coverage for the research house. Also, its predictions would be less important if potential investors would fear the risk of a squeeze-out by the controlling shareholder. In theory, supermajority votes or mandatory bid requirements would prove much more important in those economies. Coffee (2005) concludes that the design of gatekeepers needs to address the idiosyncrasies of the respective systems, i.e. that concentrated ownership systems facilitate the extraction of private benefits and dispersed ownership creates incentive to manipulate earnings.

Lastly, the fear of a M&A transaction can naturally push managers towards aligning with the firm's shareholders' best interest. A difference between a firm's actual and potential share price may arise because of a failure of internal governance mechanisms and thus provides incentives for outside investors to seize their opportunity of taking-over the firm. The threat of a takeover, however, can motivate managers to keep a corporation's value as high as possible, thereby narrowing the gap between current and intrinsic value and lowering the risk of acquisition. Nevertheless, takeover markets bear their risks and do not fully resolve the principal-agent problems when managers overpay for acquisitions instead of repaying the funds to their shareholders (Denis & McConnell, 2003).

2.2.1 Corporate Governance in Germany

The German stakeholder model of corporate governance is distinctive in several aspects to the shareholder model which is prevalent mainly in the Anglo-Saxon jurisdictions, such as the United States and the UK. The stakeholder system is typically represented through comparatively weak equity capital markets, historically strong debt markets and concentrated ownership. While the German interpretation is similar in these regards, Germany is a unique case compared to its peers in that it operates through a two-tier board system; one board of executives, who manage the day-to-day business and propose strategic changes, and a separate supervisory board, which sets dividends, votes on the strategic changes and can nominate the executive board.[6] Members of the supervisory board cannot be part of the executive board and allocated through a system of codetermination. 50% of the supervisory board consist of elected shareholder representatives and the other 50% are elected employee representatives. Effectively

[6] See the article "Handelsblatt explains why German corporate governance is so different" in Handelsblatt (28.2.2018)

differentiating the German corporate governance system from its purely shareholder focused counterparts by including labor in its control body. Notably, the chairperson, who is elected by the shareholders, holds the swing vote and can therefore overrule any labor decision in the case of a tie (see e.g. Edward and Nibler, 2000; Goergen, 2008).

Fig. 3: *The German corporate governance model*[6]

This section provides a review of the German corporate governance system, its historical and recent developments with regard to the main stakeholders, the ownership structures and shareholder rights, market pressure and legal rules.

Germany is said to be a *blockholder system* (Ringe, 2015), i.e., the majority of German corporations are owned by large blockholders, who have the ability to largely control the companies´ strategy. While this is the case for most markets outside of the US and the UK, Ringe (2015) pries out *blockholding ownership*, *cross-participation* and the *strong role of banks* as the three aspects of the German market environment to constitute its exceptional setup.

Blockholding ownership is a frequent occurrence in German listed corporations, e.g. Edwards et al. (2000) report that more than half of the companies in their sample have a single blockholder that owns more than 50% of their shares. Becht & Boehmer (2003) examine the voting power of all German companies trading on official stock exchanges and confirm the widely accepted sentiment, that German corporations are controlled by large blockholders. Becht & Boehmer (2003, p.7) conclude that "voting power is usually concentrated in one large block and not shared among several blockholders", the average size of the largest blockholder is 59%, significantly greater than the size of the second largest blockholder at 7%. In addition, only 20% of the listed companies have more than two blockholders (shareholders that own

more than 5% of the voting rights), resulting in concentrated control and a lack of competition in most German corporations. Note that only 18% of the respective companies´ largest voting block is below 25%, which constitutes the minimum percentage of voting rights to block statute changes. Moreover, a statistic by the Schutzgemeinschaft der Kapitalanleger (SdK) [7] shows an average equity participation rate of merely 45% to 59% between 2005 and 2015 at annual general meetings of the DAX30 index, which consists of the 30 largest listed entities in Germany. Individual cases go as low as 25% and the data for the MDAX, SDAX and TecDAX draw a similar picture.[8] This compares to higher average participation rates of around 80% in the US, 70-80% in the UK, and around 70% for France (see e.g. Froese, 2017; Hopt, 2011; Beuthel, 2006). In summary, the typical ownership structure of a listed German corporation often consists of a large blockholder with a significant controlling stake and further implied control due to a lack of participation on votes by minority shareholders.

Cross participation between industrial companies, and even more frequently between industrial companies and banks, are a common occurrence in Germany (Ringe, 2015). German companies and banks are heavily intertwined through two main channels. First, as stated in Sautner & Villalonga (2010), about 13% of Germany´s market capitalization consisted of intercompany holdings, i.e., companies and banks held shares and thereby voting rights of other German corporations, dating back to World War II. Although a tax reform in 2002, which exempted capital gains tax on a sale of these intercompany holdings, somewhat alleviated this web structure, corporations are still significantly connected through share holdings. Second, companies reinforce their interdependent relationships through interlocking directorates on their respective supervisory boards through which they obtain access to business information and can exert control (see e.g., Ringe, 2015; Windolf & Nollert, 2001). With regard to financial institutions, Windolf & Nollert (2001) find that they insert vastly more of their executives to industrial companies´ supervisory boards (outdegree: 38%) than they accept from industrial companies in their respective supervisory boards (indegree: 13%). This close knitted network of interdependencies of German companies with each other and the financial institutions is often referred to as *Deutschland AG*, reflecting the almost cartel-like relationships (see e.g., Ringe, 2015) shielding them from external shareholders and arbitrary government rulings (see e.g. (Coffee, 2001); Windolf & Nollert, 2001).

The s*trong role of banks* is the binding element between the former two aspects of the "Deutschland AG". In contrast to other jurisdictions, with significantly stronger equity markets,

[7] https://sdk.org/assets/Statistiken/HV-Praesenzen/praesenz-dax15.pdf
[8] https://sdk.org/veroeffentlichungen/statistiken/

banks play an exceptional, comprehensive role in the German economy. They exert influence on the German industry through a unique combination of (small) equity stakes, direct lending, and thereby placing covenants on management decisions, as well as appointing supervisory board members (see e.g., Coffee, 2001; Ringe, 2015; Froese, 2017). This set-up, which is almost universally true for the German corporate landscape, ensures that banks take a comprehensive view on the economy rather than focussing on the success of individual companies. Effectively, they are diversifying their investments through a "general insurance" (Ringe, 2015, p. 12), allowing for a united German landscape. This structure has grown historically and was encouraged through two main government policies (Froese, 2017).

Under Otto von Bismarck, the two largest banks were incorporated, Deutsche Bank in 1870 and Dresdner Bank in 1872, providing government support in favor of debt financing rather than equity markets (see e.g. Coffee, 2001; Gehlen & Reckendrees, 2013; Froese, 2017). The German central bank provided unlimited liquidity for direct lending by the German banks, leading to cheap debt financing and a hindered growth in equity markets (see e.g. Coffee, 2001; Froese, 2017). Further, the Imperial Stamp Act of 1984 and the introduction of the Stock Exchange Law of 1986, which significantly limited trading activities of several securities on margin, hindered the growth of the German stock market and thereby left debt financing with little competition (see e.g. Coffee, 2001; Froese, 2017).

In summary the German corporate governance system is characterized by concentrated ownership through blockholders, an exceptional position of the large traditional banks and debt financing in general, and cross-participation of these banks and corporations alike. To counter this system of strong shareholders, Germany has set in place several mechanisms to protect minority shareholders and grants additional rights to them (see e.g. Ringe, 2014). (Brass, 2010) and (Hommer, 2014) describe the fiduciary duty that all shareholders have towards the company and other shareholders. Generally, it protects any shareholder and the company from a decision that only benefits a sole shareholder (and may impair the respective other agents). While it covers all potential situations that raise a conflict between participants, it is notable, that transactions are a recurring event, where the fiduciary duty is cited (see e.g. Froese, 2017). Another key aspect of the German corporate governance system is the shareholder equality (§53a of the Aktiengesetz; see e.g. Ringe, 2014), ensuring that all shareholders are treated equally with regards to voting rights, profit distribution or participation of the proceeds in a liquidation.

Froese (2017, p.54) depicts a comprehensive overview of the shareholder rights and duties of each ownership level. The German legal framework grants minority shareholders a

vast set of rights to counter the heavy ownership concentration, structured through threshold system of ownership. Following, we summarize the main rights granted to shareholders, which represent important steps for an activist to consider, when aiming to influence a target company.

A single share in a company allows the holder to participate in the annual general meeting, i.e. notably speak, vote, nominate potential supervisory board members and request information from management. Holding shares, representing more than €500,000 of the outstanding capital allows the shareholder to put items on the agenda, while a position of €1,000,000 or more than 10% of the outstanding capital qualifies for requests of a discharge of an individual member of the management or the supervisory board. Owning more than 5% of the outstanding capital, allows the shareholder to request an extraordinary shareholder meeting. Holding a stake above 25% of the outstanding capital, entitles the shareholder to block any request which requires a supermajority (i.e. a majority of at least 75%).[9]

Becht & Boehmer (2003, p.7) find that "The size of voting blocks is clustered around important voting thresholds, implying that blocks are held for control purposes." Unsurprisingly, shareholders, including activist hedge funds and private equity funds, allocate their number of shares along these thresholds to receive the specific rights they deem necessary to influence the board and decisions within the company.

"The corporate governance system in Germany grants very strong minority protection rights, which of course is in the best interest of an activist. Hedge funds have successfully used this fact by blocking M&A transactions. A strategy that doesn´t really exist in this form in the US and has been very expensive for the respective counterparts."

Thomas Kolaja, Co-Head of European Activist Response Practice,
McKinsey & Company

With proceeding globalization and an everchanging international environment the German corporate governance system is adjusted over time and partly converges to its Anglo-Saxon counterpart, however, as the key aspects of the "Deutschland AG" remain intact, its unique position lasts (Goergen, 2008). Recent changes identified were driven by market developments as well as through the legal frame itself. The traditional German banking model has moved partly towards internationalization and fee-based services, and the stock market has

[9] Please refer to Froese (2017, p.54) for a more detailed depiction of the individual thresholds and respective shareholder rights granted

become a larger channel in the German financing market (Rapp & Strenger, 2015, p.2), slowly breaking up the historically stronghold of the German banks. Policy and tax reforms, as e.g. the capital gains exemption on the sale of intercompany holdings in 2002 (Sautner & Villalonga (2010)) continue to change the legal framework and amend the incentives set by the German government. With the increasing pressure from external shareholders, such as the activist hedge funds and private equity funds discussed in this paper, the development of the "Deutschland AG" remains an exciting topic to follow.

2.2.2 Corporate Governance in Sweden

A growing body of research argues that the Principal-Agent model suffers largely from a 'made-in-the-US' bias as it is developed from and mostly tested for US companies. More specifically, researchers argue that it does not capture the key relationships within corporate governance systems around the globe since its underlying assumptions are tailored towards the historical and institutional context of the United States (Pedersen & Thomsen, 1997). As pointed out earlier, at its heart lay the ever-present threat of opportunistic tendencies by executives (because executives are opportunistic by nature), their constant desire to maximize utility as well as the fact that publicly traded firms are characterized by information asymmetries arising from the separation of ownership and control. However, Lubatkin et al., 2005) argue that a country's history shapes its informal and formal institutions and influences the governance of economic relationships to an extent that the P-A-model is not transferable between nations. Especially for Sweden, whose institutions are shaped by the concepts of egalitarianism, cooperation, collective responsibility and low power distance (Barbara Czarniawska-Joerges, 1993), those values are fundamentally different from the US and the underlying assumptions of the P-A-model appear less applicable.

In a nutshell, the Swedish corporate governance code is similar to other continental European governance systems in that it resembles a stakeholder model – albeit with a particularly strong focus on equity-markets and creditor protection. As opposed to the shareholder model/theory, the stakeholder model states that a corporation owes a responsibility to a wider group of stakeholders, other than just shareholders. However, the Swedish corporate governance system is unique in its very large and active stock market as well as in its ownership structure of a very small number of controlling minority shareholders owning a high proportion of companies (Stafsudd, 2009). This control is achieved and maintained by the use of a dual class share structure in combination with cross-ownership and pyramiding, so that control is effectively based on a small capital base (Högfeldt et al., 2004). The remainder of this section

will briefly comment on how historic events contributed to the development of the current Swedish corporate governance system and then provide a deep-dive on its distinctive features.

The beginnings of the modern corporate governance system in Sweden can be traced back to boom of the Swedish industry around the turn of the 19th century. The Swedish production level was the highest in Europe - more than 60% of the companies with the highest sales in 2000 were established before 1915 - restrictions on foreign ownership were severe and became worse when foreign shareholdings were restricted to 20% in the 1930s (Stafsudd, 2009). With the downfall of Ivar Kreuger's financial empire in the wake of the Wall Street crisis in 1932, the Swedish banking system has been severely shaken. Banks that acquired large portfolios of stocks during the previous financial crisis were now prohibited to directly own equity following the Swedish version of the Glass-Steagall act in 1934 (Högfeldt et al., 2004) However, banks could transfer their equity assets to holding companies, that were structured as closed-end investment funds (CEIFs), whose shares were proportionally distributed to the bank's shareholders. With former owners maintaining control and effectively reinforcing that holding companies were separated from the banks, this ended in the typical three-level Swedish ownership pyramid that can be seen today: Listed portfolio firms at the bottom were controlled via the CEIFs or other control vehicles at the intermediate level that, in turn, are managed by a bank foundation or controlling family. At this point, the Swedish ownership structure was already exceptionally concentrated with c. 70% of a corporation's market capitalization effectively owned by only six to seven per cent of shareholders in 1945 – and one individual often controlling more than half of the voting rights (Henrekson & Jakobsson, 2003). However, until the 1990s the Swedish ownership landscape changed drastically with individual ownership falling from 75% to 18% between the 1950s and 1990 spurred by socialist philosophy following the rise of the Social Democratic party. Essential to their agenda was to create social enterprises without individual owners by transferring ownership to the public. Keeping individual ownership high across generations was prevented by introducing extremely high inheritance and gift taxes and debt financing to existing companies was available at preferential terms when compared to funding for new corporations. Unsurprisingly, self-employment and new company formation declined sharply over the same time (Henrekson & Johansson, 1999). It appears controversial at first sight, but the socialist vision of creating social enterprises was ought to be achieved by 'ownership of a few' in that negotiations could be facilitated by keeping it between the government, the labour movement as well as industrial elitist (Stafsudd, 2009; Collin, 1998) Therefore, institutional ownership rose proportionally to the reduction of individual ownership and the Swedish corporate landscape was dominated by highly levered, large industrial

companies. Simultaneously, this gave rise to the Handelsbanken and Wallenberg spheres that together owned 60% of the largest listed Swedish companies in 1990 (Collin, 1998). However, Sweden experienced a drastic shift in political philosophy following the introduction of the so-called wage-earner fund scheme in 1980s and was spurred by the overall downturn of the Swedish economy during that time. The scheme introduced by the Social Democratic party aimed at transferring ownership to employees which was heavily objected by the industrialists and also by the public leading to more liberal reforms by a non-Socialist government. Most notably was the deregulation of credit and capital markets alongside previously government-controlled product markets like telecommunications, the allowance of foreign ownership as well as tax cuts to favour individual ownership resulting in the current governance structures (Strafsudd, 2009). Today, private share ownership (still led by 'the spheres') is amongst the highest in the world - appropriately quantified by a study from Temo (2003)[10] who finds that 84% of Swedish adults are share owners (Carlsson, 2007).

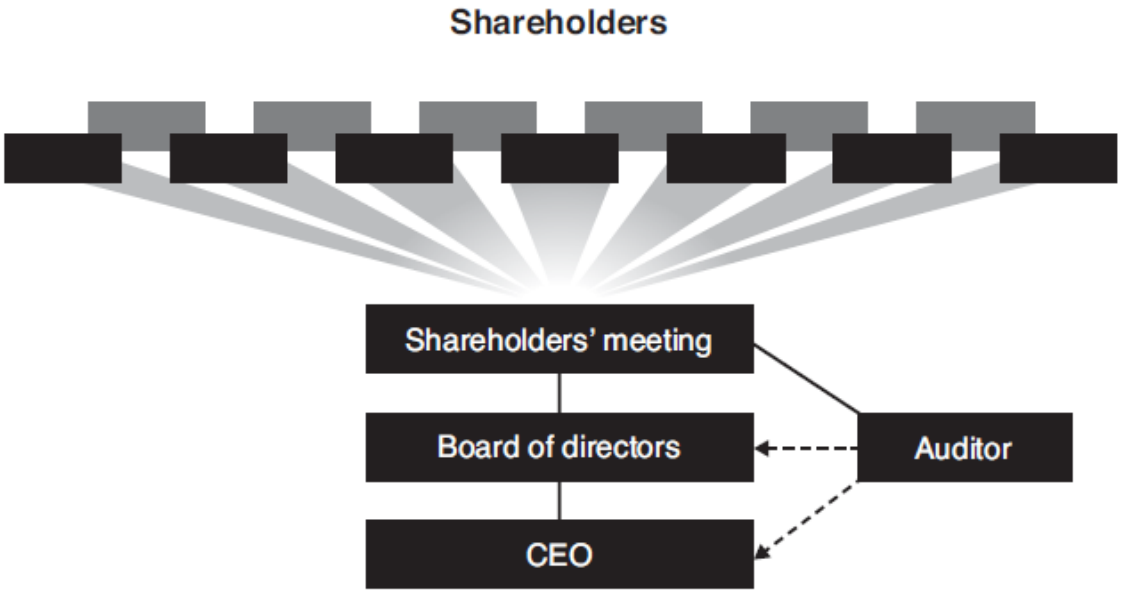
Per Lekvall, Secretary of the Swedish Corporate Governance Board), lists the six distinctive feature of the Swedish governance model that sets it apart when compared to Anglo-Saxon judiciaries in his review from 2009. Foremost, the Swedish regulatory system consists of legal requirements, namely the Companies Act, as well as self-regulation in the form of stock exchange rules and the Corporate Governance Code. The first (and last) Swedish Companies Act became effective as of January 2006 and as opposed to many other mainland European jurisdictions, it specifies what normally is included in Governance Codes, such as board composition (e.g. no less than three members, one of which is to be appointed chair), CEO and chairman duality and approval principles for the remuneration of management. As mentioned earlier, the Swedish business sector also has a tradition of self-regulations which manifests itself in a 'comply or explain' principle of the Corporate Governance code that is largely in line with that of its European counterparts.

From a structural perspective, however, the Swedish model offers an alternative to the unitary model in Anglo-Saxon countries as well as to the two-tier structure found in Germany and other European countries. It is set-up hierarchically with a clear distribution of roles and responsibilities between the layers where the bodies on top have significant powers to issue directives to or even to take over the power of their subordinates (Fig. 4). The shareholder's meeting is sovereign in its decision making regarding any company matter that does not fall within the exclusive competence of another corporate body and can only be opposed by the

[10] Temo (2003) Aktieägandet i Sverige 2003 (Share ownership in Sweden 2003)

veto right of the board of director's in very few occasions. It has exclusive decision-making authority on changes to the articles of associations, adoption of the financial statements, profit allocation as well as dividend distribution. Most important is its role of discharging and appointing the board based on recommendations of the nomination committee (Carlsson, 2007). The typical size of a Swedish nomination committee is around four to five members, usually made up by the largest shareholders and the board Chair. Its suggestions for appropriate candidates for the board of directors are often based on the network of one of the NC members or on recommendations of professional search consultants. Nonetheless, this highlights that larger shareholders can have a significant influence on who is steering the company. The board must then follow any directives passed by the shareholder's meeting given that it does not violate the Companies Act or the Company's Article of Association. Most notably, however, the Swedish governance explicitly specifies that the board needs to be outsider dominated and that no more than one of the directors can be part of a company's executive team, a role mostly inherited by the CEO (see Swedish corporate governance code 2016). Additionally, what is generally seen as problematic in other countries like Germany works particularly well in Sweden – co-determination. A distinctive feature of the Swedish stakeholder model is the representation of employees on the board of directors. Both the Law on Board representation ('LSA') as well as the act on co-determination ('MBL') came into effect in parallel in the mid-70s and the former specifies that a company with more than 25 employees is obliged to allow two employee representatives on the board (three in case of more than 1,000 employees). Accordingly, these representatives have the same duties as directors that are regularly appointed by the AGM (Carlsson, 2007). Figure 3 also captures the unique role of the respective auditor who is appointed by and reports to the shareholder's meeting but also reviews the performance of the CEO and the board.

Fig. 4: *The Swedish corporate governance model*



Source: Adapted by Lekvall (2009) from the Swedish Corporate Governance Code

Thirdly, Lekvall (2009) emphasizes the aforementioned structure of concentrated owners which are ought to take long-term responsibilities for the company by holding on to the firm even in less prosperous times and by also taking an active governance role – often in the form of a board seat. Strongly linked to the far-reaching authority of the shareholder's meeting as well as to the condensed ownership structure is in that context that those strong ownership powers are further enhanced by a dual class share system, so-called A and B shares. Currently, half of the Swedish listed companies allow for high voting shares with multiple voting rights, but more and more companies face headwinds that this allegedly hampers industry restructuring and reduces competition for control (Carlsson, 2007). Before touching on the arguments favoring the differentiation of voting rights (DVR), it is worth doing a small excurse to the historic events enabling the dual class share structure. When Ivan Krueger planned to make a share issue of Swedish Match at the London Stock Exchange in 1922 (and again in 1924) following his vast increase in attraction by outside investors, he soon faced the foreign ownership restriction of that time. Swedish match overcame this obstacle with issuing shares with voting rights in a ratio of 1:1000 what subsequently became a model for numerous international share issues by Swedish multinational corporations. Today, the Swedish Company Act caps this ratio at 1:10 (Carlsson, 2007). The most recited arguments from those in favour of the dual-class share system, among them Jacob Wallenberg, chairman of the Wallenberg investment vehicle Investor AB, include freedom of contracts as well as the transparent ownership registrations. In

fact, they argue that there is a market for both types of shares, each investor can choose freely in which one to invest and the ownership structured is required to be disclosed as detailed as to the three per cent level. Moreover, dual-class shares are often defended by their ability to facilitate long-term ownership and to counter institutional investors with a short-term investment horizon. Unsurprisingly, it has been mostly foreign institutional investors opposing the Swedish DVR highlighting the effective protection of the established spheres and making the bridge to political rights where one share should equal one vote (Lekvall, 2009; Carlsson 2007). Indeed, the empirical research on dual-class shares is vast and assessing their appropriateness is beyond the scope of this paper, but it is worth mentioning that a study by Holmén and Nivorozhkin (2007) finds that both takeover risk as well as market value decrease with dual class shares (and leverage).

In line with the strong ownership powers of controlling shareholders[11] is the Swedish approach of protection the rights of minority shareholders. This is achieved by three lines of defence. First, there is the legal obligation to treat all shareholders equally and decisions that give undue advantages to certain groups become invalid if challenged. Secondly, the Swedish governance system in general has been a pioneer in legally securing individual shareholder rights, so that all shareholder, for example, regardless of their share count can ask questions at the meeting, have their resolution proposals included on the agenda or file counter-resolutions. Lastly, minority shareholders can block certain resolutions of the shareholder's meeting regarding, for example, M&A activities, changes to the capital structure or a dividend payment. The required threshold for blocking such decisions varies between 10% and 33% of voting rights. The sixth distinctive feature are the far-reaching transparency standards of the Swedish governance system. These relates to full disclosure of the remuneration of the board members and the CEOs as well as to related party transactions (Lekvall, 2009).

For a concluding remark, the Swedish Corporate Governance Code has been introduced in 2005 and even though the code is mandatory, the 'comply-or-explain' principle allows companies to override certain rules if they disclose their reasoning and thus let the market judge if appropriate. A study by Tagesson & Collin (2016) analyses certain characteristics that tend to increase the likelihood of deviance from the code. They find that higher ownership concentration, smaller boards with directors with long tenure and an auditor's partnership structure measured by the proportion of employees to partners correlates with the tendency to

[11] See e.g. La Porta et al. (1998) or Shleifer-Vishny (1997)

override a principle. Overall, however, they find only a small number of deviations indicating a very high degree of compliance with the code.

