UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

Market Reactions to Hedge Fund Activism in Europe

- An Empirical Study

Bachelor Thesis in Financial Economics

Spring 2018

15 ECTS

Daniel Karlsson 951025
Philip Linderum 950327

Supervisor: Stefan Sjögren

Abstract

Activism is on the rise in Europe. In recent years, hedge funds have begun to target firms across the continent with the intent of generating profits through exercising shareholder rights to prompt change and address inefficiencies. Their interventions often lead to controversy as to whether they are a beneficial ownership addition to firms and their shareholders.

This thesis measures market reactions to the first ownership disclosure made by activist hedge funds in European listed firms. Through the application of a quantitative research method using an event study methodology, this thesis finds significant evidence that abnormal returns arise in the activist target firm shares, as well as that there is a difference both in the amount and behavior of abnormal returns depending on the circumstances surrounding the entry. Furthermore, we find significant abnormal returns to be present in each day of the post-revelation week, suggesting that an uninformed investor can profit from following the activists.

Keywords: *Corporate governance • Hedge funds • Activism • Europe • Event studies*

JEL Classifications: *G14 • G24 • G34*

Acknowledgements

Table of Contents

1. Introduction

Hedge fund activism is an old phenomenon dating back to the corporate raiding and takeover boom of the 1970's and 1980's in the United States (Cheffins & Armour, 2011). However, it took until early 21ˢᵗ century for it to make an impact on the European markets. Today, the largest and most active European focused hedge fund is Cevian Capital, having made a multitude of activist investments since its founding in 2002. One example of such an investment is Cevian's acquisition of a large stake in Volvo, in which they replaced a majority of the directors as well as the CEO and sold off parts of the company to focus on its truck business (Milne, 2017).

The actions that Cevian undertook in Volvo are examples of shareholder activism. Various types of institutional investors have been engaging in activism over the years, although with very mixed results (Brav, Jiang, Partnoy, Thomas., 2008). According to Davis and Steil (2001, p.1), "Institutional investors may be defined as specialized financial institutions that manage savings collectively on behalf of small investors toward a specific objective in terms of acceptable risk, return maximization, and maturity of claims". Ivanova (2016, p.175) defines institutional investors as "[...] bodies that trade in large share quantities and invest money on behalf of shareholders". Black (1990) states that a lot of institutional investors suffer from the free-riding problem as well as conflicts of interest, resulting in poor results in terms of firm performance improvements. Hedge funds, on the other hand, generally do not suffer from the issues of other institutional investors because they have stronger financial incentives, are subject to lighter regulation and have fewer conflicts of interest (Brav et al., 2008).

Dissatisfied shareholders have two courses of actions available to them; either they can voice their opinions, or they can sell their shares. The latter option is commonly referred to as voting with their feet, or to do "the Wall Street Walk" (Admati & Pfleiderer, 2009). The voice option includes a broad spectrum of actions including attending shareholder meetings, nominating members to the board of directors and engaging in private dialogues with management in order to make them implement the shareholder's ideas. Shareholder activism has become an important aspect of contemporary corporate governance and is defined by Smith (1996, p. 227) as "[…] monitoring and attempting to bring about changes in the organizational control structure of firms (targets) not perceived to be pursuing shareholder-wealth-maximizing goals". Investors that engage in firms to pursue such activities are commonly referred to as activists.

Activists potentially serve as key contributors to the mitigation of agency problems such as separation of ownership and control (Fama & Jensen, 1983) and of conflicts between large, controlling shareholders and minority shareholders.

For monitoring to be beneficial, the increase in value of an activist's shares has to outweigh the direct costs of monitoring as well as the opportunity costs of being passive or investing in another firm (Larcker and Tayan, 2011; Cubbin and Leech, 1983). By not engaging in monitoring, passive shareholders profit more than the active shareholders since the passive shareholders do not bear the monitoring costs but are entitled to the gains in share value. This can ultimately remove the incentives to monitor. In corporate governance, this phenomenon is known as the free riding problem. (Thomsen & Conyon, 2012).

Hedge funds have a large array of strategies at their disposal, and one such strategy that has seen a surge in Europe in recent years consists of exercising activism on an industrial scale. For example, Elliott Capital Advisors are known for investing aggressively to block acquisition attempts or to disrupt the influence of dominant shareholders. Such interventions have led to a lot of criticism, where some critics argue that they are too short-term in their approach and that they distract firm management from long-term objectives (Cremers, Mascolane & Sepe, 2017). On the other hand, some argue that their presence, or the mere threat of it, as well as their actions help generate more efficient firms (Gantchev & Jotikasthira, 2017). The pursued activities, however, vary in terms of radicalism and range from small structural changes such as replacing an underperforming CEO or introducing the firm to a new market all the way to firing entire boards, separating product groups into new firms or blocking mergers.

Ordóñez-Calafí & Bernhardt (2017) identify two major profit drivers for the activist hedge funds; the main one is to discipline management and implement value increasing changes in the acquired firms, and the second is to minimize the intervention costs by secretly acquiring their initial stock prior to crossing the critical ownership level (commonly 5%), after which the public will be notified of the intervention.

The typical compensation scheme of hedge funds is comprised of a 1-2% annual fee on the assets under management in addition to a 15-25% performance fee on the return of the fund above a certain benchmark (Stulz, 2007). That being said, investing in a hedge fund comes with high costs. Since activist hedge funds often purchase large enough stakes to invoke an

ownership disclosure, or choose to make public statements, an investor could instead simply follow the fund and mirror its investments.

Prior studies investigating hedge fund activism have primarily been conducted on American activism (Brav et al., 2008; Clifford, 2008; Boyson & Mooradian, 2011), measuring stock performance in proximity to ownership disclosures. Unanimously, they find that the entrance of hedge fund activists in firms generate short-term abnormal returns. However, there appears to be a lack of empirical findings indicating what kind of market reaction activist hedge fund entries generate in Europe, except for one study by Bessler, Drobetz & Holler (2015) conducted on the German market. Since the European market differs from the US market in several ways, it cannot be safely assumed that the market reaction to hedge fund activism will be the same. Firstly, Europe has a different, tighter regulatory environment from the US and consists of several countries with their own interpretations of the EU-adopted directives. This leads to differences both in investor protection as well as disclosure regulation, both of which are key elements in activism. Secondly, the corporate governance tradition in Europe is different from the one in the US and activism has not been as prominent in Europe. Thirdly, according to Faccio and Lang (2002), ownership structures in Europe are dominated by strong majority shareholders owning more than 20% of the firm, whereas in the US, ownership is more dispersed (Porta, Lopez-De-Silanes, Shleifer., 1999).

Despite the typical European corporate ownership structure and tight regulatory environment, there appears to have been a surge in both hedge fund activism as well as media coverage in recent years (e.g. Grumberg, Hopkins, Corte., 2018). Consequently, it is imperative that we find out the effects of such activism. It is clear that the activists see potential value waiting to be unlocked in European firms, otherwise they would most likely not be increasing their investments in the region. But the question remains: what does the market believe?

1.1. Purpose

This paper intends to measure the market reaction to hedge fund activism in European listed firms. By doing so, we can get a picture of the market attitude towards European activism which also serves as an implication regarding the effectiveness of European corporate governance. Furthermore, we will investigate whether the market reacts instantaneously or if it could be a viable strategy to invest in response to an activist announcing its engagement in a firm.

1.2. Structure of the paper

Section 2 presents a theoretical framework consisting of literature studies, previous research and our hypotheses. Section 3 describes the method and sample construction and section 4 provides the results by order of hypothesis. Moreover, in section 5 we critically discuss and analyze the results presented in section 4 in light of the theoretical framework provided in section 2. Lastly, in section 6 we present a conclusion, in which we summarize our results, discuss some shortcomings of the study and give suggestions for future research related to the topic.

2. Theoretical framework and previous research on the topic

This section provides a theoretical framework which leads to three hypotheses. Firstly, we discuss the efficient market hypothesis and the implications it provides for price adjustments. Continuing, there is a discussion regarding the structural market conditions, and lastly a review of previous studies on the topic is provided.