3. Activist hedge funds vs private equity funds

Section 2.1.2 introduces a corporation's ownership structure as a very effective tool of internal corporate governance. While the empirical literature fails to establish a link between improved good governance and passive blockholders, the picture reverses if large financial shareholders become active participants in a firm's operations. Most prominent active shareholders are typically hedge funds and private equity funds. While there are many similarities between both fund types, a clear distinction between the investors builds the baseline for our analysis. As our predecessors, we face the fact that there is neither an academic, nor a practical systematic definition on what a hedge fund is, or what exactly classifies the particular hedge fund subcategories (e.g. Getmansky et al., 2004). Therefore, we start by giving an overview of generally accepted differences between hedge funds and private equity funds. We follow by describing shareholder activism and the strategy of activist campaigns and in a final step, develop a criteria checklist to distinguish between activist hedge funds and private equity funds.

3.1. Distinction between hedge funds and private equity funds

There are a few things that both asset classes have in common (Achleitner and Kaserer, 2005). Both typically raise their funds through *institutional investors* rather than individuals. Private equity and hedge funds represent the vast majority of the alternative investment spectrum available and therefore, often compete for the same funds. Private equity, as well as hedge funds, have typically negotiated a 2-and-20 fee structure whereby the agreements usually hold a 2% annual fixed management fee in addition to a performance fee of ca. 20% (e.g. Mietzner, Schweizer & Tyrell, 2011). This fee structure is set in place to incentivize fund management to act in line with investor interest, additional co-investments by the fund managers are often favoured.

With regard to the structural set-up, both investors are typically formed as *limited partnerships* (Achleitner & Kaserer, 2005), characterised by investors as limited partners and managers are general partners (usually within an advising entity to the actual investment fund vehicle). Neither hedge funds nor private equity funds are typically affiliated with banks or insurances (Kahan and Rock, 2007), allowing them to have less conflict of interest in their

active investment strategy in comparison to a mutual fund that is attached to a bank and also the main financier of the target company.

The two main differences between hedge funds and private equity funds are *investment horizon* and the *investment strategy* (Achleitner and Kaserer, 2005). Private equity funds are long-term oriented investors that typically seek to heavily influence their portfolio companies. The prime example of a private equity investment is a take-private or private transaction with majority control after closing for the private equity fund. Instead, we purposefully focus here strictly on public investments, in order to avoid including the control premium paid. Funds are normally closed-end-funds and the LPs deploy their money for at least seven years. The compensation structure is such that a general partner receives their *carried interest* after the fund has been fully deployed (realized gains) (see e.g. Achleitner and Kaserer, 2005).

A private investment in public equities (PIPEs) without seeking control by a private equity fund has historically been less common. However, the private equity industry has grown drastically over the recent years even as public markets rose worldwide and were assumed to gauge away investors' interest from PE. In fact, McKinsey reports that the private equity net asset value grew twice as fast as global public equities since 2002 and that total deal volume in 2018 surpassed the previous high of 2007. The fundraising cycle reached its record-breaking peak in 2017 and pace slowed down only marginally in 2018 ($714 Bn in 2018 vs. $855 Bn in 2017). Yet, the capital GPs have attracted from investors in 2018 is still the third largest-amount on record. The growth in assets under management, however, is accompanied with an increase in dry powder – most of which is typically held within the youngest-vintage funds.[12] Continuous GP pressure to put the newly raised capital to play and cyclicality in the usual target markets, forces the industry to be on the look-out for new avenues of investing – the latest of which involves eyeing public minority investments. Points of entry to this field range from raising a new funds only with a PIPE focus, extending the mandate of a current fund or an acquisition as we have seen in the EQT/ Zeres example.

In contrast, hedge funds typically are short-term investors, with quarterly or even monthly capital withdrawal guidelines (this might not be the case for all hedge funds, a prominent and important example for our study is Cevian Capital). With regard to the compensation structure, hedge funds pay their employees annual bonuses, which are calculated on unrealized gains (Mietzner, Schweizer & Tyrell, 2011). Albeit the investment strategy spectrum is very wide and can potentially include any product and asset class in the market,

[12] See Bain & Company Global Private Equity Report 2019

most strategies are focussed rather on the short-term. As they face severe capital redemption threads and might lose their best employees due to the bonus scheme, most hedge funds invest rigidly to avoid even short-term losses.

3.2 Shareholder Activism

Gillan and Starks (2007, p. 5) introduce the idea of *shareholder activism* as "encompassing a continuum of possible responses to corporate performance and activities". On one end of the spectrum are shareholders that express their views simply through the purchase and disposal of shares without any other form of interference with the company. On the other end, are shareholders that take full control of the company through takeovers and LBOs to initiate principal changes. Between both, there are many different forms of active shareholders, e.g. blockholders that acquire minority stakes to influence management and accomplish significant corporate changes.

The motivations for an active shareholder approach vary widely. This might be a financial motivation to influence a company´s management, but may also include strategic, social, political or environmental agenda. Goranova & Ryan (2014) state that "Shareholder activism has targeted corporate governance and performance as well as social, political, and environmental issues [..]". To put these agendas through, two main approaches are named in the literature – even if there is no widely accepted definition (Froese, 2017). Yermack (2010) sees shareholder activism as "efforts by investors to use their active voting power as a catalyst for corporate change", while Gillan and Starks (1998) define an activist as “an investor who tries to change the status quo through ‘voice’, without a change in control of the firm”.

As such, the actors operating in the investment fund landscape vary greatly, each has their own individual approach and agenda. There are financial investors, ranging from long-only mutual funds and pension funds to private equity and hedge funds, as well as other strategic competitors, labor union funds, religious groups, social activists and individuals (Goranova & Ryan, 2014). To increase shareholder value, these activists typically influence management to improve strategic and operational decisions, corporate governance, capital structure, and M&A or bankruptcy related matters (e.g. Brav et al., 2008).

Kahan and Rock (2007) split financially motivated shareholder activists into two groups, according to their strategy and behaviour. The first group is defined by an “incidental and ex post” (Kahan & Rock, 2007) approach. These are mutual and pension funds which only react in an activist manner when one of their existing portfolio companies shows a weak

performance and the investors sees it necessary to intervene. With regards to hedge fund activism, Kahan and Rock (2007, p. 1069) define the approach as "strategic and ex ante". The hedge fund investors identify a company with potential for strategic or structural improvements, acquire a voting stake and start an activism campaign. Hereby, Kahan and Rock (2007, p. 1069) write "hedge fund activism represents a blurring of the line between risk arbitrage and battles over corporate strategy and control", extending on the differences between the reactive approach of mutual and pension funds. Building on what we have learned from our interviewees, however, several long-only funds recently started to take a more active position and heavily support activist hedge-funds in their campaigns. This development could potentially change the activism environment and put additional shareholder pressure on the management boards (see e.g. Appel et al., 2016). A current example is the involvement of DWS on Cevian´s Thyssen-Krupp campaign[13].

"As the pressure on traditional active managers to produce higher returns continues to increase, they are following the growth in shareholder activism closely and increasingly support campaigns behind the scenes and through raising their voice publicly. A notable example is the involvement of DWS in relation to Cevian's successful campaign to break up ThyssenKrupp, which showcases the changing behavior of active managers in Europe."

Rich Thomas, Head of European Shareholder Advisory, Lazard

For historical periods, however, the empirical literature fails to establish a strong link between passive blockholders and value creation. Karpoff (2001), for example, compares 31 empirical studies on shareholder activism available at the time – most of which Kahan and Rock (2007) would classify as incidental and ex post" shareholders. For event windows, which are set to 31-days or narrower, only two studies find statistically significant positive, albeit small (i.e. <2%), abnormal returns (Strickland, Wiles, and Zenner, 1996; Sunil Wahal, 1996), the overall findings are either not statistically significant or negative. Kahan and Rock (2007) argue that financial activists, particularly hedge funds may be the advantageous investment vehicle for shareholder activism as they face a lower degree of regulation from the state as well as the limited partners. With regards to the US market, there are numerous studies that find positive abnormal returns for hedge fund activists. Notably Brav et al. (2009) examine Schedule 13-

[13] See Lazard, Review of Shareholder Activism Report (Q1-2019).

D[14] filings from 2001 to 2006, which identify an activists´ investment in a US company, and show large positive abnormal returns between 7% and 8% for the [-20;+20] announcement window. Klein and Zur (2007) find extraordinarily large average abnormal returns of 10.2% for the [-30;+5] event window around the Schedule 13-D filing, between 2003 and 2005. Clifford (2008) compares active blockholdings to passive blockholdings made by the same group of hedge funds from 1998 to 2005 and finds positive average abnormal returns of 3.4% and 1.6%, respectively, for the [-2;+2] window surrounding the filing. More recently, Boyson, Ma, & Morrandian (2015) find positive abnormal returns of 2.3% for the [-1;+1] window around the filing date from 2001 to 2013, and Krishnan, Partnoy, & Thomas (2016) find positive abnormal returns of 7.2% for the [-10;+10] filing window from 2008 to 2014.

For the German market, Mietzner and Schweizer (2013) report CARs of c. +4.0% for their entire dataset[15] across all event windows. Weber & Zimmermann (2013) study the CARs of activist hedge fund investments in 2005 to 2008 on the transaction date (+0.9%), the announcement date (+0.4%) and the publication date (+0.9%), rather than an event window. Bessler, Drobetz, & Holler (2015) find CARs of 2.7% for the [-5;+5] window from 2000 to 2006, and Becht, Franks, & Grant (2013) show CARs of 6.6% for the [-10;+10] window in 2000 to 2010.

3.3 Identification of activist hedge funds and private equity funds

Building on the distinction shown in the previous two sections, we have developed a criteria list, which we have used to categorize each investor for the transactions identified, following an approach first used by Weber & Zimmermann (2013). As stated before, there is no distinct nor widely accepted categorization. Therefore, we have aimed to be as clear in our process as possible. We have based our list on the "empirical criteria of distinction" identified by the SEC, which can be found in Achleitner & Kaserer (2005, p. 9). However, there are cases which are on the threshold for individual criteria or which couldn´t be strictly defined without access to confidential fund information.

Capital commitment

As discussed in section 2.1. the funding structure is one of the main differentiators between hedge funds and private equity funds. In general, we have categorized by closed-end-funds that

[14] Shareholders who intend to influence the firm file a schedule 13-D with the SEC whereas regular, passive blockholders file a schedule 13-G

[15] Including both private equity and hedge fund activist investments

have a multiple year tenure vs. short term capital redemption. The exact fund structure was not always publicly available. However, private equity funds often advertise with long-term capital commitment on their websites, confirming the criteria. Please note that for open-end funds, e.g. Investor AB, we have included them in the private equity sample, as they show the similar "secure funding" sentiment we aimed to filter for.

Investment horizon

The investment horizon goes partly hand-in-hand with the capital commitment criteria. Typically, we have looked for multiple year engagements for a fund to be categorized as private equity. This could be achieved through either explicit mentioning on the funds´ website or through recent transactions made. In general, we want to understand what the market *a priori* assumes the investor to act like as this sentiment will affect the regression.

Investment strategy

In accordance with section 2.2, we only include investors that clearly state that they actively influence the target company (or have done so in the past). This criterion was mostly used to exclude investors which don´t follow the activist strategy we aim to analyse. While it is not explicitly clear how transactions from activist hedge funds were filtered in prior research (Bessler, Drobetz, and Holler, 2008; Achleitner, Betzer, & Gider, 2010; potentially Mietzner & Schweizer, 2013), we only include hedge funds which have the reputation to run activist campaigns. Therefore, we filter out traditional long-short hedge funds and many merger arbitrage strategies. However, it is possible that a traditional activist may have used a different strategy, e.g. merger arbitrage, in the particular transaction.

Other categories that we have used to determine whether the investor is a hedge fund or a private equity fund, include *the use of leverage (*within the frame of the individual transaction), *the use of a hedging strategy* and *the size of typical investments.* However, these were simply used to strengthen an already existing categorization, rather than as a deciding factor.

4. Data

There is no single comprehensive source of hedge fund activism campaigns available, neither for the German nor the Swedish market[16]. Therefore, most empirical studies are based on datasets, that are manually retrieved from the publicly available mandatory disclosures of the national regulator, e.g. BAFIN in Germany or the SEC in the US.

The US is the most prominent subject market of comparable studies due to the relatively easy access to meaningful transaction data and historically strong engagement of activist institutional investors. Previous studies have relied on schedule 13D filings from the SEC, requiring shareholders, who seek active influence in the company, to disclose any position above 5% of a firm's shares within then days (see, e.g. Klein, 2009, Clifford, 2008; Greenwood & Schor, 2009; Brav et al., 2009). The SEC's online database EDGAR allows for easily accessible transaction data and separates investors into activist and non-activist strategies through the 13D and 13G filings, however, the distinction lacks a specific categorization for each campaign and needs to be evaluated individually. Neither of these are possible for the German or Swedish market. Consequently, we found a hand-collection process necessary to build our data set under sufficient scrutiny. The following subchapters detail our process for Germany and Sweden respectively. In a final step we have set up a comprehensive spreadsheet to retrieve the necessary share prices, ownership data, operative measures, etc. for each transaction from CapitalIQ.

4.1 Data Collection Germany

All available prior studies on hedge fund activism in Germany, before 2015, rely on the approach by Becht and Boehmer (2003) to collect the necessary shareholder data and mandatory disclosure dates (see e.g. Bessler, Drobetz, and Holler (2008), Achleitner, Betzer & Gider, 2010; Kühne, 2011; Weber & Zimmermann, 2013; Mietzner & Schweizer, 2013). It resembles a top-down approach utilizing the periodically archived datasets of the Bundesanstalt für Finanzdienstleistungsaufsicht (BAFIN), which includes all active blockholders available through mandatory disclosures. A longlist of activist hedge fund investors and private equity funds is then matched to the dataset to identify the targets of activist campaigns and private

[16] There are certain databases that do provide information on hedge fund activism, however, these are mainly regarding the US and UK market. Namely we have contacted Activist Insight, an online platform that provides data on shareholder activism on a global level from 2010 onwards. However, they only operate on a subscription model and have a clear focus on the US and UK market.

equity investments. However, the BaFin has recently changed their guidelines and only the most recent disclosure of any shareholder is available on their website.[17]

Froese (2017) uses a different hand-collected approach. First developing a longlist of activist investors that historically have operated in Germany. In a second step, the longlist of activist hedge funds is used to find block trades through the news database Factiva. According to Art. 26, WpHG, mandatory disclosures are published through news wire agencies and can therefore be matched with the specific activist investors. The identified activist campaigns are then further screened (e.g. by holding period, investment strategy etc. (Froese (2017)). In a final step, additional campaign information such as number of voting rights, convertible instruments and annual meeting dates are collected through Art. 27a WpHG disclosures, annual reports and Bloomberg among others.

We utilized both approaches to identify a comprehensive list of suitable transactions. Our first step consisted of building a private equity and activist hedge fund longlist. We based our private equity longlist on the recent list of the largest 300 private equity funds from *Private Equity International*, as well as the member list of the *Bundesverband Deutscher Kapitalbeteiligungsgesellschaften (BVK)*. For the activist hedge fund longlist, we pulled ca. 350 funds from CapitalIQ and screened them by our criteria discussed in section 2.3. In the second step we match these longlists twofold to capture any suitable transaction of our period, with the database from the BaFin (in line with the approach by Becht and Boehmer (2003)) as well as through a Factiva news search (in line with the approach by Froese (2017)). To circumvent the new BaFin database guidelines, we approached the BaFin directly and received the full datasets for each individual month from 2007 onwards. Aggregating the monthly lists allows us to screen for any transactions these funds have participated in. Additionally, we screen the BaFin list for notifications that contain keywords such as *management, partners, capital, equity, fund* to capture any potential special purpose vehicles (SPV). In line with Mietzner & Schweizer (2013), we include fully owned special purpose vehicles as these regularly represent the advising fund. Through this process we have collected a large dataset of potential transactions, however, the BaFin list only shows the most recent mandatory disclosure of the month, which could also represent divestments, convertible instruments and follow-on investments among

[17] Consider an activist hedge fund that acquires a 10% stake in the listed German company A in 2017, exceeding the mandatory disclosure threshold of 3% and subsequently sells its shares again in 2018, falling below the mandatory disclosure threshold. Due to the new guidelines, the database will only show the most recent disclosure, which in this case is the disposal rather than the acquisition we want to track. (https://portal.mvp.bafin.de/database/AnteileInfo/)

others. Therefore, we use Factiva to identify the Art. 26, WpHG and trace the original reporting date when the block acquired by the investor first exceeded the mandatory disclosure threshold of 3%. We use the reporting date rather than the position date, as we interpret it as the first time that all market participants are aware of the change in ownership. Please note that since the period until 2007 analysed in Mietzner & Schweizer (2013), the mandatory disclosure timeframe after the block acquisition was changed from nine to four days, and the minimum threshold was adjusted from 5% to 3%. Consequently, we work with the 3% threshold and have chosen a shorter [-5+5] window for our regression model. We repeated this process by matching our private equity and hedge fund longlists with the Art. 26, WpHG mandatory disclosures published on Factiva. Through this twofold matching process, we avert omitting special purpose vehicles which were not originally included in the longlists.

In a final step we exclude any transactions made by Private Equity funds when the target company is taken private within a year of the initial investment and those investments made by Hedge Funds following a majority buy-out of a strategic or other financial investor and the company is taken private. While the former simply aggravates for us to track long-term performance, the latter one follows a different investment rationale than what our study tries to analyse (i.e., often merger arbitrage).

In accordance to the approach used by Weber & Zimmermann (2013) we explicitly developed criteria to distinguish activist hedge funds from other hedge funds and private equity funds (see. Section 3.3). This distinction highly affects the findings of the datasets due to two reasons. First, by choosing an event study around the notification date, we take an *a priori* perspective. Other market participants and the target should assume the hedge fund to run an activist campaign. Prior literature available (see e.g. Bessler, Drobetz, and Holler, 2008; Achleitner, Betzer & Gider, 2010; and potentially Mietzner & Schweizer, 2013) use a broader definition of activist hedge funds, which potentially also includes other hedge fund strategies, such as merger arbitrage and long-only, or as in the case of Bessler, Drobetz, and Holler (2008) specifically, convertible bonds and campaigns without significant ownership by the fund . For Mietzner and Schweizer (2013), this is suggested by larger samples of transactions than this study for a time period when activism was less common - we thus deem comparability to be distorted. Second, the distinction between private equity and hedge funds is not clearly defined neither in practice nor in academia (see section 3.1.) and consequently not always straightforward. Therefore, we developed a set of criteria to avoid including fringe cases in the wrong sub-sample. While there are of course many variables, such as time period and market

sentiment, that will affect the CAR results, a difference in definition can arguably influence the results as well.

4.2 Data Collection Sweden

Similar to Germany, datasets for private equity investments or hedge fund activism campaigns are generally not readily available upon request for the Swedish market and need to be hand-collected based on mandatory disclosures that investors filed with the Swedish Stock Exchange and *Finansinspektionen*. The latter one requires investors to notify the market about major changes in ownership. These notification obligations apply when an investor acquires (or disposes) shares in a listed company and thereby reaches, exceeds or falls below certain thresholds of capital or voting rights in the company. The lowest of these thresholds is the 5% mark in Sweden. All investments below the 5% capital or voting power mark do not need to be reported to the regulatory authorities and thus smaller shareholdings often remain undetected by the market – unless, of course, voluntarily published by the investor. The Swedish Financial Supervisory Authority specifies that disclosures shall be made as soon as possible but no later than three business days (until midnight) following the day of the transaction.

For our event study analysis, we only consider investments of more than 5% of capital or voting rights and smaller investments that lead to exceedance of this mark since we interpret this as the first time the market is aware of a change in the ownership structure. This means we analyze the point in the market is first fully aware of a blockholding by a financial investor, irrespective of capital or voting rights exceeding the 5% threshold. Please note that for the descriptive statistics, explanatory regressions as well as the probit model we only analyse the share of voting rights acquired during that first transaction to have comparability with our figures obtained for Germany.

For our data collection, we received help from *Holdings*, a database provider for Swedish ownership data and trade flows. Their data analytics team extracted a list of ownership movements for Nordic investment funds over the past ten years for us. The list we received included 46 investment companies and shareholding movements as detailed as changes in 0.3% of capital or voting rights. Subsequently, we cleaned the list for companies that do not match our definition of a Private Equity or Hedge Fund, divestments, transactions below the 5% mark as well as follow-on investments. Since Finansinspektionen is not able to provide ownership flows, we manually complemented our list with their website search function. The web function gives all shareholding notifications for a company entered into the search field. We then used

a list from *Private Equity International* to identify the 300 largest private equity funds and manually looked up if they ever flagged investments to the Swedish authorities. We replicated this for c. 350 activist hedge funds we extracted from CapitalIQ. For the sake of completeness, we also checked for notifications made by companies whose name contains *management, partners, capital, equity, fund* etc. In a final step, we pulled what Preqin labels as *PIPEs*, i.e. private investments in public equities, and a list of all M&A transactions relating to Swedish listed companies and international companies that are listed on the Swedish Stock Exchange from CapitalIQ and complemented our sample.

In a second step, we again checked the date for each transaction we identified to make sure to use the notification and not the position date. We also limit our transaction sample to what Finansinspektionen refers to as regular buy notifications. Therefore, we disregard convertible instruments as well as IPOs and new issues. We also exclude transactions made by Private Equity funds when the target company is taken private within a year of the initial investment and those investments made by Hedge Funds following a majority buy-out of a strategic or other financial investor and the company is taken private. While the former simply aggravates for us to track long-term performance, the latter one follows a different investment rationale than what our study tries to analyse. We acknowledge though that a follow-up public-to-private transaction is an additional tool for private equity activism and part of the initial share price reaction might relate to a buy-out expectation.

5. Methodology

Similar to Mietzner and Schweizer (2013), we interpret market reactions to official filings of minority investments of at least 3% of voting rights in Germany and 5% in Sweden as a measure for value creation. More precisely, we measure if the market expects a new financial investor taking a block holding position to reduce agency costs by, for example, better-aligning management and shareholder incentives. Hence, the share price reaction is interpreted as an upper bound[18] for value creation that could be attributable to expected corporate governance improvements and/or any other positive news for the corporation's future dependent on the investor's track record (e.g. Mietzner, Schweizer, & Tyrell, 2011). At this point, it is worth mentioning again that we intentionally disregard any news regarding take-over ambitions to not have our results distorted by takeover speculation. That said, we apply standard event study

[18] Provided there has not been information leakage

methodology (see e.g. Brown & Warner, 1985 or Corrado, 2011 for an introduction) around the official filing date with the respective takeover authority. As mentioned earlier, we purposely exclude investments that lead to a buyout within one year post the initial filing. This is particularly important because if the initial stake surpasses 30%, investors are required to hand-in a bid for the entire company in both countries[19]. Only 20 of our c. 350 data points, however, exceed the 30% and those that do, remain listed for at least 300 trading-days.

Finance theory and particularly the efficient market hypothesis suggest that stock prices reflect all available information. Given this basic premise, we can study how a particular event changes a firm's prospects by analysing the impact of the event on the firm's share price. In its most common form, event studies focus on returns instead of trading volumes and volatilities by quantifying an event's economic impact in what is called abnormal returns. Abnormal returns are calculated by subtracting the expected or "normal" returns if the event had not taken place from the actual realized returns. While the latter can simply be empirically observed, the normal returns need to be estimated with the help of expected return models. We apply the basic *Capital Asset Pricing Model* that builds on the actual returns of a reference market and the correlation of a corporation's stock with that reference market. Equation (1) summarizes this model formally.

$$AR_{i,t} = R_{i,t} - \left(\alpha_i + \beta_i R_{m,t}\right) \qquad (1)$$

We use pre-event data over a 200-trading day period from $t_{i,-220}$ to $t_{i,-20}$ to estimate the typical relationship with the reference index (expressed by the alpha and beta parameters). At this point, it is worth mentioning that for a handful of investments share price data was not available for the entire 200-day period, either because of an IPO or simply not available in Capital IQ. We excluded all investments for which we could not estimate the parameters for at least three months which reduced our sample by four data points but is consistent with our approach to disregard companies that had an IPO in the prior quarter. For Germany, we use the Composite Dax (CDAX®) and for Sweden the OMX All Share as reference indices. For all realized returns $R_{i,t}$ we use the dividend adjusted total returns to not have dividend payments affect share price movements. Our market returns $R_{m,t}$ for Germany are also dividend adjusted whereas there was no consistent total return index for Sweden available.

[19] EU Takeover Directive 2004/25/EC

To measure the total event induced impact on a corporate stock over a particular period of time (*event window*), we add up the daily abnormal returns to create a 'cumulative abnormal return' (*CAR*, see equation (2)).

$$CAR_{t_1,t_2} = \sum_{t=t_1}^{t_2} AR_{i,t} \qquad (2)$$

In total, we analysed nine event windows with the largest spanning a 60-day period around the official announcement date. The disclosure requirement is no later than three days in Sweden and no later than four days in Germany following the day on which the relevant threshold has been reached. That said, we expect the greatest increase in value to during the [-5; 0] and [-5; 5]-day window. Please note that Mietzner and Schweizer (2013) analyse transactions in Germany prior to 2007 which were subject to a notification requirement of no later than nine days following the day of the transaction. They expected the greatest uptick in value during the [-10; 10]-day event window.

We further calculate 'cumulative average abnormal returns' *(CAARs)* which represent the mean values of identical event types for both of our sample countries (see equation (3)). Figure III-XII display the average CARs over time for both of our sample countries and on a subsample basis.

$$CAAR = \frac{1}{n}\sum_{i=1}^{n} CAR_{t_1,t_2} \qquad (3)$$

To draw statistical inferences across our event windows, we use a parametric cross-sectional t-test to check if the mean is statistically different from zero. The test statistic for testing $H_0: CAAR = 0$ is given by

$$t_{CAAR} = \sqrt{N}\frac{CAAR}{S_{CAAR}} \qquad (4)$$

and the respective standard deviation S_{CAAR} by equation (5).

$$S_{CAAR}^2 = \frac{1}{N-1}\sum_{i=1}^{N}(CAR_i - CAAR)^2 \qquad (5)$$

Brown and Warner (1985), however, showed that the cross-sectional test is prone to event-induced volatility and thus might be of low power. To check our results for robustness, we also apply a non-parametric Wilcoxon signed rank test which considers both the sign and the magnitude of abnormal returns. It further assumes that none of the absolute values are equal and are-non zero, with

$$W_t = \sum_{i=1}^{N} rank(A_{i,t})^+ \qquad (6)$$

where $rank(A_{i,t})$ only considers the positive ranks of absolute values of cumulative abnormal returns $A_{i,t}$ at time t for firm i. The test statistic for $H_0: AAR = 0$ is then defined as

$$z_{Wilcoxon,t} = \frac{W - N(N-1)/4}{\sqrt{N(N+1)(2N+1)/12)}}. \qquad (7)$$

Since we are running a cross-sectional analysis, we need to test $H_0: CAAR = 0$ instead and add the CAAR value for each firm *i* to the abnormal returns in the event window and then perform the same analysis as described above[20].

After having examined the Private Equity and Hedge Fund subsamples separately, we draw inferences regarding differences in their mean and median event window CARs using a standard two-sample t-test (testing for $H_0: \mu_{PE} - \mu_{HF} = 0$) as well as the Wilcoxon rank sum z-score. This helps us to determine whether the financial markets distinguish between large purchases of voting rights by private equity investors and hedge funds. Anticipating the limitations and suggestions for further research section of our thesis, it would have been interesting to define different size brackets and to check if the capital markets react more positively with a greater acquired stake. Especially for Sweden, however, our data sample was not large enough to conduct this part of analysis so that we decided to leave this for future research.

Due to the shortened (and now more aligned with Sweden) disclosure requirement following the regulatory change in Germany, we expect the differences in announcement returns not to be severely biased by lagged disclosures. We thus base our cross-sectional regression on the [-5; 0] event window in an attempt to explain the variation across abnormal

[20] We find the wording on eventstudytools.com to be somewhat ambiguous for testing $H_0: CAAR = 0$ and run the Stata inbuilt *signrank* function instead to obtain the Wilcoxon signed rank test statistic associated with the CARs. We also perform a *signtest* that does not make further assumptions about the CARs' distribution for robustness.

returns and estimate their sensitivity to ownership and firm characteristics. We first regress our cumulative abnormal returns (using heteroskedasticity-consistent, robust standard errors) on three control variables (a proxy for a stock's liquidity, run-ups/drawdowns and the actual beta) as well as on several explanatory variables. We then repeat all of the above analysis for what we call cumulative abnormal excess returns by simply deducting the index return from the realized return instead of estimating an expected ('normal') return with the help of a single factor model. The results are shown in table VI and IX. We add a second regression on a dummy variable equal to one if the investor became the largest shareholder following the acquisition the see if any of those firm characteristics favour a buy-out.

In a second step, we estimate a Probit model based on the observable firm characteristics used for our regression analysis to calculate the conditional probability by which a target company is approached by a private equity fund or a hedge fund investor. We use a dummy variable equal to one if the respective target company was acquired by a Hedge Fund and zero otherwise.

Lastly, we analyse the long-term impact of a change in ownership and if following activism campaigns can payoff for individual investors. We measure performance by calculating the buy-and-hold abnormal returns of our target firms by benchmarking their performance against the CDAX® and the OMX All share index for periods between 100 and 300 days. We again draw statistical inference by comparing the mean and median abnormal returns of our subsamples for both countries with the help of a standard t-statistic for means and a sign test for medians.

6. Empirical Results

6.1 Differences in Investment Criteria

Given the many differences of hedge fund and private equity investors discussed in section 3.1, we expect the respective investor types to show varying investment behaviour and criteria used to select target companies. In accordance to Mietzner & Schweizer (2013) we apply a Probit model to analyse these potential differences. We estimate whether a company is approached by a hedge fund (dependent variable of 1) or a private equity fund (dependent variable of 0) (see Table III). Please refer to the Appendix to find a comprehensive list of all variables chosen in the Descriptive Statistics analysis as well as the Probit model. We compare our findings on a standalone basis for Germany and Sweden and highlight the similarities and differences to Mietzner & Schweizer (2013).

In Germany the relevant investment criteria for a hedge fund investment are the % stake acquired, other hedge fund ownership in the quarter of the transaction, as well as having another investor or strategic company as the largest shareholder. Hedge fund investors on average acquire smaller stakes in the target companies compared to private equity funds. Activist campaigns typically include "syndication", a strategy to seek the support of other blockholders, allowing the activist to influence the target company with a smaller stake than a private equity manager would normally acquire. It is also noteworthy that private equity investors may plan to delist the company in the long-term. These findings are in line with Mietzner & Schweizer (2013).

Regarding the ownership structure, we find that hedge fund investors are more likely to target a company if other hedge funds are already shareholders in the company at the time of the acquisition. Note that although it does show a positive coefficient, a hedge fund representing the largest shareholder is not a significant criterium in our dataset. However, if the largest company is an investment firm other than a hedge fund, or a strategic company, the probability that the company will be targeted by a hedge fund is higher. Again, this may be based on the "syndication" strategy of activist hedge funds, that seek support by other investors. A strategy that could negatively impact performance in a stakeholder model corporate governance system as in Germany and requires support of strong allies (other blockholders with a similar investment view). The feedback we received from our interviewees is consistent with our view:

"From a corporate governance perspective, it is generally easier to inflict change with the same ownership percentage in Sweden than in Germany. The activist business model builds on the idea of getting support from other stakeholders, and this is especially true in Germany. It might hence be that in Germany funds tend to look for targets with like-minded owners and other stakeholders to push for change, because they feel that on their own it is more difficult for them to get their agenda through."

Niko Pakalen, Partner, Cevian Capital

In contrast, private equity funds often aim to be the sole investor and may be interested in the option to take the company private later-on. In recent years, classic asset managers have become more prone to vote along activist hedge funds and voice their views, as for example Artisan in the Cevian campaign targeting ABB. This development may explain the difference in findings to Mietzner & Schweizer (2013).

The main findings of Mietzner & Schweizer (2013, p. 11) that, "hedge funds prefer smaller targets […], with higher growth valuations […] and higher interest expenses compared to sales" have not been replicated in our analyses. Mietzner & Schweizer (2013) argue that activist hedge funds typically have fewer assets under management than comparable private equity funds and are therefore bound to invest in smaller companies. Accordingly, smaller companies on average show higher book-to-market multiples. Not only has hedge fund activism become increasingly popular since 2007 - resulting in larger assets under management and in a greater number of "blockbuster" investments - but also are private equity investors more likely to be required to gain a predetermined ownership stake. Hedge funds, on the other hand, often keep their investment at a stake of 5-10% of voting rights, which lets them also target bigger companies[21].

According to the Probit model for the Swedish market, activist hedge fund and private equity investors only differ statistically significantly by the size of the stake they acquire and the leverage the target company carries. Typically, private equity funds place leverage in the target company itself, mainly through a leveraged buyout, while hedge funds use leverage on fund level (see e.g. Achleitner and Kaserer, 2005; Mietzner and Schweizer, 2013). It is, however, plausible that a private equity fund would set up an investment vehicle to use leverage on a minority investment or that an activist hedge funds only uses equity.[22] The Private equity

[21] See, for example, the response of Niko Pakalen from Cevian Capital in Section 6.4 on how fund types differ.
[22] The structure that individual funds use and how this affects the investment would be a great topic for further research

investors typically acquire larger stakes, which is in line with our findings in Germany, as well as for Mietzner & Schweizer (2013). While private equity funds prefer companies with a higher leverage at the 1% statistical significance level, according to the Probit model, the coefficient is only 0.025. The preference for higher leverage can be explained by the fact that private equity funds typically seek out target companies that can tolerate a high debt burden. Note that these are the only agency proxies that distinguish between hedge fund and private equity investors in Sweden. Especially regarding the governance structure, the findings differ greatly from the German market.

In summary, hedge fund and private equity investors target similar firms in Germany and Sweden respectively. An inherent difference between both strategies is the stake acquired. While activist hedge funds acquire smaller stakes and use the syndication strategy to influence corporate strategy, private equity funds acquire larger stakes and consider taking the company private. With regard to governance structure the Probit model identifies that private equity and hedge fund investors follow a similar investment strategy in Sweden, but significantly differ in Germany. We believe that this can be traced to our definition of activists in Sweden, which also include large traditional asset managers that participate and lead activist campaigns, and the differing corporate governance systems.

"I think Private Equity needs to pursue different avenues of investing from time to time depending on the stage of the public versus the private market. Public minority investments have certainly become one of those avenues over the past five to six years where we try to implement governance similar to our private holdings – with a bit less of influence of course. Going forward, I expect this development to continue."

Andreas Källström, Partner, Altor Equity Partners

We also asked our interviewees if there are fund specific characteristics that tend to be more relevant for either hedge funds or private equity funds. While debt carrying capacity and stability of cash flows are generally more important for private equity firms, we learned that hedge funds pay particular attention to macroeconomic factors we haven't included in our probit regression.

"For us it is really about bottom-up company picking rather than looking at a set of predetermined variables. For example, return on invested capital and low starting valuation are important, but so are non-financial characteristics like the attractiveness of the end market

and strength of the company's offering and their market position, as well as macroeconomic factors like the stage of the business cycle for the company in question.

Niko Pakalen, Partner, Cevian Capital

"Cyclicality is generally less of a concern for a private equity fund. As long as we fundamentally believe in the business, the exact state of the macro-environment is not that important to us. Regarding your findings of private equity funds favoring targets with higher leverage, I think private equity funds are generally more experienced when working with leverage which is particularly important when a company currently operates with a high degree of leverage and you believe you cannot immediately influence that."

Andreas Källström, Partner, Altor Equity Partners

"From our point of view, a good catalyst is usually an opportunity to improve the linkage among the owners, the board and the management, which is key to having a good governance in a company. In its simplest form this can be that the board of directors does not have a clear view of what the strategy of the company should be due to too-passive owners. It's very hard to quantify but you could look at it in terms of shareholders, i.e., looking at managerial shareholdings or board shareholdings, which can be a positive signal."

Mark Shay, Partner, Accendo Capital

"I think the industry of a target company could also be a differentiating factor. For example, large financial institutions, like Cevian's Investment in Nordea, or investment companies trading at a discount, such as Elliot Management's involvement in Alliance Trust in the UK, are typically something that a private equity fund would not invest in."

Mikael Walther, Founder, Navos Capital

Additionally, we have replicated our Probit model, excluding the "stake" variable to test the robustness of the model. The % stake that is acquired by the respective fund can in part be endogenous. While section 3.3. depicts the criteria chosen to distinguish between activist hedge fund and private equity investments, sources used such as the website or news articles may have reflected the stake acquired in their taxonomy. However, when comparing the findings of this adjusted Probit model to the original model, we identify only minor differences. Namely these are for Germany, the "Largest Strategic" variable is no longer a statistically significant indicator

for a hedge fund or private equity investment and the constant turned from slightly positive to a statistically significant indicator of -1,873. The Swedish model has moved in line with the German probit, showing a smaller (from -1,040 to -2,338) and now statistically significant constant. Overall the findings remain very similar, albeit at a lower LR chi^2 and Pseudo R^2.[23]

6.2 Market Reactions to Block Trades by Financial Investors

We hypothesize that the official disclosure of a holding in a listed company by a financial investor is associated with positive abnormal returns because of a potential reduction in agency cost and/or operational or strategic improvements market participants expect. For both Germany and Sweden, we calculated market- and risk-adjusted returns for nine different event windows by benchmarking the observed returns against a CAPM prediction and the respective market index over the same period of time. We define the date at which the financial authorities have been informed about a change in ownership as day 0. Tables VI to IX summarize the cumulative average abnormal returns for the [-30;+30] window for our subsamples and chosen benchmarks. Tables VI to IX give estimates of the wealth effects in both countries following the entry of a financial investor (Table VI and VII show the abnormal returns against the CAPM prediction, table VIII and IX show the index-benchmarked excess returns).

The results in Tables VI and VII are confirmative of our hypothesis but generally less salient than previous research. The empirical literature on investor activism is vast, especially for the US. For example, Brav et al. (2008), find a Hedge Fund outperformance of +7.0% around announcement (see e.g. Klein (2009) or Clifford (2008) for further research on the US market). For the German market, Mietzner and Schweizer (2013) report CARs of c. +4.0% for their entire dataset across all event windows. A more detailed overview can be found in section 3. For our (more recent) German dataset, we find an outperformance of c. +1.2%. Similar to Mietzner and Schweizer (2013), the [-20;+20] event window shows the greatest increase in wealth +2.4% (compared to +4.5% in the referenced paper) which is significant at the 10% level. For the entire sample, we also find statistically significant outperformance during the narrower [-10;0] and [-5;0] windows with +1.4% and +0.9%, respectively. That especially the narrower event windows show a significant outperformance is less puzzling due to the aforementioned change in regulation from nine to no later than four days regarding the disclosure requirement. When analysing our subsamples for the German market, it becomes apparent that investments by private equity investors are received more favourably. The highest

[23] The detailed tables can be found in the excel file attached, or through contacting the authors

albeit not significant wealth effect is recognized again for the [-20;+20] event window with c. +3.1%. Again, all four most narrow event windows show significant outperformance of ~1.7-2.0%. Turning to the hedge fund sample, our findings are less persuading. The reported wealth effect for Hedge Fund investments in the German stock market is much lower and not significant for any of the event windows. Nonetheless, our tests do not indicate a meaningful difference between both investor types except for the returns in the [-5;0] event window which is at first sight not surprising given their blurred definitions and the similar skills sets both investor types possess. However, on the back of the results for the event window most closely surrounding the announcement date, our findings for the PE sample hint that a priori the market receives private equity investors to be more shareholder beneficial – potentially caused by their longer-term investment horizon, strategic and operational involvement, commitment and, of course, a potential buy-out expectation. When analysing the index- instead of CAPM-benchmarked returns (Table VIII) for our event windows, we receive a similar yet statistically more significant picture. For our entire sample and especially for our PE sample, almost all event windows are significant with relative outperformance of c. +2.2% and +2.8%, respectively. For our hedge fund sample, the broadest event windows show a wealth effect of ~3.0% and are all significant. Regarding the difference between both investor types, we obtain similar results as for our CAPM-predicted returns. Figures III and XII graphically capture what can be seen in the data. The private equity CARs show a drastic increase around the reporting date whereas the Hedge Fund CARs show a more gradual pattern.

Turning to Sweden, our findings are vastly aligned with those found for Germany, yet different in their magnitude. For our entire data set, we find wealth effects of +2.4% and +2.3% when benchmarked against the CAPM predictions for the [-20;+20] and the [-5;+5] event window, whereas only the latter one is statistically significant. Our analysis of private equity investments shows (significant) outperformance of ~2.8-3.4% for those event windows closely mirroring the three-day disclosure time frame for Sweden. For the hedge fund sample, outperformance against the CAPM prediction is higher, especially for the broader event windows, but again not statistically significant. Differences between both investor types and in favour of private equity funds can only be insinuated by the results of the rank sum test for returns across the [-5;+5] event window. Again, when benchmarking against the OMX All Share Index, our findings are more significant and greater in their magnitude. Index outperformance over the [-20; +20] event window for the entire sample is c. +4.2% and c.

+2.6% for the [-5; +5] window[24]. The former is driven by hedge fund outperformance of c. +4.5% and the latter one by outperformance of c. 3.8% by the private equity sample[25]. However, we again fail to detect a perceived difference between both investor types.

We again ran our findings past our interviewees to get their views on why the market reacts more favorably to an activist coming in in Sweden than in Germany and why we might see differences in announcement returns between the different types of activists. On aggregate, we find outperformance of +0.9% in Germany and +2.0% in Sweden during the [-5;0] event window. The feedback we received shows that our findings can very much be attributed to the differences in corporate governance systems in Germany and Sweden. We learned that the latter, on the one hand, is a much more shareholder-value oriented country, reflective in the nomination committee. The four largest shareholders get a direct way to influence the board composition which also involves placing their own people on the board. The German stakeholder model, on the contrary, gives very high powers to other stakeholders, especially union members. The German supervisory board, which lacks the decision-making authority of the board of directors in Nordic countries, is made up half by shareholder and half by union representatives. In case of a tie, the chairman, who is a shareholder representative, holds a casting vote. This, however, shows how important it is for an activist campaign to have employee interests in mind and become more adept to the unique levers in Germany.

"When it comes to shareholder activism in Germany, everyone always states that the two-tier board system and codetermination make it hard to run a successful activist campaign. While there is truth behind this, it´s a bit more complicated. Some funds like Elliott have become very adept to the German corporate governance system and its levers. The recent move to refuse discharge of the Bayer board is a perfect example for this. In the US, shareholders can fire the board, in Germany they attach a black spot on their profile for the job market. The fact that the corporate governance systems are different, doesn´t mean it´s impossible, however, funds have to adapt better to the German system, and I think we will see more of this in the future."

Thomas Kolaja, Co-Head of European Activist Response Practice,
McKinsey & Company

[24] Significant at the 5% and 1% level, respectively (See table IX).
[25] Significant at the 10% and 1% level, respectively (See table IX).

"In very broad and general terms, it is more attractive for a shareholder to see an activist investing in a company in Sweden. Sweden is generally a shareholder-value oriented country, which is reflected in how managers run the companies. Also, importantly, activists have the nomination committee as their tool to change the composition of boards. This is absolutely not to say that you can't do good activism in Germany, the investor just needs to more carefully pick the situation and make sure that it can steer the company in the desired direction – e.g., that the management and other shareholders can be persuaded. Versus the size of the market, there are, however, less of these opportunities in Germany than in Sweden. If I would randomly pick a company in Sweden and in Germany, and say than an activist enters that name, my guess is that the activist would have a higher chance of succeeding in changing the company in Sweden than in Germany. That being said, the improvement potential in German companies tends to be higher – it is just more difficult to realize."

Niko Pakalen, Partner, Cevian Capital

"I think Sweden is more capitalistic than Germany in the sense of that the market has accepted that shareholders should control and have the right to decide the fate of the company. This is not only reflected in the strong role separation emphasized by the governance code but also in the fact that institutions are generally very positive to small activist shareholder trying to drive things. On the contrary, I perceive the basic instinct in Germany to react more suspicious, part of which might relates to the fact that the German stakeholder model emphasizes that the company does not only exist for the benefits of its shareholders."

Mikael Walther, Founder, Navos Capital

Turning to the differences between both fund types, our interviewees attribute the private equity outperformance to a longer commitment and to potential buyout expectation, thus confirming our hypothesis above. It is also worth noting that in both countries the acquisition of a stake greater than 30% triggers the legal obligation to make a bid for the entire company[26]. To account for this, we applied our criteria that the target company cannot be delisted within one year and thus assumed that the bid was rejected. However, only 20 of our c. 440 data points actually relate to activist campaigns with an acquired stake of more than 30% of outstanding voting rights.

[26] EU Takeover Directive 2004/25/EC

"In comparison to buy-and-hold hedge funds that become active owners like Cevian or Investment Öresund, I don't think Private Equity differs that much if it has a mandate to invest in public minorities. The distinction is rather complex because both investors tend to invest in companies where earnings are depressed, and they see a possibility to unlock operational value from a benchmarking perspective. The only deviation is that Private Equity investments could be a bit more long-term oriented."

Andreas Källström, Partner, Altor Equity Partners

"Private Equity investors tend to have stronger brand names, be better known to the public markets and are often larger in size. The only well-known activist hedge fund in Sweden is probably Cevian Capital, so any other fund to most people is just an anonymous fund investor and people are not so in tune with what their strategy is."

Mark Shay, Partner, Accendo Capital

6.3 Explaining the Sources of Value Creation

Similar to Mietzner and Schweizer (2013), we apply multiple cross-sectional regression models to our abnormal returns in order to explain the different valuation reactions. We start with a control regression model that is designed to control for potential distorting aspects of the explanatory regression. In a second step, we regress several corporate, financial and ownership characteristics to explore a pattern of value creation. It is worth highlighting that we only apply a subset of the control variables used by Mietzner and Schweizer (2013) but are largely consistent with their firm characteristics. Additionally, we also regress those characteristics on a dependent variable equal to 1 if the respective investor is the largest blockholder following the acquisition to see if any of those features facilitate becoming the dominant shareholder.

6.3.1 The Control Model

We apply the following control variables:

1. *Liquidity.* As proposed by Amihud (2002) stock illiquidity is defined as the average ratio of the daily absolute return to the (EUR, SEK) trading volume on that day. We thus obtain the absolute (percentage) price change per dollar of trading volume.

$$ILLIQ_{iy} = \frac{1}{D_{iy}} \sum_{t=1}^{Diy} \left| R_{iyd} \right| / VOLD_{ivyd,} \qquad (8)$$

where R_{iyd} is the return on stock i on day d of year y and $VOLD_{iyd}$ is the respective daily volume - denoted in dollars for explanatory purposes in the formula above but in local currencies in our calculations. We calculated the average between day -220 and -20 to the acquisition. Mietzner and Schweizer (2013) expect a positive coefficient of the illiquidity measure if the share price increase stems from buy side pressure.

2. *Beta.* The share price reaction around the announcement date could simply be a risk premium which is usually factored into a corporation's CAPM beta coefficient. We estimate the beta in relation to the aforementioned indices and would expect a positive sign on the coefficient.
3. *Technical Reaction.* Calculated as the geometric mean of the stock price return over the 200-day period prior to the event. Since an uptick in share price around the reporting date could just be a technical correction following a period of market decline, we would expect a negative sign on that coefficient.

Table X-XIII report the results of our control models. For the CAPM-benchmarked returns in Germany, we find no statistically significant coefficient. Turning to the Index-benchmarked return, we find a slightly positive coefficient on the Amihud liquidity measure for the PE sample. For Sweden, the coefficient on the Amihud liquidity measure is much larger (irregardless of our measurement for abnormal return) for the hedge fund sample indicating that the abnormal returns in the hedge panel are influenced by buy-side pressure[27]. For the PE sample in Sweden, we find a positive beta coefficient which suggests that some of the return is could be linked to a risk premium. However, it is only significant at the 10%-level.