The efficient market hypothesis (Fama, 1970) is an investment theory saying that prices should reflect all publicly available information and that securities respond immediately to any new information, making it impossible to outperform the market. Thus, the only way of achieving higher returns is either by luck or by pursuing riskier investments. There are three versions of the efficient market hypothesis: a weak form, a semi-strong form and a strong form. In the weak form of market efficiency, the share prices already reflect all information that can be derived by examining market trading data such as historical prices, trading volume etc., making it impossible to outperform the market based on technical analysis. Under the semi-strong form, all obviously publicly available information such as fundamental data, earnings forecasts and dividends are already incorporated in the price. Therefore, one should not be able to buy undervalued stocks based on fundamental analysis. Lastly, in the strong form of market efficiency, all information regarding the firm, whether private or public, is incorporated in the share price.

It is important to keep in mind that Europe is not a homogenous market in terms of corporate ownership structure, which is illustrated by Porta et. al (1999) in a study of ownership structures

in 27 developed economies around the world. Their study indicates that continental Europe has more concentrated ownership in comparison to the US and UK where firm ownership is more dispersed. Their findings are further strengthened by Faccio and Lang (2002), who find that firms in Europe as a whole are typically family controlled (44,29%) or subject to dispersed ownership (36,93%). However, there are large differences between countries where for instance UK firms are typically (63,08%) subject to dispersed ownership, whereas the percentage of German firms that are subject to dispersed ownership is only 10,37%. The relationship for family-controlled firms is the opposite, where continental Europe has the highest percentages and the UK the lowest.

The classic explanation for activism is that it mitigates the problems stemming from the separation of ownership and control (Berle & Means, 1936), which causes agency problems between firm management and owners. This works as an explanation for activism in the US and UK markets where many firms are subject to dispersed ownership but fails to motivate activism in continental Europe and Scandinavia. For firms with concentrated ownership however, the explanation for activism may differ. A possible explanation could be the principal-principal problem, which is a different agency problem that arises when majority shareholders start abusing their ownership control to enjoy private benefits at the expense of minority shareholders (Renders and Gaeremynck, 2012). Traditionally, this type of conflicts has been thought to frequently occur in emerging economies, but according to Renders and Gaeremynck (2012) such problems may exist in European markets with concentrated ownership as well. Furthermore, Love (2010) states that good corporate governance is needed to reduce the problems associated with private benefits of control enjoyed by majority shareholders.

In an attempt to harmonize the European financial markets, the European Commission has adopted the Transparency Directive which states that any shareholder acquiring shares in a listed firm whose voting rights reach or exceed 5%, both directly and indirectly, should notify the company of the acquisition within 4 trading days (Council Directive 2001/34/EC). The US regulation law, on the other hand, states that such a notification "[…] must be filed by an investor with the SEC within 10 days of acquiring 5% of any class of securities of a publicly traded company if they have an interest in influencing the management of the company" (Brav et al., 2008, p.1736). This means that an investor has 6 more days before it has to disclose its ownership in the US compared to in the European Union. According to Seretakis (2014), these

tighter rules that are present in the EU severely harm the incentives for activism as it limits the possibility to secretly acquire stocks after crossing a critical ownership level, which is a major profit driver for activists (Ordóñez-Calafí & Bernhardt, 2017).

Although there is limited research on European activism, plenty of studies have measured stock returns in proximity to the first ownership disclosure by activists in the US. Studies are, regardless of geographical focus, unanimous in terms of finding abnormal returns. Interestingly, most studies find that the market reaction differs between aggressive and non-aggressive interventions.

By looking at 1057 initial disclosure filings by hedge funds between 2001 and 2006 from the US, Brav et al. (2008) find abnormal returns of 7.2% in the 41-day window surrounding the filings and roughly 6% in the 21-day window. Clifford (2008), with a sample constructed using the same method as Brav et al. (2008), observe abnormal returns of 3.39% within the five days surrounding the ownership disclosure. When first identifying activists and then looking at their interventions, Boyson & Mooradian (2011) find mean cumulative abnormal returns of 8.10% within a 51-day event window and 8.68% within a 21-day event window. Bessler et al. (2015) find that abnormal returns in Germany are positive, yet smaller than the ones in the US, and significant at the 1% level in a range of different event windows, which provides an idea that at least the German reaction towards hedge fund activism is similar to that of the US. Their sample is constructed through screening news articles for the words "hedge fund" and various company names, which illustrates the struggle resulting from the lack of a unified database for disclosure filings in the EU, such as EDGAR in the US.