6.3.2 Firm, Financial and Ownership Characteristics

We apply the following explanatory variables in our regression to analyse differences in stock price reactions for our subsamples:

1. *Stake*. The amount of control inherited by an outside investor is directly linked to its number of voting rights. Accordingly, we expect activists to be better positioned to challenge management and align interests with a higher ownership stake and thus a positive sign of the variable.
2. *Leverage.* According to the agency cost hypothesis, debt can be used to align managers' interest. Especially in the case of a conflict between shareholders and management

[27] And significant at the 1% level for both abnormal return measurements.

arising from the separation of ownership and control, debt helps to discourage overinvestment by opportunistic managers (see e.g. Harvey et al., 2004; Jensen & Meckling 1976; Jensen et al., 1986 and else). We use the total debt to total assets ratio as a proxy for leverage and expect a negative coefficient.

3. *Free Cash Flow and Profitability.* The agency cost hypothesis also suggests that the risk of managers wasting corporate resources is higher if executives have more cash at their disposition, i.e. when companies perform better operationally. While previous research follows this line of thought and expects positive coefficients on all profitability and cash flow proxies, we think for a target company to be attractive for an investor its current valuation must be punished by the market – often in response to poor performance. We use several proxies to estimate profitability and the availability of free cash flow. For the latter, we use CapitalIQ's data for return on assets as well as book value growth as measured as the change in common shareholders equity over the year prior to the acquisition Cash earnings return on equity is calculated as operating cash flow over common shareholder equity at the last full financial year before the acquisition and earnings per share is extracted from Capital IQ. We would expect a positive coefficient on profitability metrics showcasing a classic turnaround case but a positive coefficient on the cash flow proxy to be attractive from a cash return perspective. For both funds, cash flow streams that are returned to the investor are a vital part of their internal rate of return calculations but especially for private equity funds interim cash flows play a crucial role in repaying debt.
4. *Abnormal Trading Volume.* The minimum disclosure requirements in Germany and Sweden are 3% and 5%, respectively. Passing those thresholds is what classifies as an event in our study and could – depending on how it is perceived by the market - lead to increased trading volumes once disclosed. We follow Campbell & Wasley (1996) in using the log-transformed relative volume per firm (see e.g. Ajinkya & Jain, 1989 or Cready & Ramanan, 1991 for using the log-transformed formula). We get our trading volume metric as follows:

$$V_{it} = \log\left(\frac{n_{it} + 0.00255}{S_{it}} * 100\right), \quad (9)$$

where n_{it} is the number of shares traded for firm *i* on day *t*, and S_{it} represents the total shares outstanding on the same day. We then compute the mean-adjusted abnormal trading volume as

$$v_{it} = \tilde{V}_\tau - \tilde{V}_t \quad (10)$$

with

$$\tilde{V}_t = \frac{1}{T}\sum_{t=f}^{t=1} V_{it}. \quad (11)$$

T is the number of days in the estimation period and *f* and *l* are the first and last days of the estimation period. With date 0 denoting the event date, we estimate $\tilde{V}_t$ over the days -60 to -10 and +10 to +60 to the acquisition. Due to a possible delay of disclosure, we don't calculate the trading volume on event date 0 but take the average trading volume surrounding that event instead. Hence, we estimate $\tilde{V}_\tau$ in a similar fashion but over the days -10 to +10. Similar to Mietzner and Schweizer (2013), we expect a positive coefficient if CARs are connected to buy-side pressure.

5. *Valuation.* The market value of a company is reflective of its growth opportunities, especially when put into relation to its book value. We use this ratio to understand how much growth is already priced in and conclude that investors have a harder time enhancing value when this ratio is high – we expect a negative sign.
6. *Size.* The empirical literature suggests a negative relation between size and the level of information asymmetry since larger firms are typically better covered by analysts and more closely monitored by investors (see e.g. Helwege et al. (2007)). Mietzner and Schweizer (2013) thus expect a negative function of shareholder wealth opportunities in relation to increasing firm size because it is unlikely that new investors will have unknown private information. We expect a negative coefficient because the amount of capital investors can deploy on a single investment is often limited. With increasing firm size, they can simply buy less of the outstanding voting rights which aggravates their activist endeavour and might trigger a smaller market reaction in case of a disclosure of a very small stake.
7. *Ownership Structure.* We control for ownership structure by including the number of blockholders (i.e. parties surpassing the minimum reporting threshold) at the end of the quarter prior to the acquisition. Since monitoring activities largely differ between the type of blockholder, we also include variables for the number of private equity investors and dummy variables equal to one if the largest shareholder prior to the acquisition was

a passive asset manager or a hedge fund. Exploiting private benefits is theoretically facilitated by a diverse ownership structure so that we expect a greater market reaction in case of a previously diverse shareholder base.

In summary, our regression results indicate that the chosen explanatory variables have done a better job in explaining the sources of value creation in prior research (e.g. used in Mietzer and Schweizer, 2013) but fail to do so for more recent samples. However, they do suggest that strategies of activist hedge funds and private equity investors have become more aligned over the years. It is also worth noting that we provide alternative interpretations for coefficients on certain proxies than what previous studies suggests for older datasets.

In Germany, we find a negative coefficient on equity growth for hedge funds and for private equity investments a negative coefficient on earnings per share development. Mietzner and Schweizer (2013) detect higher abnormal returns for firms with higher return on assets and more free cash flow and attribute this to Jensen's (1986) hypothesis that agency problems are often free cash flow problems. We, however, interpret negative coefficients for return on assets, equity growth and earnings per share in combination with positive coefficients on free cash flow[28] as a classic turnaround target for investors that is still attractive from a cash generating perspective. A turnaround target has typically fallen from grace with public markets in response to its poor performance as captured above and market participants now hope a new block holder to steer it back into the right direction. That the sign on the coefficients is the same for both fund types is confirmative in our hypothesis that the investment cases have converged over time.

"It is fair to say that activist hedge funds and private equity funds investing in public equities target underperforming companies. Very few of these funds, however, typically do basket case investments where a company is significantly cash flow negative.

Niko Pakalen, Partner, Cevian Capital

"As I said earlier, the distinction between an activist hedge fund and a private equity fund with a public minority mandate is a very blurring line. With leverage in the structure, however, we would generally not look at companies that are cash flow negative. The typical private equity case would be a proven business in an attractive market, that is profitable, cash flow stable but not realizing its full potential."

Andreas Källström, Partner, Altor Equity Partners

[28] Coefficients on returns on assets and free cash flow are not significant for our sample.

It is worth noting that we find a large (and significant) coefficient on the abnormal trading volume for private equity investments. Private equity investors generally attempt to acquire larger stake holdings to be able to enhance operating and financial policies, but the large and positive coefficient clearly indicates that the market already reacted to the increased buy-side pressure. Interestingly, we find greater abnormal returns for firms with fewer block holders prior to the PE investment. The regression results for the index-benchmarked returns are shown in table XIII and consistent with our findings for the CAPM-benchmarked reactions. In our second Model, we test our proxy variables for the likelihood that the investor becomes the largest owner following the acquisition. For both fund types, we find that the likelihood decreases with the number of block holders in the prior quarter. For hedge funds, we find a similarly negative relationship for firm size and valuation (in relation to its book value). None of this is puzzling to us since firm size aggravates becoming the dominate shareholder and a high market-to-book ratio indicates that some growth opportunities are already priced in. Hedge funds which are very dependent on management to put through their activism campaigns due to their often-smaller shareholdings must carefully decide on the right entry point. This is not to say that private equity investors are less concerned about their buy-in price, however, with large parts of their investments being debt financed and greater influence over the company, they have additional angles for value creation.

Turning to Sweden, we find that none of our proxies for agency costs captures the variation in abnormal returns[29] around PE investments. This is puzzling since prior research suggested a link between agency proxies and private equity investments in other countries and we also find private equity induced outperformance. For hedge funds, we again find that the market shows a greater reaction for firms with bad operational performance measured as common equity growth and return on assets. We also find a positive relationship between the existence of a private equity investor in the prior quarter or a hedge fund being the largest owner and the market reaction. This syndication confirms our hypothesis that funds are more aligned with regards to their target firms and often even collaborate to pursue their agenda. Even though funds can complement each other in the value creation process, it might also be the case that a hedge fund is free riding on another funds value creation efforts instead of being value-enhancing itself from an agency cost perspective. That said, our screening process described in section 2 is designed to examine how active a hedge fund typically becomes, but to capture the

[29] When benchmarked against the CAPM prediction.

case-specific level of activism a priori is very hard if not impossible. For example, Elliott Management Corporation, the largest activist fund worldwide has a very broad investing mandate, ranging from pure merger arbitrage strategies to active ownership cases such as its recent involvement in Telecom Italia.

During our interviews, we also asked our interviewees for other, Sweden-specific agency cost proxies we have not included in our analysis. Most of the feedback we have gotten centres around the unattractiveness of companies with a dual-class share structure.

"If a dual class share structure prevents you from getting a strong stake in the voting rights, the case is usually less attractive for an activist investor. For us, we typically wouldn't invest in a company that already has a very strong ownership structure - whether it is because of super-voting shares or just a constellation of legacy owners that we feel cannot be moved at all. The alternative, which many funds pursue, is to start their campaign with a small stake and then agitate publicly to make some changes – this is, however, more typical for US funds."

Mark Shay, Partner, Accendo Capital

For index-benchmarked excess returns, we again obtain a very similar picture. For private equity funds we see lower abnormal returns if there are already private equity funds invested in the prior quarter which indicates that the market believes it is most beneficial to follow the strategy of only one long-term investor. For hedge funds, we also see a negative coefficient on the price-to-book multiple indicating that some of the upside is already priced in.

With regards to the likelihood of becoming the dominant stakeholder, none of our explanatory variables shows a relationship for our hedge fund sample. For private equity funds, the likelihood increases with poor operating performance (common equity growth) and increases with abnormal trading volume. A different interpretation of a positive coefficient on the abnormal trading volume instead of buy-side pressure might be that a dominant stake holding by a private equity investor is facilitated at target firms that have been traded less prior to the acquisition. We allow for this conclusion since we have not regressed our the Amihud (2002) illiquidity measure on the dummy variable for being the largest shareholder post acquisition.

6.4 Long-term Results

Table XIV shows the benchmark-adjusted buy-and-hold abnormal returns (BHAR) over various holding periods for our samples. For Germany we find that the mean BHAR relative to our benchmark index is slightly negative (i.e., smaller than -1%) and turns slightly positive (i.e. smaller than 1%) for the 300-day period and not statistically significant. Please note that the mean is heavily affected by outliers, especially for investments that occurred during or subsequently to the global financial crisis of 2008/09, therefore we focus on the median. The median for the entire sample is consistently negative and only significant for the 250-day period at -2.9%. Regarding our subsamples, we calculated a -5.6% BHAR for the private equity subsample which is lower than the -2.5% BHAR we found for the hedge fund subsample. However, the private equity subsample is only significant on the 100-day and the 250-day period, while the hedge fund subsample does not show significant findings. There is no statistically significant difference between the private equity and hedge fund subsample, which can therefore only be seen as indicative.

Although negative BHARs for both subsamples are consistent to the findings in Mietzner and Schweizner (2013), the paper reports lower negative abnormal returns for the private equity subsample. This stands in contrast to existing literature (e.g., Brav et al. (2008), Klein und Zur (2009), and Clifford (2008)) which show positive abnormal returns for the one-year period following block acquisitions by hedge funds. A possible rationale for the difference in outcomes lays in the vastly different strategies individual hedge funds use and our focus on more long-term oriented activist campaigns.

Historically, private equity funds have had a more long-term focus and the fund capitalization to back it up, allowing them to seek out investment targets with greater potential to reduce agency cost. While the initial disclosure of the block trade can be seen as a positive signal to reduce agency costs, the first period often requires further investments in the form of restructuring costs (see Mietzner and Schweizer (2013)) which only materialize after the BHAR time period examined. Hedge funds have shorter (often quarterly) capital withdrawal set ups and therefore avoid negative performance at any time (see Mietzner and Schweizer (2013). In accordance to our findings in the Probit model, we hypothesize that hedge fund activists specifically have become more similar to private equity investors, hence the insignificant difference in BHAR returns.

"Overall, I think it is somewhat difficult to make a clear distinction between the target companies for private equity public market efforts and activist hedge funds, because the type of situations that PE is targeting in listed companies is fairly similar to what we are targeting. Our targets tend to be bigger though."

Niko Pakalen, Partner, Cevian Capital

A possible argument could be that the rising popularity in activist strategies has allowed hedge fund managers to communicate to their limited partners to expect positive returns only in the long-term, effectively relieving the short-term capital withdrawal rules somewhat.

Interpreting the BHAR results in the light of the positive CARs found in Germany, it appears that the market initially overestimates the respective investors´ ability to reduce agency costs. Especially the private equity BHARs are surprisingly low. One potential hypothesis would be that market participants initially expect private equity managers to influence and improve company decisions due to their proven ability do so in private transactions and P2P, while it appears to be harder once the investment was made.

On the contrary, our findings in Sweden show strong positive abnormal returns throughout all periods and for both subsamples. The mean BHAR relative to our benchmark index is increasingly positive and shows +13.5% for the 300-day period and is statistically significant for all periods. The median is also positive albeit lower and shows +4.5% for the 300-day period, it is significant only for the 250-day period. The private equity subsample BHAR is consistently positive and shows +8.7% at the 300-day period, it is statistically significant for the 200-, 250-, and 300-day periods. However, the median BHAR is positive as well, but not statistically significant at any period. Remarkably, the mean hedge fund subsample BHAR is extraordinarily high, i.e., +18.3% in the 300-day period and significant over all periods. The median is consistently positive, but only significant for the 250-day period. As noted for the German sample, the outlier problematic is prevalent in the Swedish sample. Especially the hedge fund subsample consists of several transactions that have occurred shortly after the financial crisis and show initial returns of 200-300%, leading to an extraordinarily high mean BHAR[30].

[30] Please note that the Swedish reference index is not dividend adjusted whereas individual stocks are based on total return (OMX All Share (Total Return) not available in CapitalIQ)

"One way to better assess the value creation ability of both fund types would be to track the operational improvement instead of share price performance over time. One explanation for the latter could be that activist funds are typically better in communicating with the public markets and managing the stock price whereas private equity funds are used to work quite closely to the operations and rather having an influence on that part of the value enhancement process. "

Andreas Källström, Partner, Altor Equity Partners

While the market initially overestimates the impact of activist hedge funds and private equity investors in Germany, the opposite is true for Sweden. When comparing the findings of both countries, we again need to reflect that both Sweden and Germany generally have a stakeholder model corporate governance system. In contrast to the more shareholder-value oriented Swedish governance code, the German supervisory boards also consist of representatives of the labour force. From our interview campaign we learned that the two-tier board structure and the strong union representation aggravates to cut agency costs and imposes several challenges for an investor. This hypothesis is supported by the findings of Becht and Böhmer (2003) that German corporations typically have high voting power concentration of a single blockholder. In many cases this blockholder holds above 25% of voting rights, which represents a great hurdle for activists. While the market initially reacts favourably to an investment announcement of either fund type in both respective countries, this difference in corporate governance and the funds´ ability to reduce agency costs, that it affects, may explain the vast difference in long-term abnormal returns.

7. Limitations and Suggestions for further Research

As shown in section 3.1., there is no clear categorization of hedge funds and private equity funds. We have used the criteria named in section 3.3. to distinguish between both investors. However, not all necessary information is available through desktop research and different research might allocate the funds differently. Additionally, we have focussed on a *a*-priori approach to decide whether an activist campaign was at hand. It is possible that an activist hedge fund used a different investment strategy or changed its position during the transaction process (e.g., to a merger arbitrage strategy).

Our paper is then based on a cross-sectional analysis for cumulative abnormal returns surrounding the official notification with the respective financial authority for each of our target

countries. In order to perform our cross-sectional analysis, we compute the CAPM-/Index-benchmarked abnormal returns on each day around the announcement day and then accumulate them into CARs for nine different event windows. Subsequently, we perform the aforementioned cross-sectional tests on our obtained CARs per country. Without making further tweaks to the abnormal returns before accumulating them, this set-up of analysis somewhat limits us to the test we performed in section 6. It is worth mentioning that certain variations of the t-test inherit a greater statistical power. For example, the Patell (1976) test is immune to the way in which the abnormal returns are distributed across the event window[31] and the Boehmer, Masumeci, and Poulsen (1991) test accounts for event-induced volatility. However, both tests require that before summing up the abnormal returns, each abnormal return is standardized by the forecast-error corrected standard deviation. That said, those tests require a different set-up of the empirical analysis which we decided to leave for future studies.

We find for both Sweden and Germany that activist hedge funds and private equity funds differ by the share of outstanding voting rights they acquire. Similarly, we would have expected a statistically significant coefficient in our regression model when explaining the sources of value creation since the acquired stake is in direct relation to the control an investor can exercise over the target company. Even though we fail to detect greater outperformance for larger acquired shareholdings, we think that clustering our datapoints into different size brackets and re-running the CAR and regression analysis would provide additional insights into how both investor types differ and if there is a form of minimum threshold shareholding the public market deems necessary to be influential. Especially for Sweden, however, our data sample was not large enough to divide our data into size brackets and to still perform our analysis on large enough samples to receive meaningful results.

Turning to section 6.3, we use 16 proxies for agency costs to help us explain the sources of value creation. Those proxy variables are largely obtained from Mietzner and Schweizer (2013) but altered and complemented where we deem appropriate. For the sake of consistency, we apply this broad set up proxy variables including firm, performance and ownership characteristics to our findings for both Germany and Sweden. After conduction our interview campaign, we conclude that adjusting this set of proxies to the respective corporate governance model would provide additional insights into the specificity of each country. However, the fact that our set of independent variables does a better job at explaining the differences in value creation for our Swedish sample largely stems from the fact that, on aggregate, cumulative

[31] But is prone to cross-sectional correlation and event-induced volatility.

abnormal returns for the decisive[32] [-5;+0] are a percentage point higher than when compared to our German sample (c. 2% vs. 0.9%, respectively).

Below, we also compiled some of the suggestions we encountered during our interview campaign, most of which relate to our long-term abnormal returns. The full effectiveness of an activist campaign should of course be evaluated over its entire lifespan, this, however, would tie us to a much older dataset since some of those campaigns often last more than six years. A natural extension to this comprehensive long-term analysis would be to include the exits that the investor has chosen. While some investors may plan to run an indefinite buy-and-hold strategy, others may choose to find or argue for a M&A solution, potentially raising the share price by a control premium once this becomes public knowledge.

"Regarding your long-term findings, I think there is a time dimension to it where one year might not be enough to capture the changes of what constructive funds are trying to do. One year in the space of activist investments is still what we would consider a short-term outcome. We would rather look at a period of five to seven years to evaluate the outcome of an investment. Maybe in the first two years, this involves changes to management and the board, over the next two years we have an evolving corporate strategy and over the last two years, we see the implementation phase of that strategy. Even in this case, however, the crystallization of the value creation might take up to eight years. I think a better approach to evaluating the success of an activist involvement is to relate it to its full life cycle, whether that is six months or five years."

Mark Shay, Partner, Accendo Capital

8. Conclusion

Financial activism is on the rise all across the globe but especially in Europe – not only conducted by US hedge funds but also by their European competitors that have grown to sizeable players, albeit their approaches tend to differ drastically. A more recent phenomenon is that greenfield activist funds replicate the approach of their large-scale peers in an attempt to build the necessary track record as well as private equity funds enforcing their public minority mandates. The findings of this paper suggest, and our interviewees confirm that the strategies

[32] Decisive because this is the event window the regression analysis is based on

in terms of selection criteria of target companies converged and differences mostly persist in the size of the acquired stake and leverage of the target company. In fact, Cevian Capital goes one step further and calls its investment style a *private equity approach to public markets*. That being said, the observed difference in ownership acquired and the ability to work with leverage suggest that a distinction between both activist types is most practical on an organizational level rather than based on their interchangeable strategies. We find this to be what prior research has been struggling with the most. While there is a vast research body providing evidence that active blockholders are creating greater shareholder value than passive blockholders, the definition of an activist and the distinction between different types of activists appear to be more ambiguous. Hence, this paper applies a unique framework based on investment strategy (degree of activism), capital commitment and investment horizon. On aggregate, we find outperformance in both countries for our activist samples around announcement – c.+2.0% in Sweden and c.+0.9% in Germany for the [-5:0]-day event window. In both countries, however, we find the abnormal returns to be driven by the private equity subsamples. Drawing on the feedback of our interview campaign, this is likely to be related to a potential buy-out expectation, typically longer commitment as well as more established brand names - especially in Sweden. Our attempts to explain the differences in the value uplift around announcement are less salient than what is suggested in Mietzner and Schweizer (2013), however, the findings for Germany are in-line with the hypothesis that both funds target similar companies.

Tracking the long-term abnormal returns of the identified activist campaigns over 300 trading days confirms apparent differences between both countries – attributable to their differing corporate governance systems. Negative median BHARs in Germany might indicate that public market misjudged the activist's ability to realize a reduction in agency costs in the German corporate governance setting. Sweden, on the other hand, is characterized by a very active stock market, a shareholder value-oriented governance system that enables large owners to become influential and generally appears to be at a greater acceptance stage of the activist business model. This is highlighted by the fact that the number of investment companies per capita is among the highest (if not the highest) in the world and that (small) constructive activist are welcomed by other shareholders for their contribution. In contrast, public scrutiny tends to be much higher in Germany. Shareholder activism is usually aggravated by the powers the stakeholder governance model assigns to different parties, especially to the employee unions that can use their 50% supervisory board representation to confront most activists' proposals. That being said, we learned that good activism in Germany requires much more careful

company picking and to ensure early on in the process that the company itself wants to go in the same direction as the activist wants to push it to.

For a concluding remark and inspiration for further research, we would suggest a review of the value enhancement achievements (in relation to abnormal announcement returns) over the full life-cycle of the activist campaign – both in terms of stock market and operational performance. An additional but related piece of analysis would be to consider the entry and exit route each fund pursued when starting and terminating its involvement.

Bibliography

Achleitner, A., & Kaserer, C. (2005). Private Equity Funds and Hedge Funds: A Primer. *CEFS Working Paper No. 2005-03*. https://doi.org/10.2139/ssrn.1109100

Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, *94*(2), 291–309. https://doi.org/10.1016/j.jfineco.2008.10.007

Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The Role of Boards of Directors in Corporate Governance: A Conceptual Framework and Survey. *Journal of Economic Literature*, *48*(1), 58–107. https://doi.org/10.1257/jel.48.1.58

Ahrens, R., Gehlen, B., & Reckendrees, A. (2013). *Die "Deutschland AG". Historische Annäherungen an den bundesdeutschen Kapitalismus*. *Bochumer Schriften zur Unternehmens- und Industriegeschichte*.

Ajinkya, B. B., & Jain, P. C. (1989). *THE BEHAVIOR OF DALLY STOCK MARKET TRADING VOLUME*. Journal of Accounting and Economics* (Vol. 11).

Allen, J., & Phillips, G. M. (1998). *Corporate Equity Ownership and Product-Market Relationships*. *SSRN*. https://doi.org/10.2139/ssrn.120694

Amihud, Y. (2002). *Illiquidity and stock returns: cross-section and time-series effects $. Journal of Financial Markets* (Vol. 5).

Barbara Czarniawska-Joerges. (1993). Swedish Management. *International Studies of Management & Organization, Vol. 23*.

Bebchuk, L., & Grinstein, Y. (2005). The growth of executive pay. *Oxford Review of Economic Policy*, *21*(2), 283–303. https://doi.org/10.1093/oxrep/gri017

Becht, M., & Boehmer, E. (2003). Voting control in German corporations. *International Review of Law and Economics*, *23*(1), 1–29. https://doi.org/10.1016/S0144-8188(03)00011-5

Becht, M., Franks, J., Grant, J., Bank, B., Wagner, H., Armour, J., … Goldstein, P. (2017). *Returns to Hedge Fund Activism: An International Study*. Retrieved from http://ssrn.com/abstract=2376271%0Ahttp://ssrn.com/abstract=2376271

Berle, A. A., & Means, G. C. (1932). *The Modern Corporation and Private Property*. *Macmillan Publishing Company* (Vol. 21). https://doi.org/10.2307/3475545

Bethel, J. E., Liebeskind, J. P., & Opler, T. (1998). Block share purchases and corporate performance. *Journal of Finance*, *53*(2), 605–634. https://doi.org/10.1111/0022-1082.244195

Beuthel, B. (2006). *Electronic Corporate Governance: Online and Virtual Shareholder Meetings and Shareholder Participation in Switzerland and Germany*. *Dissertation, University of Sankt Gallen*.

Bhagat, S., Black, B., Sanjai Bhagat Professor Bernard Black, P., Benston, G., Brickley, J., Davis, G., … Yang, Y. (2000). *BOARD INDEPENDENCE AND LONG-TERM FIRM PERFORMANCE*.

Boehmer, E. (1999). Corporate Governance in Germany: Institutional Background and Empirical Results. *Ssrn*. https://doi.org/10.2139/ssrn.157823

Boehmer, E., Masumeci, J., & Poulsen, A. B. (1991). Event-study methodology under conditions of event-induced variance. *Journal of Financial Economics*, *30*(2), 253–272. https://doi.org/10.1016/0304-405X(91)90032-F

Brass, S. (2010). *Hedgefonds als aktive Investoren: Rechtliche Schranken und rechtspolitische Vorschläge*.

Brav, A. (2009). Hedge Fund Activism: A Review. *Foundations and Trends® in Finance*, *4*(3), 185–246. https://doi.org/10.1561/0500000026

Brav, A., Jiang, W., Partnoy, F., & Thomas, R. (2008). Hedge Fund Activism , Corporate Governance , and Firm Performance Hedge Fund Activism , Corporate Governance , and Firm Performance. *Exchange Organizational Behavior Teaching Journal*, *LXIII*(November), 1729–1775.

Brown, S. J., & Warner, J. B. (1985). *The Case of Event Studies*. Journal of Financial Economics* (Vol. 14). North-Holland USING DAILY STOCK RETURNS.

Burns, N., & Kedia, S. (2006). The impact of performance-based compensation on misreporting. *Journal of Financial Economics*. https://doi.org/10.1016/j.jfineco.2004.12.003

Campbell, C. J., & Wasley, C. E. (1996). Measuring abnormal daily trading volume for samples of NYSE/ASE and NASDAQ securities using parametric and nonparametric test statistics. *Review of Quantitative Finance and Accounting*. https://doi.org/10.1007/BF00245187

Carlsson, R. H. (2007). Swedish corporate governance and value creation: Owners still in the driver's seat. *Corporate Governance: An International Review*. https://doi.org/10.1111/j.1467-8683.2007.00629.x

Cho, M.-H. (1998). ECONOMICS Ownership structure, investment, and the corporate value: an empirical analysis. *Journal of Financial Economics*, *47*, 103–121. https://doi.org/10.1016/S0304-405X(97)00039-1

Clifford, C. P. (2008). Value creation or destruction? Hedge funds as shareholder activists. *Journal of Corporate Finance*, *14*(4), 323–336. https://doi.org/10.1016/j.jcorpfin.2008.04.007

Coase, R. (1937). Coase, Ronald, 'The Nature of the Firm', Economica, November 1937, 386-405. *Economica*, (November), 386–405. https://doi.org/10.1016/S0039-6109(16)37642-3

Coffee, J. C. (2001). The Rise of Dispersed Ownership: The Role of Law in the Separation of Ownership and Control. *The Yale Law Journal*, *111: 1*, 1–82. https://doi.org/10.2139/ssrn.254097

Coffee, J. C. (2005). A theory of corporate scandals: Why the USA and Europe differ. *Oxford Review of Economic Policy*. https://doi.org/10.1093/oxrep/gri012

Collin, S.-O. (1998). Why are these Islands of Conscious Power Found in the Ocean of Ownership? Institutional and Governance Hypotheses Explaining the Existence of Business Groups in Sweden. *Journal of Management Studies*, *35*(6), 719–746. https://doi.org/10.1111/1467-6486.00117

Core, J. E., Guay, W. R., & Larcker, D. F. (2003). Executive Equity Compensation and Incentives: A Survey. *Social Science Research Network*, *9*(April), 27–50. https://doi.org/10.2139/ssrn.276425

Corrado, C. J. (2011, March). Event studies: A methodology review. *Accounting and Finance*. https://doi.org/10.1111/j.1467-629X.2010.00375.x

Cready, W. M., & Ramanan, R. (1991). The power of tests employing log-transformed volume in detecting abnormal trading. *Journal of Accounting and Economics*, *14*(2), 203–214. https://doi.org/10.1016/0165-4101(91)90005-9

Cronqvist, H., & Fahlenbrach, R. (2009). Large shareholders and corporate policies. *Review of Financial Studies*, *22*(10), 3941–3976. https://doi.org/10.1093/rfs/hhn093

Davis, A., & Mishel, L. (2014). CEO pay continues to rise as typical workers are paid less. *Epi Issue Brief #380*, 12. Retrieved from http://www.epi.org/publication/ceo-pay-continues-to-rise/

De Andres, P., Azofra, V., & Lopez, F. (2005). *CORPORATE BOARDS IN OECD COUNTRIES 197 Corporate Boards in OECD Countries: size, composition, functioning and effectiveness* (Vol. 13).

Defond, M. L., Hann, R. N., Xuesong, H. U., & Engel, E. (2005). Does the market value financial expertise on audit committees of boards of directors? *Journal of Accounting Research*. https://doi.org/10.1111/j.1475-679x.2005.00166.x

Demsetz & Lehn, K., H. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, *93*(6), 1155–1177. https://doi.org/10.1086/261354

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate financing. *Applied Financial Economics*, *19*(24), 1975–1986. https://doi.org/10.1080/09603100903266807

Denis, D. K., & McConnell, J. J. (2003). International Corporate Governance. *Journal Of Financial AND Quantitative Analysis*, *38*(1), 1–36. https://doi.org/10.2307/4126762

Edwards, J., Nibler, M., Bergloef, E., & Franks, J. (2000). Corporate governance in Germany: the role of banks and ownership concentration. *Oxford University Press*, (Vol. 15, No 31.), 237–267. Retrieved from https://www.jstor.org/stable/1344697

Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Erhardt_et_al-2003-Corporate_Governance%3A_An_International_Review, *11*(2), 102–111. https://doi.org/10.1111/1467-8683.00011

Fama, E. F., & Jensen, M. C. (1983). Separation of Ownership and Control SEPARATION OF OWNERSHIP AND CONTROL *. *Journal of Law and Economics*, *26*(2), 301–325.

Fich, E. M. (2005). Are Some Outside Directors Better than Others? Evidence from Director Appointments by Fortune 1000 Firms*. *The Journal of Business*. https://doi.org/10.1086/431448

Field, L. C., & Mkrtchyan, A. (2017). The effect of director experience on acquisition performance. *Journal of Financial Economics*. https://doi.org/10.1016/j.jfineco.2016.12.001

Finegold, D., Benson, G. S., & Hecht, D. (2007). Corporate boards and company performance: Review of research in light of recent reforms. In *Corporate Governance: An International Review*. https://doi.org/10.1111/j.1467-8683.2007.00602.x

Froese, H. (2017). Conceptualization of Hedge Fund Activism Campaigns – Theoretical Frameworks, Strategies, and Tactics in Application to the German Market. *Dissertation, University of Sankt Gallen*.

Garcia-Torea, N., Fernandez-Feijoo, B., & de la Cuesta, M. (2016). Board of director's effectiveness and the stakeholder perspective of corporate governance: Do effective boards promote the interests of shareholders and stakeholders? *BRQ Business Research Quarterly*. https://doi.org/10.1016/j.brq.2016.06.001

Getmansky, M., Lo, A. W., & Makarov, I. (2004). An econometric model of serial correlation and illiquidity in hedge fund returns. *Journal of Financial Economics*, *74*(3), 529–609. https://doi.org/10.1016/j.jfineco.2004.04.001

Gillan, S. L. (2006). Recent Developments in Corporate Governance: An Overview. *Journal of Corporate Finance*, *12*(3), 381–402. https://doi.org/10.1016/j.jcorpfin.2005.11.002

Gillan, S., & Starks, L. T. (1998). A Survey of Shareholder Activism: Motivation and Empirical Evidence. *Contemporary Finance Digest*, (October 1998 2, 3), 10–34. https://doi.org/10.2139/ssrn.663523

Gillan, S., & Starks, L. T. (2007). The Evolution of Shareholder Activism in the United States. *Ssrn*, (512), 1–51. https://doi.org/10.2139/ssrn.959670

Goergen, M., Manjon, M. C., & Renneboog, L. (2008). Is the German system of corporate governance converging towards the Anglo-American model? *Journal of Management & Governance*, *12*(1), 37–71. https://doi.org/10.1007/s10997-007-9040-7

Goranova, M., & Ryan, L. V. (2014). Shareholder Activism: A Multidisciplinary Review. *Journal of Management*, *40*(5), 1230 –1268. https://doi.org/10.4337/9781784711481.00032

Greenwood, R., & Schor, M. (2009). Investor activism and takeovers. *Journal of Financial Economics*, *92*(3), 362–375. https://doi.org/10.1016/j.jfineco.2008.05.005

Gugler, K., & Weigand, J. (2003). Is ownership really endogenous? *Applied Economics Letters*. https://doi.org/10.1080/1350485032000095357

Hart, O. D. (1995). Corporate Some Theory Governance : *The Economic Journal*, *105*(430), 678–689.

Hart, O. D., Hart, O. D., Moore, J., & Moore, J. (1990). Property Rights and the Nature of the Firm. *The Journal of Political Economy*, *98*(6), 1119–1158. Retrieved from http://links.jstor.org/sici?sici=0022-3808(199012)98:6%3C1119:PRATNO%3E2.0.CO;2-3

Harvey, C. R., Lins, K. V., & Roper, A. H. (2004). The effect of capital structure when expected agency costs are extreme. *Journal of Financial Economics*. https://doi.org/10.1016/j.jfineco.2003.07.003

Henrekson, M., & Johansson, D. (1999). *Institutional Effects on the Evolution of the Size Distribution of Firms *. Small Business Economics* (Vol. 12).

Hermalin, B. E., & Weisbach, M. S. (1998). Endogeneously Chosen Board Of Directors And Their Monitoring Of The CEO. *American Economic Review*, *88*(1), 96–118. https://doi.org/10.2307/116820

Hermalin, B. E., & Weisbach, M. S. (2003). Boards Of Directors As An Endogenously Determined Institution: A Survey Of The Economic Literature. *Economic Policy Review*, *9*(1), 7–26. https://doi.org/10.2139/ssrn.233111

Himmelberg, C. P., Hubbard, R. G., Palia, D., Baker, G., Bhattacharya, S., Bond, S., … Schwert, B. (1999). *NBER WORKING PAPER SERIES UNDERSTANDING THE DETERMINANTS OF MANAGERIAL OWNERSHIP AND THE LINK BETWEEN OWNERSHIP AND PERFORMANCE We are grateful for helpful comments and suggestions from two anonymous referees and from Anup Agrawal*. Retrieved from http://www.nber.org/papers/w7209

Högfeldt, P., Becht, M., Erixon, L., Giacomelli, S., Mayer, C., Morck, R. K., … Thomsen, S. (2004). *NBER WORKING PAPER SERIES THE HISTORY AND POLITICS OF CORPORATE OWNERSHIP IN SWEDEN*. Retrieved from http://www.nber.org/papers/w10641

Holderness, C. G., & Sheehan, D. P. (1985). Raiders or saviors? The evidence on six controversial investors. *Journal of Financial Economics*, *14*(4), 555. https://doi.org/10.1016/0304-405X(85)90026-1

Holderness, M. J. B. and C. G. (1991). American Finance Association Negotiated Block Trades and Corporate Control Author (s): Michael J . Barclay and Clifford G . Holderness Meeting , American Finance Association , Washington , D . C ., December 28-30 , 1990 (Jul ., Published by : Wiley for. *The Journal of Finance, Vol. 46, No. 3, Papers and Proceedings, Fiftieth Annual Meeting, American Finance Association*, *46*(3), 861–878.

Holmén, M., & Nivorozhkin, E. (2007). *The Impact of Dual Class Shares on Takeover Risk and the Market for Corporate Control*.

Hommer, M. (2014). *Aktivistische Hedgefonds zwischen Recht und Corporate Governance*.

Hopt, K. J. (2011). *Comparative Corporate Governance : The State of the Art and International Regulation*. *ECGI Working Paper Series in Law* (Vol. 170). Retrieved from http://ssrn.com/abstract=1713750

Huse, M., Nielsen, S. T., Marie, I., & Fafo, H. (2008). *Women and employee-elected board members and their contributions to board control tasks*. *Journal of Business Ethics* (Vol. 18).

J.W., C., V.B., M., & N., S. (2001). An examination of the relationship of governance mechanisms to performance. *Journal of Management*, *27*(1), 23–50. https://doi.org/doi:10.1016/S0149-2063(00)00085-4

Jensen, M. C. (1993). The modern industrial revolution and the challenge to internal control systems. *Journal of Finance*, *48*(April 1997), 831–880. https://doi.org/10.1111/j.1540-6261.1993.tb04022.x

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm : Managerial Behavior , Agency Costs and Ownership Structure Theory of the Firm : Managerial Behavior , Agency Costs and Ownership Structure. *Journal of Financial Economics*, *3*(4), 305–360. https://doi.org/http://dx.doi.org/10.1016/0304-405X(76)90026-X

Joecks, J., Pull, K., & Vetter, K. (2013). Gender Diversity in the Boardroom and Firm Performance: What Exactly Constitutes a "Critical Mass?" *Journal of Business Ethics*, *118*(1), 61–72. https://doi.org/10.1007/s10551-012-1553-6

John, K., & Senbet, L. (1998). Corporate governance and board effectiveness. *Journal of Banking & Finance*, *22*, 371–403. https://doi.org/10.1504/IJBGE.2007.012605

Kahan, M., & Rock, E. B. (2007). Hedge Funds in Corporate Governance and Corporate Control. *Faculty Scholarship. Paper 94.*

Kaplan, S. N. (2013). CEO Pay and Corporate Governance in the U.S.: Perceptions, Facts, and Challenges. *Ssrn*. https://doi.org/10.1111/jacf.12013

Kaplan, S. N., & Reishus, D. (1990). Outside directorships and corporate performance. *Journal of Financial Economics*. https://doi.org/10.1016/0304-405X(90)90061-4

Kiel, G. C., & Nicholson, G. J. (2003). Board composition and corporate performance: How the Australian experience informs contrasting theories of corporate governance. *Corporate Governance: An International Review*. https://doi.org/10.1111/1467-8683.00318

Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting & Economics*, (33), 375–400. https://doi.org/10.1078/0030-4026-00026

Klein, A. (2009). Shareholder Activism : Hedge Entrepreneurial Funds and Other Private Investors, *64*(1), 187–229.

Klein, A., & Zur, E. (2009). Entrepreneurial Shareholder Activism : Hedge Funds and Other Private Investors Published by : Wiley for the American Finance Association Entrepreneurial Shareholder Activism : Hedge Funds and Other Private Investors. *The Journal of Finance*, *64*(1), 187–229.

Kroll, M., Walters, B. A., & Wright, P. (2008). Board vigilance, director experience, and corporate outcomes. *Strategic Management Journal*. https://doi.org/10.1002/smj.649

Lekvall, P. (2009). *The Swedish Corporate Governance Model*. Retrieved from www.iod.com/hicg

Levrau, L. A. A. V. den B. A. (2004). *EVALUATING BOARDS OF DIRECTORS: WHAT CONSTITUTES A GOOD CORPORATE BOARD?* Retrieved from https://onlinelibrary-

wiley-com.ez.hhs.se/doi/epdf/10.1111/j.1467-8683.2004.00387.x

Lubatkin, M. H., Lane, P. J., Collin, S. O., & Very, P. (2005). Origins of corporate governance in the USA, Sweden and France. *Organization Studies*. https://doi.org/10.1177/0170840605054602

Macey, J. R., & McChesney, F. S. (1985). A Theoretical Analysis of Corporate Greenmail. *The Yale Law Journal*, *95*(1), 13. https://doi.org/10.2307/796120

Magnus Henrekson, by, & Jakobsson, U. (2003). *The Transformation of Ownership Policy and Structure in Sweden: Convergence towards the Anglo-Saxon Model? *. New Political Economy* (Vol. 8). Retrieved from http://ssrn.com/abstract=998237Electroniccopyavailableat:http://ssrn.com/abstract=998237

Michael C. Jensen. (1986). Agency Costs of Free Cash Flow , Corporate Finance , and Takeovers Agency Costs of Free Cash Flow , Corporate Finance , and Takeovers. *American Economic Review*, *76*(2), 323–329.

Mietzner, M., & Schweizer, D. (2013). *Hedge Funds versus Private Equity Funds as Shareholder Activists in Germany Differences in Value Creation*.

Mietzner, M., Schweizer, D., & Tyrell, M. (2011). Intra-Industry Effects of Shareholder Activism in Germany — Is There a Difference between Hedge Fund and Private Equity Investments? *Schmalenbach Business Review*, *63*(2), 151–185. https://doi.org/10.1007/bf03396816

Morrissey, J. (2011). The Raider in the Winter: Carl Icahn at 75. *The New York Times, 16 April 2011*. Retrieved from https://www.nytimes.com/2011/04/17/business/17icahn.html

Mueller, D. C. (2006). Corporate Governance and Economic Performance. *International Review of Applied Economics*. https://doi.org/10.1080/02692170601005598

Mueller, D. C., & Reardon, E. A. (1993). Rates of Return on Corporate Investment. *Southern Economic Journal*, *60*(2), 430. https://doi.org/10.2307/1060090

Newell, R., & Wilson, G. (2000). *Three surveys on corporate governance*. *The McKinsey Quarterly*.

Patell, J. M. (1976). Corporate Forecasts of Earnings Per Share and Stock Price Behavior: Empirical Test. *Journal of Accounting Research*, *14*(2), 246. https://doi.org/10.2307/2490543

Pedersen, T., & Thomsen, S. (1997). *EUROPEANPATTERNSOF CORPORATEOWNERSHIP: A TWELVE-COUNTRY STUDY*. Retrieved from www.jstor.org

Pindado, J., & de la Torre, C. (2004). Why is ownership endogenous? *Applied Economics Letters*. https://doi.org/10.1080/1350485042000267003

Rapp, M. S., & Strenger, C. (2015). Corporate Governance in Germany: Recent Developments and Challenges. *HHL Research Paper Series in Corporate Governance*, *13*, 1–19.

Ringe, W. G. (2015). Changing law and ownership patterns in Germany: Corporate governance and the erosion of Deutschland AG. *American Journal of Comparative Law*, *63*(2), 493–538. https://doi.org/10.5131/AJCL.2015.0014

Rosenstein, S., & Wyatt, J. G. (1990). Outside directors, board independence, and shareholder wealth. *Journal of Financial Economics*, 175–191. https://doi.org/10.1515/comm.1996.21.3.257

Ruigrok, W., Peck, S. I., & Keller, H. (2006). Board characteristics and involvement in strategic decision making: Evidence from Swiss companies. *Journal of Management Studies*. https://doi.org/10.1111/j.1467-6486.2006.00634.x

Sautner, Z., & Villalonga, B. (2010). *Corporate Governance and Internal Capital Markets*. *Harvard Business School*. https://doi.org/10.2139/ssrn.1530565

Shiah-Hou, S. R., & Cheng, C. W. (2012). Outside director experience, compensation, and performance. *Managerial Finance*. https://doi.org/10.1108/03074351211255146

Shleifer, A., & Vishny, R. W. (1997). A Survey of Corporate Governance. *The Journal of Finance*, *52*(2), 737–783. https://doi.org/10.1111/j.1540-6261.1997.tb04820.x

Shome, D. K., & Singh, S. (2007). Firm Value and External Blockholdings. *Financial Management*, *24*(4), 3. https://doi.org/10.2307/3665947

Stafsudd, A. (2009). Corporate networks as informal governance mechanisms: A small worlds approach to sweden. *Corporate Governance: An International Review*. https://doi.org/10.1111/j.1467-8683.2008.00721.x

Tagesson, T., & Collin, S. O. Y. (2016). Corporate governance influencing compliance with the Swedish Code of Corporate Governance. *International Journal of Disclosure and Governance*. https://doi.org/10.1057/jdg.2015.15

Weisbach, M. S. (1988). Outside directors and CEO turnover. *Journal of Financial Economics*, *20*, 431–460. https://doi.org/10.1016/0304-405X(88)90053-0

Windolf, P., & Nollert, M. (2001). Institutionen, Interessen, Netzwerke Unternehmensverflechtung im internationalen Vergleich. *Politische Vierteljahresschrift*, *42*(1), 51–78. https://doi.org/10.1007/s11615-001-0004-2

Yermack, D. (2010). Shareholder Voting and Corporate Governance. *Annual Review of*

Financial Economics, (March). https://doi.org/10.1146/annurev-financial-073009-104034

Appendix

Figure I. *Identified Activist Campaigns in Germany (2007- 2018; n=231)*

Activist Fund	Fund Type	#
Elliott International Limited	Hedge Fund	8
Deutsche Balaton AG	Private Equity	8
Sterling Strategic Value	Hedge Fund	6
Teslin Capital Management B.V.	Private Equity	6
Wyser-Pratte Management	Hedge Fund	5
Hermes Focus Asset Management	Hedge Fund	4
Kabouter Management	Hedge Fund	4
Lansdowne Partners International Limited	Hedge Fund	4
Monolith Investment Management	Private Equity	4
KKR	Private Equity	4
Cevian Capital	Hedge Fund	4
Active Ownership Capital	Hedge Fund	3
Eton Park Capital Management	Hedge Fund	3
Berkshire Hathaway Inc.	Private Equity	3
Hevella Capital	Private Equity	3
Pargesa Holding SA	Private Equity	3
Qatar Holding LLC	Private Equity	3
Neuberger Berman Inc.	Private Equity	3
Pelham Capital Management	Hedge Fund	2
The Blackstone Group	Private Equity	2
Cerberus Capital Management	Private Equity	2
CIGOGNE Management S.A.	Hedge Fund	2
Kairos Partners	Hedge Fund	2
N+1 (EQMC)	Hedge Fund	2
Odey Asset Management LLP	Hedge Fund	2
Ruane, Cunniff & Goldfarb Inc.	Hedge Fund	2
Sageview Capital Partners	Hedge Fund	2
Scherzer & Co. Aktiengesellschaft	Private Equity	2
Lincoln Vale	Hedge Fund	2
Southeastern Asset Management	Hedge Fund	2
TPG-Axon	Hedge Fund	2
Warburg Pincus	Private Equity	2
Gartmore	Hedge Fund	2
JP Morgan Investment Fun	Private Equity	2
Aton GmbH	Private Equity	2
Gryphon International Investment Corporation	Private Equity	2
3D Safe Corporation	Private Equity	1
3i Group	Private Equity	1
Abdiel Capital	Hedge Fund	1

Figure I - Continued. *Identified Activist Campaigns in Germany (2007- 2018; n=231)*