Some earlier studies (Brav et al., 2008; Clifford, 2008; Bessler et al., 2015) categorize their observations depending on the circumstances surrounding the first public announcement. Some use the terms aggressive/non-aggressive while others use the terminology hostile/non-hostile. Brav et al. (2008, p.1732) uses the following definition of hostility: "[…] hostility includes a threatened or actual proxy contest, takeover, lawsuit or public campaign that is openly confrontational". This paper will use the aggressive/non-aggressive terminology and the selection criteria will be further developed in the method section. The aggressive interventions seem to outperform the passive ones in the short-term (Brav et al., 2008; Clifford, 2008; Bessler et al., 2015). However, the passive German interventions surpass the aggressive ones in terms of cumulative average abnormal returns after approximately 100 days (Bessler et al., 2015).

2.1. Hypotheses

An implication drawn from the efficient market hypothesis (Fama, 1970) is that the revelation of an activist having acquired a stake in a firm should give rise to abnormal returns if the market believes it will have an effect on future performance. Prior studies on the matter suggest that such an announcement generates a positive stock price reaction. However, the fact that a lot of European firms have strong owners might make it more difficult for the activist to implement its intended changes and could thus limit the impact. This assumption is strengthened by Bessler et al. (2015) who find lower abnormal returns in Germany compared to similar studies on the US market. Nonetheless, we have constructed the following hypothesis which we intend to test:

Hypothesis I*: There are abnormal returns in proximity to the entrance of an activist hedge fund in European listed firms*

Barber and Odean (2008) hypothesise and prove that investors are attracted to stocks that receive attention in media. They argue that this stems from the impossibility to analyze all stocks on the market, leading to abnormal share turnover in those that receive more publicity. In light of this, and in combination with a stock price reaction due to new market information, we believe that the circumstances surrounding the activist entries affect the reactions. More specifically, those interventions where the activists are openly critical towards the firm management are more likely to receive publicity than those when they do not. This should make it easier for the market to evaluate such interventions by determining the odds of a successful campaign as well as its value potential. Therefore, and in line with prior researchers (Brav et al., 2008; Clifford, 2008, Bessler et al., 2015), we expect to find a difference in abnormal returns when categorizing the events into aggressive and non-aggressive interventions.

Hypothesis II*: The market reaction differs depending on whether or not the intervention is accompanied by openly critical comments towards the target firm management.*

In accordance with the efficient market hypothesis, the market should process the new information regarding an activist entry immediately and adjust the value of the stock accordingly (Fama, 1970). However, previous research (Brav et al., 2008; Boyson & Mooradian, 2011; Bessler et al., 2015) find abnormal returns in the week following the event.

Therefore, contradictory to the efficient market hypothesis, we believe that abnormal returns will continue to rise in the post-revelation week. This hypothesis will be tested by looking at abnormal returns during the post-revelation trading week. For this test the event day will be excluded since we cannot safely assume that an investor acting on these news can take part in the potential abnormal returns generated on the event day.

Hypothesis III: *An investor can achieve abnormal returns by purchasing stock in the target firm of an activist on the day after the announcement and holding it for the post-revelation week.*
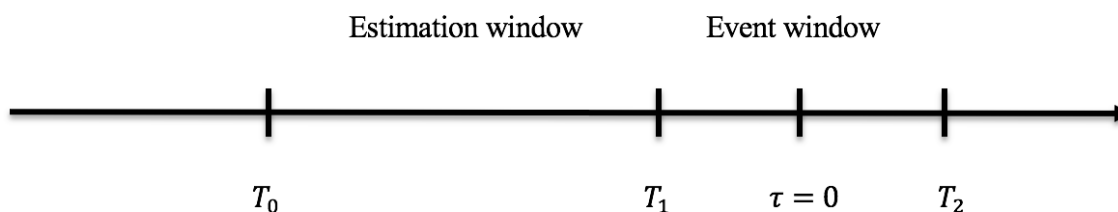
3. Method

3.1. Event Study

We implement an event study methodology in order to answer our hypotheses and investigate whether or not activist hedge fund investments in Europe generate value both for existing shareholders and for those who follow the activist. An event study is a powerful method for estimating the financial impact of an unanticipated event where the impact is characterized by "abnormal" security returns (McWilliams & Siegel, 1997).