Activist Fund	Fund Type	#
Absolute Capital Management	Hedge Fund	1
ADAR Capital	Hedge Fund	1
Adelphi Capital LLP	Hedge Fund	1
Alken Asset Management	Hedge Fund	1
Amiral Gestion	Hedge Fund	1
Amundi Alternative Investments	Hedge Fund	1
Apollo Global Management	Private Equity	1
Atlantic Investment Management	Hedge Fund	1
ATS Beteiligungsverwaltung GmbH	Private Equity	1
Audley Capital	Hedge Fund	1
AURELIUS Equity Opportunities SE & Co. KGaA	Private Equity	1
AVW Invest AG	Private Equity	1
Blue Harbour Group	Hedge Fund	1
Brandes Investment Partners, L.P.	Hedge Fund	1
Bregal Investments	Private Equity	1
The Carlyle Group	Private Equity	1
Centaurus Capital	Hedge Fund	1
Centre Lane Partners	Private Equity	1
Cinven & Bain Capital	Private Equity	1
Conduit Ventures General Partner II Limited	Private Equity	1
Consonant Capital Management	Hedge Fund	1
Creat Group	Private Equity	1
DPE Deutsche Private Equity	Private Equity	1
DIC Asset AG	Private Equity	1
DICP Capital SE	Private Equity	1
dievini Hopp BioTech holding	Private Equity	1
Equinox Investments	Private Equity	1
Esas Holding AS	Private Equity	1
Farallon Capital	Hedge Fund	1
First Capital Partner GmbH	Private Equity	1
General Atlantic	Private Equity	1
General Capital Group	Hedge Fund	1
Greenlight Capital	Hedge Fund	1
HAL Investments	Private Equity	1
Harbinger Capital Partners	Hedge Fund	1
Harding Loevner LP	Hedge Fund	1
Holland Private Equity B.V.	Private Equity	1
ROI Capital	Private Equity	1
J.F. Mueller & Sohn Beteiligungs GmbH	Private Equity	1

Figure I - Continued. *Identified Activist Campaigns in Germany (2007- 2018; n=231)*

Activist Fund	Fund Type	#
Jahr Holding GmbH	Private Equity	1
Kempen European Private Equity Fund	Private Equity	1
Knight Vinke Asset Management	Hedge Fund	1
Knightsbridge Asset Management Limited	Hedge Fund	1
LOET Trading AG/Erste Gallus Verwaltungs GmbH	Private Equity	1
M&G Investment Funds	Hedge Fund	1
MarCap Group Partners, L.L.C.	Hedge Fund	1
Mario Gabelli Asset Managament	Hedge Fund	1
Maxburg Capital Partners	Private Equity	1
Morgan Stanley Infrastructure Fund	Private Equity	1
Muenchmeyer Petersen Capital AG	Private Equity	1
Neuberger Berman	Private Equity	1
Nomainvest SA	Private Equity	1
Oakcliff Capital	Hedge Fund	1
Octavian Advisors	Hedge Fund	1
Orchid Asia	Private Equity	1
Overseas Asset Management	Hedge Fund	1
Balboa Capital	Hedge Fund	1
Paradigm Capital Value Fund	Hedge Fund	1
PEN GMBH	Private Equity	1
Permira Advisers	Private Equity	1
Prescott Capital	Hedge Fund	1
AL-KO Beteiligungs GmbH	Private Equity	1
QVT Associates GP LLC	Hedge Fund	1
Ramphastos Investments	Private Equity	1
Ratio Capital Management B.V.	Private Equity	1
Rhine Alpha Stars	Hedge Fund	1
RTW Investments	Hedge Fund	1
Conifer Capital Management	Hedge Fund	1
Samana Capital	Private Equity	1
Seneca Capital	Hedge Fund	1
M2 Capital Management	Private Equity	1
S-Group Capital Management	Private Equity	1
Sleep Zakaria & Company	Hedge Fund	1
Teleios Capital	Hedge Fund	1
The Children's Fund	Hedge Fund	1
Havensight Capital	Private Equity	1
Third Point	Hedge Fund	1
TR European Growth Trust PLC	Private Equity	1

Figure I - Continued. *Identified Activist Campaigns in Germany (2007- 2018; n=231)*

Activist Fund	Fund Type	#
Tremblant Capital Group	Hedge Fund	1
VATAS Holding GmbH	Private Equity	1
Vestigo Capital Advisors	Private Equity	1
VTC	Private Equity	1
Water Street Capital	Hedge Fund	1
Weiss Asset Management	Hedge Fund	1
Wemaco Invest AG	Hedge Fund	1
Working Capital Managment	Hedge Fund	1
Wynnefield Capital Management LLC	Hedge Fund	1
Yorkville Advisors LLC	Hedge Fund	1
Tiger Global	Hedge Fund	1
Oaktree Capital Group	Hedge Fund	1
Indaba Capital Management, L.P.	Hedge Fund	1
Triton Partners	Private Equity	1
Olympus Partners	Private Equity	1
BVF Investments, L.L.C.	Hedge Fund	1
BVF Partners L.P.	Hedge Fund	1
Centaurus Alpha Master Fund Limited	Hedge Fund	1
Ivory Investment Management	Hedge Fund	1
Goldsmith Capital Partners Limited	Hedge Fund	1
Paulson & Co. Inc.	Hedge Fund	1
Ramius LLC	Hedge Fund	1
Sterling Strategic Value Limited	Hedge Fund	1
Oaktree European Principal Fund III Ltd.	Private Equity	1
One Equity Partners II, L.P.	Private Equity	1
Trilium Capital	Private Equity	1
Maverick Capital	Hedge Fund	1
Acacia Partners	Private Equity	1
Heliad Equity	Private Equity	1
Kingdon Capital	Hedge Fund	1
Soros Fund Mangement	Hedge Fund	1
Absolute Activist Value Fund	Hedge Fund	1
Senrigan Capital	Hedge Fund	1
Kofler Ventures	Private Equity	1
AKO Capital	Hedge Fund	1
Santo Holding	Private Equity	1

Figure II. *Identified Activist Campaigns in Sweden (2007- 2018; n=115)*

Activist Fund	Fund Type	#
Investment AB Öresund	Hedge Fund	14
Traction Capitl	Private Equity	7
Accendo Capital	Hedge Fund	5
Bure Equity	Private Equity	5
Industrivärden	Hedge Fund	5
Latour Capital	Private Equity	5
Investor AB	Private Equity	4
Cevian Capital	Hedge Fund	3
Creades	Private Equity	3
Kinnevik AB	Private Equity	3
Nordstjernan	Private Equity	3
Zeres Capital	Hedge Fund	3
CapMan	Private Equity	3
EQT	Private Equity	2
Gladiator	Hedge Fund	2
Keel Capital	Hedge Fund	2
Kvalitena AB	Private Equity	2
Lansdowne Partners	Hedge Fund	2
Stena AB	Private Equity	2
Luxor Capital Group	Hedge Fund	2
Orre & Byberg Capital AB	Hedge Fund	2
PSG Capital AB	Private Equity	2
Altor Equity Partners	Private Equity	1
Bodenholm Capital	Hedge Fund	1
Skanditek Industriförvaltning AB	Private Equity	1
Carve Capital AB	Hedge Fund	1
Celox Holding AB	Private Equity	1
FAM AB	Private Equity	1
HBM Healthcare Investments AG	Private Equity	1
Nordic Capital	Private Equity	1
Rite Ventures	Private Equity	1
Triton Partners	Private Equity	1
Varenne Capital Partners	Private Equity	1
Verdane Capital	Private Equity	1
City of London Investment Group	Hedge Fund	1
Mason Hill Advisors	Hedge Fund	1
Passport Capital	Hedge Fund	1
Adelphi Capital LLP	Hedge Fund	1
Armstice Capital LLC	Hedge Fund	1

Figure II - Continued. *Identified Activist Campaigns in Sweden (2007- 2018; n=115)*

Activist Fund	Fund Type	#
Elliot Capital Advisors	Hedge Fund	1
HMI Capital	Hedge Fund	1
Indus Capital Partners	Private Equity	1
Kingdon Capital Management	Hedge Fund	1
Kite Lake Capital Management	Hedge Fund	1
Sand Grove Capital	Hedge Fund	1
Camox - Cambiar Opportunity Fund	Hedge Fund	1
Odey Asset Management	Hedge Fund	1
Paradigm Capital Value PE	Hedge Fund	1
Pelham Capital	Hedge Fund	1
Monterro Investment AB	Private Equity	1
Novo A/S	Private Equity	1
Volati AB	Private Equity	1
Silchester International	Private Equity	1
Point Lobos Capital	Hedge Fund	1
Ridgeback Capital Management LP	Hedge Fund	1
Omega Fund Management	Private Equity	1

Figure III. *Distribution of Hedge Fund and Private Equity Events in Germany*

This chart shows the distribution of our events across time for both subsamples. In total, our sample covers 231 investments, of which 125 conducted by Hedge Funds and 106 conducted by Private Equity Funds

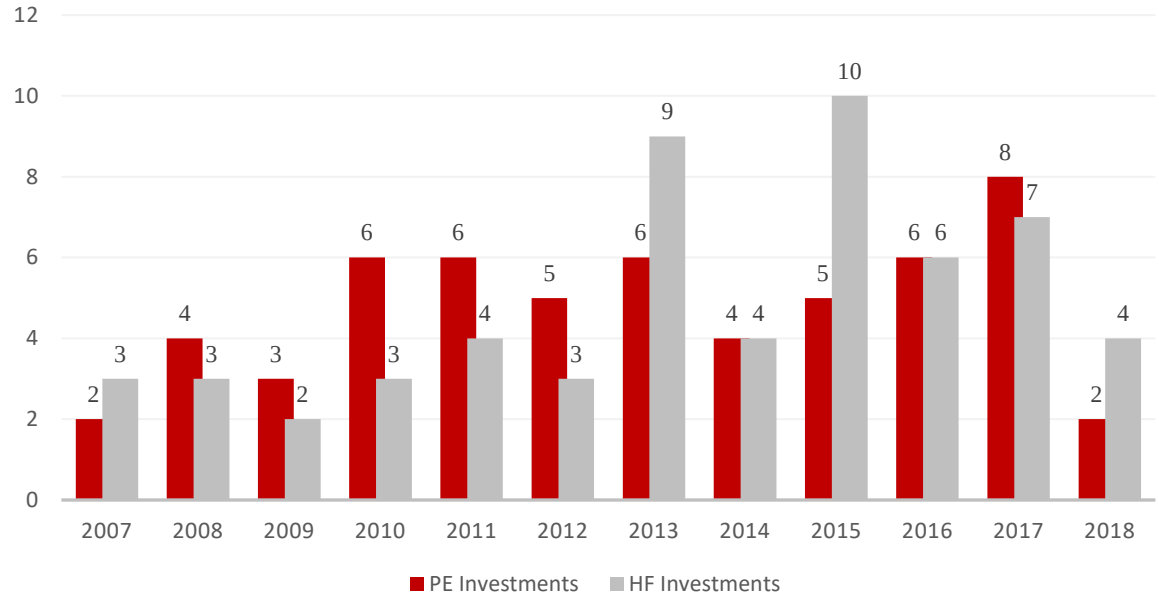


Figure IV. *Distribution of Hedge Fund and Private Equity Events in Sweden*

This chart shows the distribution of our events across time for both subsamples. In total, our sample covers 115 investments, of which 58 conducted by Hedge Funds and 57 conducted by Private Equity Funds

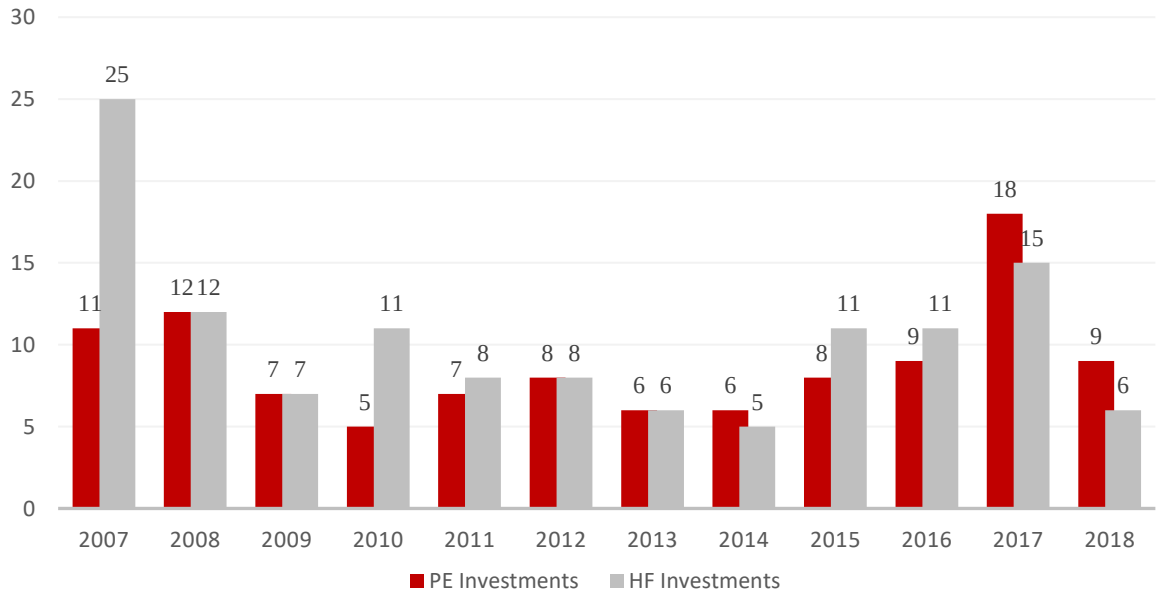


Figure V. *CAPM benchmarked CARs Germany – Full sample*

This chart illustrates the CAPM benchmarked CARs for our entire German sample from Day -30 through Day +30

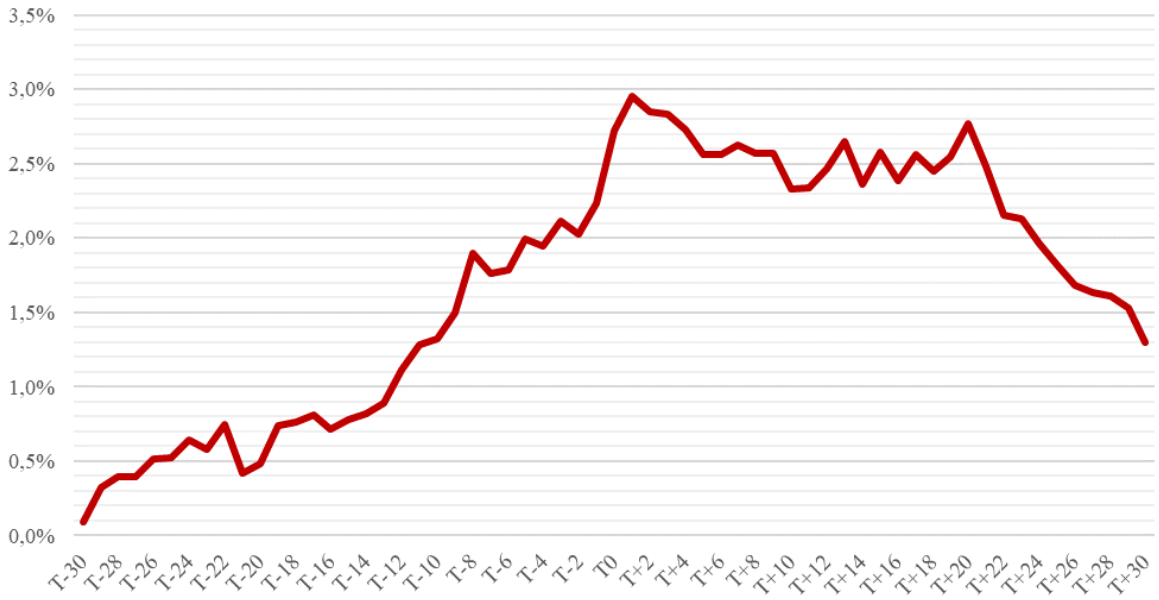


Figure VI. *CAPM benchmarked CARs Germany – Subsamples*

This chart illustrates the CAPM benchmarked CARs for our German Private Equity and Hedge Fund subsamples from Day -30 through Day +30

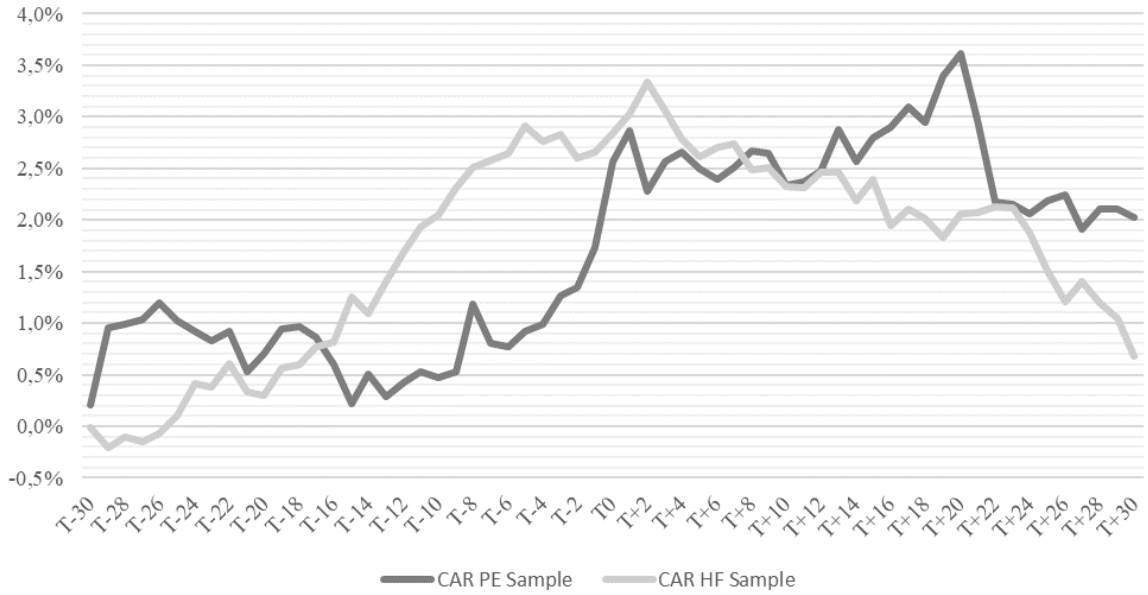


Figure VII. *CAPM benchmarked CARs Sweden – Full sample*

This chart illustrates the CAPM benchmarked CARs for our entire Swedish sample from Day -30 through Day +30

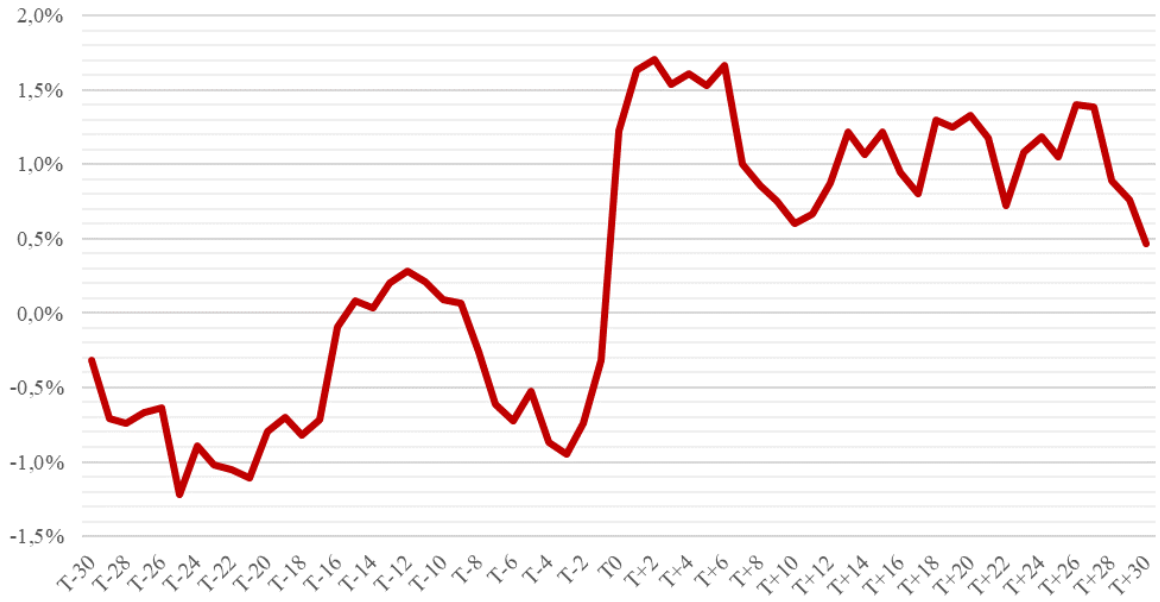


Figure VIII. *CAPM benchmarked CARs Swedish – Subsamples*

This chart illustrates the CAPM benchmarked CARs for our Swedish Private Equity and Hedge Fund subsamples from Day -30 through Day +30

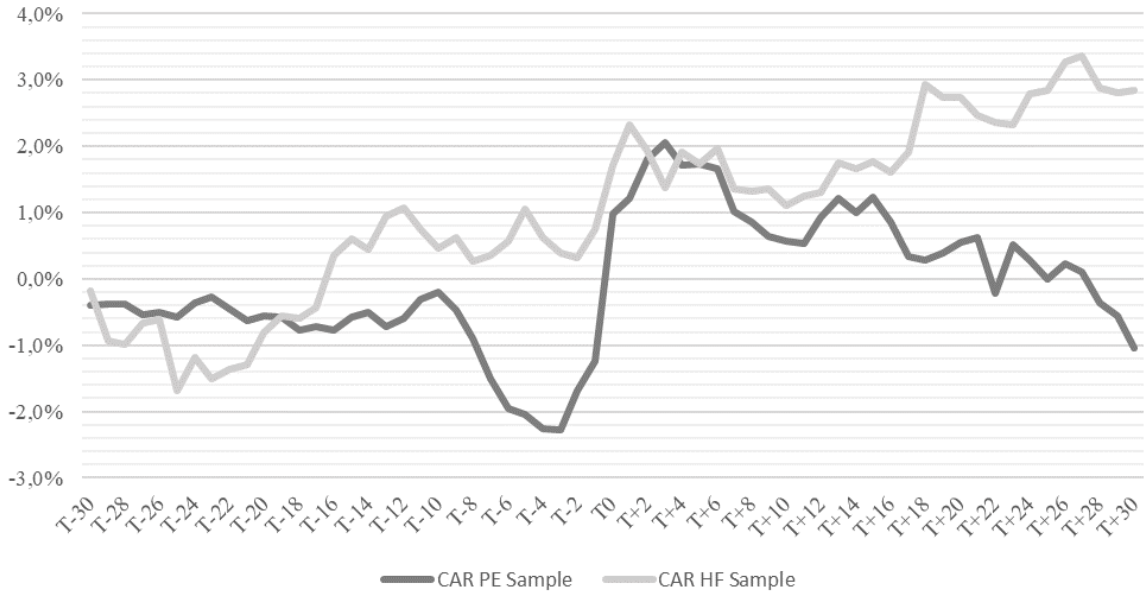


Figure IX. *Index benchmarked CARs Germany – Full sample*

This chart illustrates the index benchmarked CARs for our entire German sample from Day -30 through Day +30

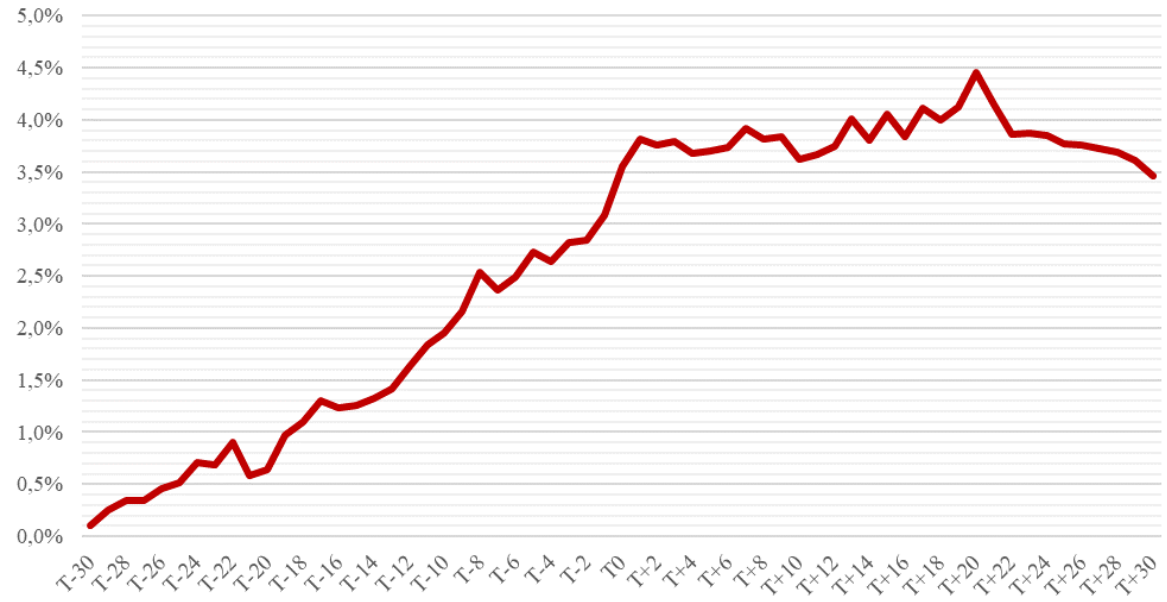


Figure X. *Index benchmarked CARs Germany – Subsamples*

This chart illustrates the index benchmarked CARs for our German Private Equity and Hedge Fund subsamples from Day -30 through Day +30

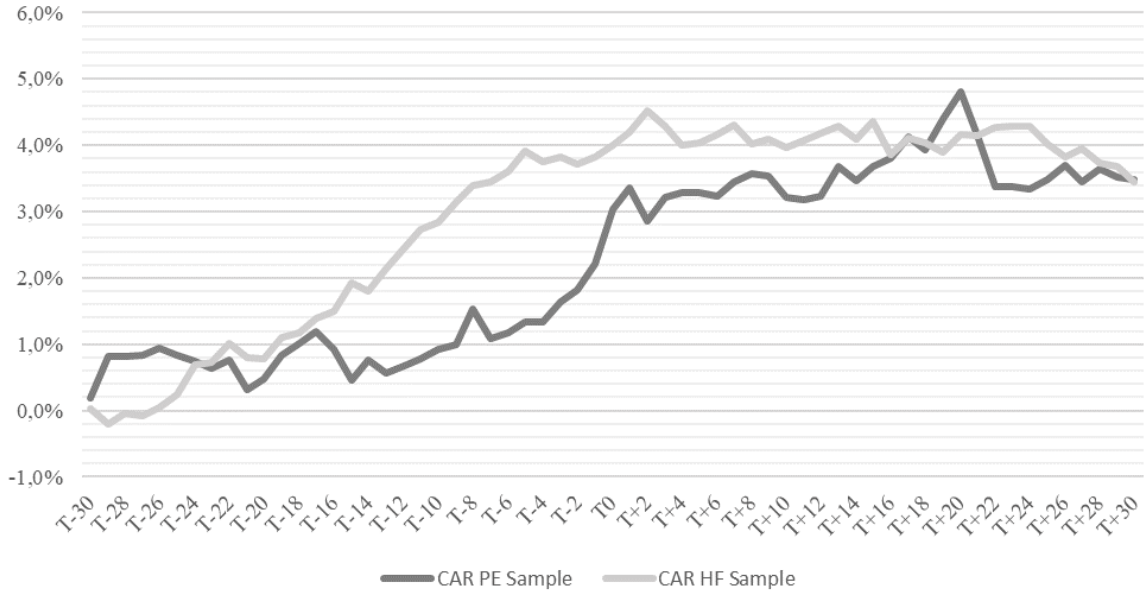


Figure XI. *Index benchmarked Cumulative Average Abnormal Return Sweden – Full sample*

This chart illustrates the index benchmarked CARs for our entire Swedish sample from Day -30 through Day +30

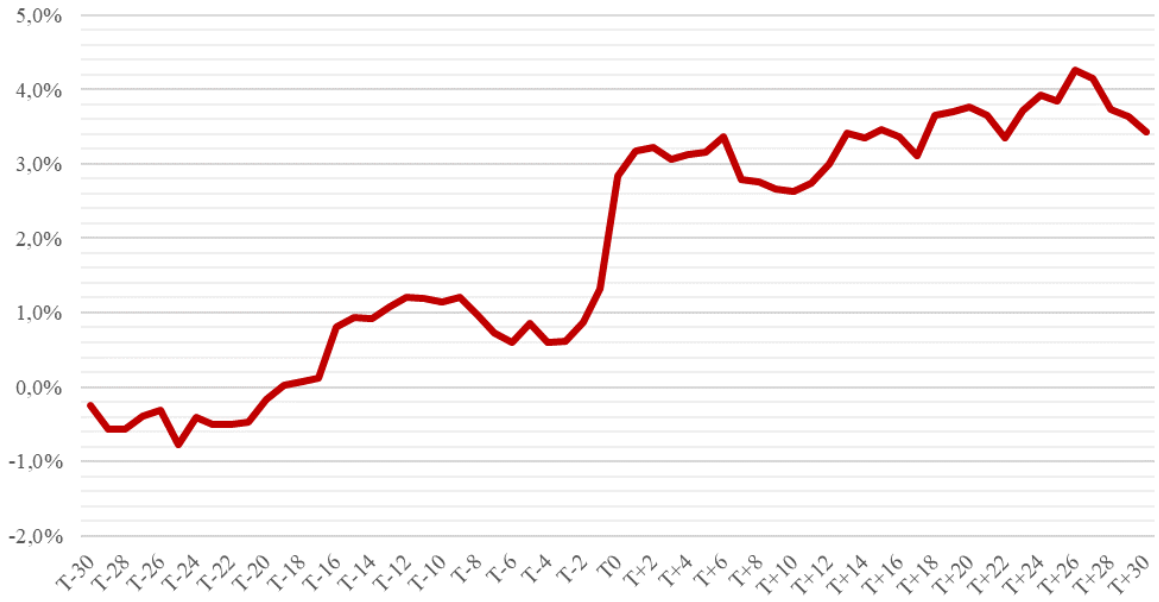


Figure XII. *Index benchmarked CARs Sweden – Subsamples*

This chart illustrates the index benchmarked CARs for our Swedish Private Equity and Hedge Fund subsamples from Day -30 through Day +30

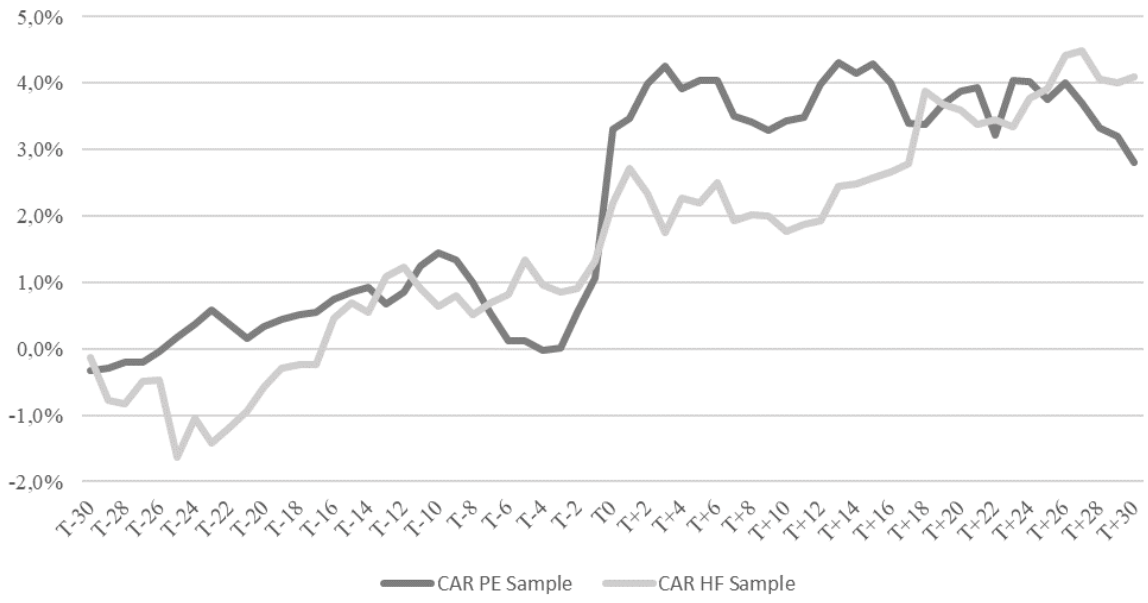


Table I

Descriptive Statistics of Firm and Ownership Characterisitcs - Germany

1) Illiquidity: Amihud (2002) liquidity measure defined as the average ratio of daily absolute return relative to the trading volume on that day.
2) Abnormal Trading Volume: Mean-adjusted abnormal trading volume (see 6.3).
3) Stake: Percentage of voting rights acquired.
4) Dividend Pay-Out: Capital IQ Dividend Pay-Out Ratio calculated as dividend paid over net income.
5) Leverage: Total liabilities over total assets (Capital IQ).
6) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
7) Equity Growth: Defined as change in common shareholders' equity over the full years preceeding the transaction (Capital IQ).
8) Earnings per Share: Capital IQ EPS for the last fiscal year.
9) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
10) Free Cash Flow: Cash earnngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
11) Beta: Beta CAPM coefficient caluclated over 200 trading days before the event.

	Illiquidity	Trading Volume	Stake (%)	Divdend Payout	Leverage (%)	Return on Assets (%)	Equity Growth	Earnings per Share	Market-to-Book Ratio	Free Cash Flow Return	Beta
Private Equity Sample											
Mean	4.856	0.037	16.703	111.858	52.835	0.268	30.366	1.014	2.673	361.039	0.570
Median	1.162	0.047	7.890	14.911	54.617	2.740	5.832	0.584	1.606	10.528	0.544
Hedge Fund Sample											
Mean	1.575	0.086	5.191	148.941	57.008	2.581	29.671	1.676	2.447	17.268	0.738
Median	0.193	0.057	3.710	19.126	58.110	3.592	8.588	0.828	1.973	17.809	0.696
Mean t-Test											
t-Value	3.773***	(1.662)*	5.377***	(0.432)	(1.426)	(1.316)	0.056	(1.183)	0.560	0.965	(3.037)***
Rank Sum Test											
z-Value	(4.034)***	0.9840	(5.598)***	0.541	1.333	1.723*	0.794	1.801*	1.567	2.669**	2.667**

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table I - Continued
Descriptive Statistics of Firm and Ownership Characterisitcs - Germany

12) Firm Size: Logarithm of the year-end market capitaliziation.
13) Total Assets: Logarithm of the year-end total assets figure.
14) Cash Balance: Logarithm of the cash balance of the target prior to the acquisition (Capital IQ).
15) Largest Hedge Fund: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a Hedge Fund.
16) Largest Investor: Dummy variable equal to 1 if the investor is the largest shareholder following the acquisition.
17) Majority (t-1): Dummy variable equal to one if there was a majority shareholder prior to the acquisition.
18) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
19) #PE (t-1): Number of private equity funds invested in the target company prior to the acquisition.
20) #Hedgefunds (t-1): Number of invested Hedge Funds one quarter prior to the acquisition.
21) Largest Strategic: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a strategic investor or a company.
22) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.

	Firm Size	Total Assets	Cash Balance	Largest Hedge Fund	Largest Investor	Majority (t-1)	Blockholder (t-1)	#PE (t-1)	#HF (t-1)	Largest Company	Largest Advisor
Private Equity Sample											
Mean	5.370	5.535	4.465	0.028	0.264	0.132	4.349	0.406	0.198	0.377	0.198
Median	5.158	5.254	4.372	0.000	0.000	0.000	4.000	0.000	0.000	0.000	0.000
Hedge Fund Sample											
Mean	5.709	5.878	4.806	0.080	0.096	0.048	4.912	0.344	0.640	0.320	0.336
Median	5.631	5.842	4.775	0.000	0.000	0.000	4.000	0.000	0.000	0.000	0.000
Mean t-Test											
t-Value	(3,231)***	(2.623)***	(2.751)***	(1.768)*	3.329***	2.200**	(1.636)	0.635	(4.121)***	0.908	(2.396)**
Rank Sum Test											
z-Value	3,888***	3.423***	3.37***	1.695*	(3.358)***	(2.259)**	1.678*	(0.404)	3.91***	(0.911)	2.34**

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table II

Descriptive Statistics of Firm and Ownership Characterisitcs - Sweden

1) Illiquidity: Amihud (2002) liquidity measure defined as the average ratio of daily absolute return relative to the trading volume on that day.
2) Abnormal Trading Volume: Mean-adjusted abnormal trading volume (see 6.3).
3) Stake: Percentage of voting rights acquired.
4) Dividend Pay-Out: Capital IQ Dividend Pay-Out Ratio calculated as dividend paid over net income.
5) Leverage: Total liabilities over total assets (Capital IQ).
6) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
7) Equity Growth: Defined as change in common shareholders' equity over the full years preceeding the transaction (Capital IQ).
8) Earnings per Share: Capital IQ EPS for the last fiscal year.
9) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
10) Free Cash Flow: Cash earngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
11) Beta: Beta CAPM coefficient caluclated over 200 trading days before the event.

	Illiquidity	Trading Volume	Stake (%)	Divdend Payout	Debt-to-Asset (%)	Return on Assets (%)	Equity Growth	Earnings per Share	Market-to-Book Ratio	Free Cash Flow Return	Beta
Private Equity Sample											
Mean	0.173	0.143	14.116	30.080	55.475	2.023	18.181	2.304	5.438	7.224	0.639
Median	0.028	0.119	10.000	0.000	58.962	3.886	5.606	1.208	2.543	18.335	0.568
Hedge Fund Sample											
Mean	0.046	0.121	6.575	44.441	48.162	3.693	40.641	5.848	6.356	17.452	0.632
Median	0.005	0.135	5.212	0.000	50.946	3.693	15.713	2.687	2.170	13.084	0.595
Mean t-Test											
t-Value	2.149**	0.434	4.293***	(0.904)	1.735*	(0.726)	(1.475)	(0.951)	(0.340)	(0.990)	0.100
Rank Sum Test											
z-Value	(2.256)**	0.028	(4.987)***	0.187	(1.396)	0.143	1.817*	1.524	(0.755)	(0.780)	(0.050)

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table II - Continued
Descriptive Statistics of Firm and Ownership Characterisitcs - Sweden

12) Firm Size: Logarithm of the year-end market capitaliziation.
13) Total Assets: Logarithm of the year-end total assets figure.
14) Cash Balance: Logarithm of the cash balance of the target prior to the acquisition (Capital IQ).
15) Largest Hedge Fund: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a Hedge Fund.
16) Largest Investor: Dummy variable equal to 1 if the investor is the largest shareholder following the acquisition.
17) Majority (t-1): Dummy variable equal to one if there was a majority shareholder prior to the acquisition.
18) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
19) #PE (t-1): Number of private equity funds invested in the target company prior to the acquisition.
20) #Hedgefunds (t-1): Number of invested Hedge Funds one quarter prior to the acquisition.
21) Largest Strategic: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a strategic investor or a company.
22) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.

	Firm Size	Total Assets	Cash Balance	Largest Hedge Fund	Largest Investor	Majority (t-1)	Blockholder (t-1)	#PE (t-1)	#HF (t-1)	Largest Strategic	Largest Advisor
Private Equity Sample											
Mean	6.230	6.17	5.002	0.053	0.351	0.035	3.175	0.368	0.246	0.246	0.228
Median	6.150	6.289	5.045	0.000	0.000	0.000	3.000	0.000	0.000	0.000	0.000
Hedge Fund Sample											
Mean	6.503	6.526	5.371	0.017	0.052	0.034	3.207	0.517	0.103	0.259	0.207
Median	6.322	6.335	5.297	0.000	0.000	0.000	3.000	0.000	0.000	0.000	0.000
Mean t-Test											
t-Value	(1,96)*	(2.079)**	(2.200)**	1.027	4.262***	0.018	0.092	(1.157)	1.725*	(0.159)	0.273
Rank Sum Test											
z-Value	1,717*	1.205	1.899*	(1.031)	(3.992)***	(0.018)	(0.333)	1.428	(1.857)*	0.160	(0.274)

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table III

Probit Model Predicting Differentiation in PE and Hedge Fund Targets

We run a Probit regression on our combined data set so that the dependent variable equals 1 if the company is targeted by a Hedge Fund, and 0 if targeted by a private equity investor. Please note that the total number of observartions for the Probit Model (n=326) is slightly lower then our entire data set (n=346) since the regression model mechanically excludes a data point when one of the variables is missing or labeled by us as "non-meaningful". The target characteristics are as follows:

1) Stake: Percentage of voting rights acquired.
2) Leverage: Total liabilities over total assets (Capital IQ).
3) Free Cash Flow: Cash earnngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
4) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
5) Earnings per Share: Capital IQ EPS for the last fiscal year.
6) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
7) Interest Expense: Interest Expense as a percentage of sales (Capital IQ).
8) Firm Size: Logarithm of the year-end market capitaliziation.
9) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
10) #Hedgefunds (t-1): Number of invested Hedge Funds one quarter prior to the acquisition.
11) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.
12) Largest Strategic: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a strategic investor or a company.
13) Largest Hedge Fund: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a Hedge Fund.
14) Cash Balance: Logarithm of the cash balance of the target prior to the acquisition (Capital IQ).
15) Majority (t-1): Dummy variable equal to one if there was a majority shareholder prior to the acquisition.

Target Characteristics	Coefficient	z - Value
Stake	(0.082) ***	(5.490)
Leverage	(0.012) ***	(2.600)
Free Cash Flow	0.004	1.340
Return on Assets	0.003	0.290
Earnings per Share	0.003	0.430
Market to Book Ratio	(0.003)	(0.290)
Interest Expense	(0.002)	(0.350)
Size	0.129	0.830
#Blockholder (t-1)	(0.029)	(0.790)
#Hedgefunds (t-1)	0.257 **	1.980
Largest Investment Advisor	0.315	1.590
Largest Strategic	0.312	1.610
Largest Hedge Fund	0.287	0.730
Cash Balance	0.099	0.720
Majority (t-1)	(0.135)	(0.360)
Constant	(0.070)	(0.100)
Number of Observations	326	
LR chi^2	85.91	
Pseudo R^2	19.06%	

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table IV

Probit Model Predicting Differentiation in PE and Hedge Fund Targets - Germany

We run a Probit regression on our data set for Germany so that the dependent variable equals 1 if the company is targeted by a Hedge Fund, and 0 if targeted by a private equity investor. Please note that the total number of observartions for the Probit Model (n=218) is slightly lower then our entire data set (n=231) since the regression model mechanically excludes a data point when one of the variables is missing or labeled by us as "non-meaningful". The target characteristics are as follows:

1) Stake: Percentage of voting rights acquired.
2) Leverage: Total liabilities over total assets (Capital IQ).
3) Free Cash Flow: Cash earnngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
4) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
5) Earnings per Share: Capital IQ EPS for the last fiscal year.
6) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
7) Interest Expense: Interest Expense as a percentage of sales (Capital IQ).
8) Firm Size: Logarithm of the year-end market capitaliziation.
9) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
10) #Hedgefunds (t-1): Number of invested Hedge Funds one quarter prior to the acquisition.
11) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.
12) Largest Strategic: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a strategic investor or a company.
13) Largest Hedge Fund: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a Hedge Fund.
14) Cash Balance: Logarithm of the cash balance of the target prior to the acquisition (Capital IQ).
15) Majority (t-1): Dummy variable equal to one if there was a majority shareholder prior to the acquisition.

Target Characteristics	Coefficient	z - Value
Stake	(0.074) ***	(3.710)
Leverage	(0.004)	(0.650)
Free Cash Flow	0.005	1.270
Return on Assets	0.001	0.100
Earnings per Share	(0.014)	(0.570)
Market to Book Ratio	(0.031)	(0.620)
Interest Expense	(0.006)	(0.840)
Size	0.218	0.840
#Blockholder (t-1)	(0.048)	(1.070)
#Hedgefunds (t-1)	0.422 ***	2.780
Largest Investment Advisor	0.547 **	2.180
Largest Strategic	0.519 **	2.070
Largest Hedge Fund	0.551	1.090
Cash Balance	(0.123)	(0.560)
Majority (t-1)	(0.148)	(0.340)
Constant	0.032	0.040
Number of Observations	218	
LR chi^2	69.59	
Pseudo R^2	23.12%	

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table V

Probit Model Predicting Differentiation in PE and Hedge Fund Targets - Sweden

We run a Probit regression on our data set for Sweden so that the dependent variable equals 1 if the company is targeted by a Hedge Fund, and 0 if targeted by a private equity investor. Please note that the total number of observartions for the Probit Model (n=108) is slightly lower then our entire data set (n=115) since the regression model mechanically excludes a data point when one of the variables is missing or labeled by us as "non-meaningful". The target characteristics are as follows:

1) Stake: Percentage of voting rights acquired.
2) Leverage: Total liabilities over total assets (Capital IQ).
3) Free Cash Flow: Cash earnngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
4) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
5) Earnings per Share: Capital IQ EPS for the last fiscal year.
6) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
7) Interest Expense: Interest Expense as a percentage of sales (Capital IQ).
8) Firm Size: Logarithm of the year-end market capitaliziation.
9) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
10) #Hedgefunds (t-1): Number of invested Hedge Funds one quarter prior to the acquisition.
11) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.
12) Largest Strategic: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a strategic investor or a company.
13) Largest Hedge Fund: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a Hedge Fund.
14) Cash Balance: Logarithm of the cash balance of the target prior to the acquisition (Capital IQ).
15) Majority (t-1): Dummy variable equal to one if there was a majority shareholder prior to the acquisition.

Target Characteristics	Coefficient	z - Value
Stake	(0.101) ***	(3.670)
Leverage	(0.025) ***	(3.000)
Free Cash Flow	0.005	0.780
Return on Assets	(0.006)	(0.340)
Earnings per Share	0.005	0.530
Market to Book Ratio	(0.004)	(0.370)
Interest Expense	0.022	1.020
Size	0.339	1.110
#Blockholder (t-1)	0.044	0.510
#Hedgefunds (t-1)	(0.234)	(0.560)
Largest Investment Advisor	0.045	0.120
Largest Strategic	(0.122)	(0.340)
Largest Hedge Fund	(0.269)	(0.310)
Cash Balance	0.181	0.680
Majority (t-1)	(0.268)	(0.320)
Constant	(1.040)	(0.740)
Number of Observations	108	
LR chi^2	37.11	
Pseudo R^2	24.81%	

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table VI

CAPM-benchmarked Cumulative Average Abnormal Returns - Germany

The table shows the CAPM-benchmarked cumulative average abnormal returns for eight different event windows. We use a t-test as well as the Wilcoxon signed Rank test and the Sign test to test if those are statistically different from zero both for the entire sample and on a subsample basis. Subsequently, we test the subsamples' means and medians for differences through a t-test as well as the Wilcoxon signed Rank test..

	All transactions					Private Equity Transactions					Hedge Fund Transactions					Test for Differences	
	CAR		t-Test	Wilcoxon	Sign-test	CAR		t-Test	Wilcoxon	Sign-test	CAR		t-Test	Wilcoxon	Sign-test	t-Test	Rank Sum Test
Event window	Mean	Median	t-Value	z-Score	p-Value	Mean	Median	t-Value	z-Score	p-Value	Mean	Median	t-Value	z-Score	p-Value	t-Value	z-Score
[-30;+30]	1.295	(0.271)	0.848	0.488	1.000	2.025	1.13	0.887	0.856	0.627	0.677	(0.831)	0.329	(0.0921)	0.592	0.438	(0.6801)
[-20;+20]	2.353	0.403	1.893 *	1.164	0.895	3.090	1.614	1.634	1.672 *	0.285	1.729	(0.841)	1.048	0.070	0.474	0.542	(1.2471)
[-20;+10]	1.912	1.235	1.680 *	1.145	0.236	1.817	1.356	1.147	1.250	0.207	1.992	0.787	1.226	0.359	0.721	(0.0771)	(0.6841)
[-10;+20]	0.015	0.007	1.424	1.037	0.357	0.031	0.019	1.903 *	1.659 *	0.207	0.001	0.003	0.096	(0.1101)	1.000	1.403	(1.3321)
[-10;+10]	1.045	0.024	1.213	0.815	0.895	1.816	0.455	1.386	0.935	0.497	0.392	(0.231)	0.343	0.201	0.721	0.819	(0.5301)
[-10;+5]	1.274	0.563	1.726 *	1.338	0.357	1.967	0.598	1.780 *	1.139	0.285	0.687	0.128	0.692	0.755	0.858	0.862	(0.3481)
[-10;+0]	1.434	0.135	2.273 **	1.515	0.693	2.043	0.362	2.040 **	1.710 *	0.627	0.918	0.109	1.148	0.504	1.000	0.878	(0.9211)
[-5;+5]	0.772	0.199	1.345	1.109	0.430	1.718	0.895	2.079 **	1.568	0.497	(0.031)	0.164	(0.0381)	0.065	0.721	1.527	(1.1681)
[-5;0]	0.932	0.229	2.027 **	1.118	0.895	1.793	1.017	2.566 ***	2.217 **	0.285	0.201	(0.201)	0.333	(0.6641)	0.474	1.725 *	(2.0731) **

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table VII

CAPM-benchmarked Cumulative Average Abnormal Returns - Sweden

The table shows the CAPM-benchmarked cumulative average abnormal returns for eight different event windows. We use a t-test as well as the Wilcoxon signed Rank test and the Sign test to test if those are statistically different from zero both for the entire sample and on a subsample basis. Subsequently, we test the subsamples' means and medians for differences through a t-test as well as the Wilcoxon signed Rank test..

	All transactions					Private Equity Transactions					Hedge Fund Transactions					Test for Differences	
	CAR		t-Test	Wilcoxon	Sign-test	CAR		t-Test	Wilcoxon	Sign-test	CAR		t-Test	Wilcoxon	Sign-test	t-Test	Rank Sum Test
Event window	Mean	Median	t-Value	z-Score	p-Value	Mean	Median	t-Value	z-Score	p-Value	Mean	Median	t-Value	z-Score	p-Value	t-Value	z-Score
[-30;+30]	0.469	0.121	0.195	(0.1031)	1.000	(1.9481)	0.604	(0.5641)	(0.2741)	1.000	2.844	(0.061)	0.850	0.066	1.000	(0.9971)	0.269
[-20;+20]	2.443	(0.041)	1.170	0.787	1.000	0.829	1.277	0.300	0.505	0.791	4.028	(0.231)	1.288	0.468	0.694	(0.7661)	(0.0731)
[-20;+10]	1.709	2.500	0.944	1.094	0.093 *	1.002	5.160	0.415	1.077	0.033 **	2.403	0.305	0.888	0.314	0.896	(0.3861)	(0.9011)
[-10;+20]	1.125	(0.131)	0.648	0.092	1.000	0.247	2.317	0.104	0.362	0.597	1.988	(1.241)	0.781	(0.2051)	0.512	(0.5001)	(0.4481)
[-10;+10]	0.392	0.892	0.277	0.137	0.351	0.421	3.464	0.214	0.791	0.063 *	0.363	(1.581)	0.178	(0.5541)	0.694	0.020	(0.8451)
[-10;+5]	1.324	1.190	1.054	1.136	0.062 *	1.667	2.208	0.945	1.871	0.033 **	0.987	0.104	0.548	(0.0661)	0.694	0.270	(1.1521)
[-10;+0]	1.016	0.194	0.853	0.611	0.576	1.059	0.340	0.577	0.926	0.289	0.972	(0.461)	0.633	0.043	0.896	0.036	(0.5591)
[-5;+5]	2.256	1.329	2.301 **	2.227 **	0.025 **	3.376	2.677	2.277 **	2.864 ***	0.003 ***	1.155	0.298	0.900	0.376	0.896	1.132	(1.7731) *
[-5;0]	1.948	0.779	2.180 **	1.906 *	0.093 *	2.769	0.823	1.870 *	2.133 **	0.016 **	1.141	0.134	1.126	0.608	1.000	0.907	(1.0851)

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table VIII

Index-benchmarked Cumulative Average Abnormal Returns - Germany

The table shows the Index-benchmarked cumulative average abnormal returns for eight different event windows. We use a t-test as well as the Wilcoxon signed Rank test and the Sign test to test if those are statistically different from zero both for the entire sample and on a subsample basis. Subsequently, we test the subsamples' means and medians for differences through a t-test and the Wilcoxon signed Rank test.

	All transactions					Private Equity Transactions					Hedge Fund Transactions					Test for Differences	
	CAR		t-Test	Wilcoxon	Sign-test	CAR		t-Test	Wilcoxon	Sign-test	CAR		t-Test	Wilcoxon	Sign-test	t-Test	Rank Sum Test
Event window	Mean	Median	t-Value	z-Score	p-Value	Mean	Median	t-Value	z-Score	p-Value	Mean	Median	t-Value	z-Score	p-Value	t-Value	z-Score
[-30;+30]	3.457	1.584	2.422 **	2.457 ***	0.0251 **	3.476	1.548	1.682 *	1.502	0.2853	3.441	1.662	1.739 *	1.970 **	0.0487 **	0.012	0.312
[-20;+20]	3.874	2.204	3.306 ***	3.219 ***	0.0037 ***	4.487	2.970	2.436 **	2.662 ***	0.0084 ***	3.354	1.203	2.228 **	1.948 *	0.1521	0.476	(0.6111)
[-20;+10]	3.043	2.014	2.737 ***	2.762 ***	0.0122 **	2.890	2.039	1.818 *	1.931 *	0.0982 *	3.171	1.833	2.038 **	1.990 **	0.0732 *	(0.1261)	(0.0451)
[-10;+20]	2.619	1.695	2.693 ***	2.399 ***	0.0251 **	4.019	2.782	2.572 **	2.542 ***	0.0409 **	1.432	1.133	1.184	1.112	0.2831	1.309	(0.9741)
[-10;+10]	1.788	0.853	2.114 **	1.846 *	0.1881	2.422	1.422	1.859 *	1.451	0.2065	1.250	0.336	1.129	1.127	0.5917	0.686	(0.2531)
[-10;+5]	1.863	0.879	2.514 **	2.277 **	0.0869	2.500	1.159	2.233 **	2.280 **	0.0409 **	1.323	0.389	1.339	1.137	0.7207	0.788	(0.7231)
[-10;+0]	1.724	0.448	2.689 ***	2.252 **	0.3570	2.254	0.803	2.246 **	2.126 **	0.2065	1.274	0.293	1.543	1.127	1.000	0.754	(0.8571)
[-5;+5]	1.207	0.845	2.131 **	2.091 **	0.0869	2.116	1.835	2.542 **	2.526 ***	0.065 *	0.437	0.383	0.568	0.514	0.592	1.480	(1.5371)
[-5;0]	1.068	0.264	2.281 **	1.481	0.693	1.870	1.062	2.670 ***	2.463 ***	0.145	0.388	(0.291)	0.620	(0.3491)	0.474	1.578	(2.0981) **

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table IX

Index-benchmarked Cumulative Average Abnormal Returns - Sweden

The table shows the Index-benchmarked cumulative average abnormal returns for eight different event windows. We use a t-test as well as the Wilcoxon signed Rank test and the Sign test to test if those are statistically different from zero both for the entire sample and on a subsample basis. Subsequently, we test the subsamples' means and medians for differences through a t-test and the Wilcoxon signed Rank test.

	All transactions					Private Equity Transactions					Hedge Fund Transactions					Test for Differences	
	CAR		t-Test	Wilcoxon	Sign-test	CAR		t-Test	Wilcoxon	Sign-test	CAR		t-Test	Wilcoxon	Sign-test	t-Test	Rank Sum Test
Event window	Mean	Median	t-Value	z-Score	p-Value	Mean	Median	t-Value	z-Score	p-Value	Mean	Median	t-Value	z-Score	p-Value	t-Value	z-Score
[-30;+30]	3.436	0.879	1.684 *	1.259	0.351	2.760	1.909	1.007	1.148	0.289	4.101	0.472	1.350	0.716	0.896	(0.3281)	(0.2631)
[-20;+20]	4.243	1.003	2.538 **	2.124 **	0.576	3.957	4.425	1.851 *	2.022 **	0.289	4.523	(0.231)	1.752 *	0.941	0.896	(0.1691)	(0.6431)
[-20;+10]	3.111	2.169	2.132 **	2.249 **	0.003 ***	3.523	5.219	1.871 *	2.109 **	0.001 ***	2.707	1.122	1.208	0.972	0.358	0.279	(1.1521)
[-10;+20]	2.572	1.381	1.711 *	1.192	0.263	2.464	4.761	1.266	1.434	0.111	2.678	(0.331)	1.163	0.221	1.000	(0.0711)	(0.8451)
[-10;+10]	1.441	1.618	1.173	1.186	0.062 *	2.030	2.096	1.230	1.537	0.033 **	0.861	1.108	0.471	0.174	0.694	0.474	(0.9571)
[-10;+5]	1.962	1.702	1.726 *	1.750 *	0.062 *	2.661	2.429	1.721	2.237 **	0.063 *	1.276	1.223	0.762	0.329	0.512	0.608	(1.1191)
[-10;+0]	1.637	1.094	1.478	1.700 *	0.025 **	2.001	0.913	1.178	1.744 *	0.111	1.279	1.506	0.887	0.561	0.148	0.324	(0.4141)
[-5;+5]	2.566	1.994	2.859 ***	2.456 ***	0.135	3.777	2.689	2.830 ***	2.769 ***	0.063 *	1.377	0.928	1.153	0.639	0.896	1.340	(1.4601)
[-5;0]	2.241	0.829	2.636 ***	2.408 ***	0.015 **	3.117	0.735	2.216 **	2.205 **	0.063 *	1.380	0.851	1.430	1.142	0.148	1.018	(0.7721)

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table X

Determinants of the CAPM-benchmarked Cumulative Abnormal Returns for Germany

On a country basis, we divide our sample in a Private Equity and Hedge Fund subsample. We then run a control model and an explanatory model on the Cumulative Abnormal Returns (benchmarked against the CAPM prediction) for the [-5; +5]-day event window. Additionally (Model II), we regress the same explanatory variables on a dummy variable equal to 1 if the investor is the largest shareholder post acquisition.

1) Liquidity: Amihud (2002) liquidity measure defined as the average ratio of daily absolute return relative to the trading volume on that day.
2) Technical Reaction: Geometric mean of the stock price return over the 200-day period prior to the event.
3) Beta: Beta CAPM coefficient caluclated over 200 trading days before the event.
4) Stake: Percentage of voting rights acquired.
5) Leverage: Total liabilities over total assets (Capital IQ).
6) Free Cash Flow: Cash earnngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
7) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
8) Equity Growth: Defined as change in common shareholders' equity over the full years preceeding the transaction (Capital IQ).
9) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
10) Largest HF: Dummy variable equal to 1 if the largest shareholder at the end of the quarter preceeding the acquisition was a Hedge Fund.
11) Abnormal Trading Volume: Mean-adjusted abnormal trading volume (see 6.3).
12) Firm Size: Logarithm of the year-end market capitaliziation.
13) Earnings per Share: Capital IQ EPS for the last fiscal year.
14) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.
15) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
16) #PE (t-1): Number of private equity funds invested in the target company prior to the acquisition.

Germany	**Hedge Funds**			**Private Equity**		
	Control	Model I	Model II	Control	Model I	Model II
Constant	(0.907)	(11.102)	0.836 **	0.635	3.537	0.826 **
Illiquidity	(0.111)			0.193		
Technical Reaction	(0.750)			1.109		
Beta	1.610			0.134		
Stake		0.342			(0.045)	
Leverage		(0.073)	(0.002)		(0.034)	(0.003)
Free Cash Flow		0.018	(0.000)		0.010	0.000
Return on Assets		(0.105)	0.002		(0.056)	(0.001)
Equity Growth		(0.018) **	0.000		(0.007)	0.001 **
Market to Book Ratio		(0.006)	(0.019) **		0.033	(0.021)
Largest HF		0.620	0.199		(1.704)	(0.128)
Abnormal Trading Volume		0.689	(0.098)		13.619 ***	0.086
Firm Size		2.274	(0.102) **		0.587	(0.033)
Earnings per Share		(0.049)	(0.003)		(0.596) **	0.007
Largest Investment Advisor		(0.753)	0.128 **		3.849	0.077
#Blockholder (t-1)		0.210	(0.020) *		(0.816) **	(0.053) ***
#PE (t-1)		(0.247)	0.044		1.022	(0.009)
Number of Observations	124	116	116	104	99	99
R2	1.18%	6.32%	17.67%	3.23%	20.03%	18.03%
Root MSE	8.870	9.380	0.282	8.493	8.294	0.433

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table XI

Determinants of the CAPM-benchmarked Cumulative Abnormal Returns for Sweden

On a country basis, we divide our sample in a Private Equity and Hedge Fund subsample. We then run a control model and an explanatory model on the Cumulative Abnormal Returns (benchmarked against the CAPM prediction) for the [-5; +5]-day event window. Additionally (Model II), we regress the same explanatory variables on a dummy variable equal to 1 if the investor is the largest shareholder post acquisition.

1) Liquidity: Amihud (2002) liquidity measure defined as the average ratio of daily absolute return relative to the trading volume on that day.
2) Technical Reaction: Geometric mean of the stock price return over the 200-day period prior to the event.
3) Beta: Beta CAPM coefficient caluclated over 200 trading days before the event.
4) Stake: Percentage of voting rights acquired.
5) Leverage: Total liabilities over total assets (Capital IQ).
6) Free Cash Flow: Cash earnngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
7) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
8) Equity Growth: Defined as change in common shareholders' equity over the full years preceeding the transaction (Capital IQ).
9) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
10) Largest HF: Dummy variable equal to 1 if the largest shareholder at the end of the quarter preceeding the acquisition was a Hedge Fund.
11) Abnormal Trading Volume: Mean-adjusted abnormal trading volume (see 6.3).
12) Firm Size: Logarithm of the year-end market capitaliziation.
13) Earnings per Share: Capital IQ EPS for the last fiscal year.
14) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.
15) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
16) #PE (t-1): Number of private equity funds invested in the target company prior to the acquisition.

Sweden	**Hedge Funds**			**Private Equity**		
	Control	Model I	Model II	Control	Model I	Model II
Constant	3.001	15.103	0.387	(1.344)	(0.169)	0.901
Illiquidity	17.179 ***			4.267		
Technical Reaction	(10.177)			(5.323)		
Beta	(3.678)			7.039		
Stake		0.012			0.215	
Leverage		(0.038)	(0.002)		0.110	(0.006)
Free Cash Flow		0.040	0.002		(0.035)	0.003
Return on Assets		(0.559) ***	(0.004)		(0.027)	0.000
Equity Growth		(0.024) ***	(0.001)		0.021	(0.002) **
Market to Book Ratio		(0.083)	(0.001)		0.045	(0.002)
Largest HF		4.981 *	0.102		(7.189)	(0.266)
Abnormal Trading Volume		1.568	0.128		7.812	0.437 **
Firm Size		(2.014)	(0.033)		(0.279)	(0.031)
Earnings per Share		0.084 ***	(0.001)		(0.661)	0.019
Largest Investment Advisor		1.707	0.175		0.684	(0.123)
#Blockholder (t-1)		(0.082)	(0.027)		(0.493)	(0.047)
#PE (t-1)		3.413 **	0.054		(2.582)	0.184
Number of Observations	58	53	53	56	53	53
R2	12.99%	37.76%	30.44%	8.11%	23.07%	28.37%
Root MSE	9.365	8.154	0.222	10.883	10.409	0.467

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table XII

Determinants of the Index-benchmarked Cumulative Abnormal Returns for Germany

On a country basis, we divide our sample in a Private Equity and Hedge Fund subsample. We then run a control model and an explanatory model on the Cumulative Abnormal Returns (benchmarked against the CDAX Index) for the [-5; +5]-day event window. Additionally (Model II), we regress the same explanatory variables on a dummy variable equal to 1 if the investor is the largest sharehoder post acquisition.

1) Liquidity: Amihud (2002) liquidity measure defined as the average ratio of daily absolute return relative to the trading volume on that day.
2) Technical Reaction: Geometric mean of the stock price return over the 200-day period prior to the event.
3) Beta: Beta CAPM coefficient caluclated over 200 trading days before the event.
4) Stake: Percentage of voting rights acquired.
5) Leverage: Total liabilities over total assets (Capital IQ).
6) Free Cash Flow: Cash earnngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
7) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
8) Equity Growth: Defined as change in common shareholders' equity over the full years preceeding the transaction (Capital IQ).
9) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
10) Largest HF: Dummy variable equal to 1 if the largest shareholder at the end of the quarter preceeding the acquisition was a Hedge Fund.
11) Abnormal Trading Volume: Mean-adjusted abnormal trading volume (see 6.3).
12) Firm Size: Logarithm of the year-end market capitaliziation.
13) Earnings per Share: Capital IQ EPS for the last fiscal year.
14) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.
15) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
16) #PE (t-1): Number of private equity funds invested in the target company prior to the acquisition.

Germany	**Hedge Funds**			**Private Equity**		
	Control	Model I	Model II	Control	Model I	Model II
Constant	(1.112)	(10.463)	0.836 **	1.340	1.640	0.826 **
Illiquidity	(0.103)			0.211 *		
Technical Reaction	4.518			8.252		
Beta	2.030			(0.972)		
Stake		0.338			(0.002)	
Leverage		(0.074)	(0.002)		(0.014)	(0.003)
Free Cash Flow		0.025	-1,84e-06		(0.014)	0.000
Return on Assets		(0.082)	0.002		(0.007)	(0.001)
Equity Growth		(0.017)	0.000		0.000	0.001 **
Market to Book Ratio		(0.229)	(0.019) *		0.190	(0.021)
Largest HF		(0.222)	0.199		(2.577)	(0.128)
Abnormal Trading Volume		1.027	(0.098)		15.092 ***	0.086
Firm Size		2.202	(0.102) **		0.548	(0.033)
Earnings per Share		(0.025)	(0.003)		(0.722) **	0.007
Largest Investment Advisor		(1.261)	0.128 **		4.463	0.077
#Blockholder (t-1)		0.377	(0.020) *		(0.780) **	(0.053) ***
#PE (t-1)		(0.387)	0.044		1.101	(0.009)
Number of Observations	124	116	116	104	99	99
R2	2.54%	6.33%	17.67%	7.93%	22.81%	18.03%
Root MSE	8.631	9.126	0.282	8,337.000	8.089	0.433

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table XIII

Determinants of the Index-benchmarked Cumulative Abnormal Returns for Sweden

On a country basis, we divide our sample in a Private Equity and Hedge Fund subsample. We then run a control model and an explanatory model on the Cumulative Abnormal Returns (benchmarked against the OMX all share Index) for the [-5; +5]-day event window. Additionally (Model II), we regress the same explanatory variables on a dummy variable equal to 1 if the investor is the largest sharehoder post acquisition.

1) Liquidity: Amihud (2002) liquidity measure defined as the average ratio of daily absolute return relative to the trading volume on that day.
2) Technical Reaction: Geometric mean of the stock price return over the 200-day period prior to the event.
3) Beta: Beta CAPM coefficient caluclated over 200 trading days before the event.
4) Stake: Percentage of voting rights acquired.
5) Leverage: Total liabilities over total assets (Capital IQ).
6) Free Cash Flow: Cash earnngs return on equity calculated as operating cash flow over common sahreholder equity at the last full financial year (Capital IQ).
7) Return on Assets: Capital IQ return on total Assets defined as pre-tax return over total assets.
8) Equity Growth: Defined as change in common shareholders' equity over the full years preceeding the transaction (Capital IQ).
9) Market to Book Ratio: Share Price over Book Value per Share at last fiscal year end (Capital IQ).
10) Largest HF: Dummy variable equal to 1 if the largest shareholder at the end of the quarter preceeding the acquisition was a Hedge Fund.
11) Abnormal Trading Volume: Mean-adjusted abnormal trading volume (see 6.3).
12) Firm Size: Logarithm of the year-end market capitaliziation.
13) Earnings per Share: Capital IQ EPS for the last fiscal year.
14) Largest Investment Advisor: Dummy variable equal to 1 if the largest blockholder prior to the acquisition is a passive asset manager.
15) #Blockholder (t-1): Number of blockholders one quarter before the acuisitions; defined as any party surpassing the minimum disclosure threshold.
16) #PE (t-1): Number of private equity funds invested in the target company prior to the acquisition.

Sweden	**Hedge Funds**			**Private Equity**		
	Control	Model I	Model II	Control	Model I	Model II
Constant	3.400	12.587	0.387	(1.809)	4.140	0.901
Illiquidity	15.279 ***			2.341		
Technical Reaction	(1.773)			3.882		
Beta	(4.232)			8.238 *		
Stake		0.033			0.199	
Leverage		(0.060)	(0.002)		0.028	(0.006)
Free Cash Flow		0.056	0.002		(0.036)	0.003
Return on Assets		(0.462) ***	(0.004)		0.006	0.000
Equity Growth		(0.021) **	(0.001)		(0.010)	(0.002) **
Market to Book Ratio		(0.128) **	(0.001)		0.083	(0.002)
Largest HF		4.276 *	0.102		(7.678)	(0.266)
Abnormal Trading Volume		0.385	0.128		7.603	0.437 **
Firm Size		(1.718)	(0.033)		(0.466)	(0.031)
Earnings per Share		0.091 ***	(0.001)		(0.520)	0.019
Largest Investment Advisor		1.629	0.175		1.083	(0.123)
#Blockholder (t-1)		0.366	(0.027)		0.079	(0.047)
#PE (t-1)		3.211 **	0.054		(3.388) *	0.184
Number of Observations	58	53	53	56	53	53
R2	8.77%	38.30%	30.44%	7.57%	28.72%	28.37%
Root MSE	8.924	7.618	0.222	9.990	8.902	0.467

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table XIV

Benchmark-Adjusted Buy-and-Hold Returns over various Holding Periods

The table belows shows the benchmark-adjusted buy-and-hold returns (BHARs) for the 100-, 150-, 200-, 250- and 300-day holding periods. The dividend adjusted CDAX as well as the OMX all-share Index are the corresponding benchmarks. Means and median are computed for the entire sample in the respective countries (n=231 for Germany and n=115 for Sweden). The PE subsamples include n=106 and n=57 for Germany and Sweden, respectively. The Hedge Fund samples comprise n=125 and n=58 data points. Please note, that for some investments made in late 2018, we couldn't track performance over all holdings periods but still included those datapoints for the shorter horizons. The mean (t-test) and

	Holding Period				
Germany	**W1 - 100 days**	**W2 - 150 days**	**W3 - 200 days**	**W4 - 250 days**	**W5 - 300 days**
Entire sample BHARs					
Mean	-0.982	-0.600	-0.245	-0.543	0.821
Median	-1.704	-1.303	-0.317	-2.891 *	-4.013
Private Equity BHARs					
Mean	-1.749	-1.671	-0.446	0.352	1.974
Median	-4.233 ***	-2.236	-1.832	-4.488 *	-5.546
Hedge Fund BHARs					
Mean	-0.332	0.314	-0.076	-1.291	-0.133
Median	0.822	-0.406	1.865	-1.078	-2.519
Test for Differences of the Private Equity and Hedge Fund Subsample BHARs:					
T-Test	-0.483	-0.641	-0.103	0.401	0.418
Sign Test	1.620	0.938	0.645	-0.060	0.342

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Holding Period				
Sweden	**W1 - 100 days**	**W2 - 150 days**	**W3 - 200 days**	**W4 - 250 days**	**W5 - 300 days**
Entire sample BHARs					
Mean	4.669 *	6.753 **	10.812 ***	11.753 **	13.472 *
Median	2.336	2.032	5.420	5.337 **	4.513
Private Equity BHARs					
Mean	2.161	4.270	9.240 *	8.099 *	8.707 *
Median	1.667	2.258	2.674	5.862	2.912
Hedge Fund BHARs					
Mean	7.135 *	9.193 *	12.329 **	15.342 *	18.325 **
Median	3.442	1.196	10.271	5.226 *	8.872
Test for Differences of the Private Equity and Hedge Fund Subsample BHARs:					
T-Test	-1.056	-0.782	-0.423	-0.797	-0.920
Sign Test	0.945	0.484	0.271	0.448	0.509

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.