According to MacKinlay (1997), the first assignment when conducting an event study is to determine the event one intends to study and subsequently identify the event window, which is the period over which security prices will be examined. In agreement with prior researchers the event of interest in this study is characterized by the day upon which firm ownership by an activist hedge fund becomes known to the public. The length of the event window will be 21 days, that is the impact will be measured on day -10 until day 10 where the event date is day 0. Having a long event window is difficult to reconcile with the assumption of market efficiency but the reasoning behind the length of the event window is based on the findings of Brav et al. (2008) which show that abnormal share turnover and cumulative abnormal returns are unusually high during these days. These findings imply that information leakage could exist which, according to McWilliams and Siegel (1997), could motivate having a longer event window in order to capture the true effects of the event. Secondly, it is necessary to decide the length of the estimation window during which normal performance will be measured. In this study the estimation window will consist of 160 days, namely day -200 until day -40. It is

important to not have any overlapping between the estimation window and the event window so that normal return parameters are not estimated from returns of the event (MacKinlay, 1997). Leaving a gap between the windows also allows for an increased event window for robustness testing without changing the normal return parameters. The timeline of the study will be indexed τ. An illustration of the timeline is given by Figure 1 below where $\tau = T_0$ to T_1 is the estimation window and $\tau = T_1 + 1$ to T_2 is the event window and $\tau = 0$ is the event date.

Figure 1 Event study timeline

3.2. Normal Return

There are several methods one can use in order to measure normal return and thus abnormal return. These methods are divided into two separate categories: statistical and economic methods. In this study, the Market model which falls into the statistical category is used. It is used due to its dominance in event studies which could be explained by the fact that it reduces the variance of the abnormal return compared to the simpler Constant Mean Return Model which assumes a constant return based on average historical stock return during a given time interval. Furthermore, the Market model does not demand as many factors as a multifactor model which in comparison generally has limited improvements in terms of abnormal return variance (MacKinlay, 1997). The use of an economic model was ruled out due to its need of restrictions and assumptions as well as the small potential gains compared to the Market model, as discussed by MacKinlay (1997). The Market model assumes a linear relationship between any given stock and the market portfolio and in order to estimate normal return it is necessary to regress the return of security i at time t on the return of the market at time t in order to get the security's beta. The normal return for the security is then defined as the beta multiplied by the market return. Algebraic expressions for the Market model is

$$R_{it} = (\alpha_i + \beta_i R_{mt} + \varepsilon_{it})$$
$$E[\varepsilon_{it}] = 0 \qquad var(\varepsilon_{it}) = \sigma^2{}_{\varepsilon_t},$$

where

- R_{it} is the return of stock i on day t
- R_{mt} is the return of the market on day t
- ε_{it} is the error term for stock i on day t
- $\alpha_i, \beta_i, \varepsilon_{it}$ are OLS estimated parameters of the model.

Since our sample, which is more thoroughly explained in a later section, consists of securities traded on different markets across Europe, different market indices are used to proxy the market portfolio. For example, if the security of interest is traded on the Swedish stock exchange, the market portfolio is represented by OMXS30, whereas if it is traded on the German market, DAX is used as proxy.

3.3. Abnormal Return

In order to estimate the impact of the activist fund's entry it is necessary to compute abnormal returns in the event window. Abnormal return is defined as the return of a security given the impact of the event subtracted by the predicted return (Brown & Warner 1980), as estimated by the Market model.

For a specific stock i and day t the abnormal return is defined as

$$AR_{it} = R_{it} - E(R_{it}|X_t),$$

where

- AR_{it} is the abnormal return
- R_{it} is the actual return
- $E(R_{it}|X_t)$ is the normal return
- X_t is the conditioning information given by the Market model.

When using the Market model to estimate normal return, abnormal return is defined as the error term given by the model and is estimated in the following way:

$$\widehat{AR}_{i\tau} = R_{i\tau} - \hat{\alpha} - \hat{\beta} R_{m\tau}.$$

Once abnormal returns for each day within the event window has been computed for each security, the firm specific abnormal returns during the event window are aggregated in order to get the cumulative abnormal return (CAR) for each security. The algebraic expression for this calculation is

$$\widehat{CAR}_{i(\tau1,\tau2)} = \sum_{\tau=\tau1}^{\tau2} \widehat{AR}_{i,\tau}.$$

However, since this study is testing whether or not activist hedge fund entries in general have a significant effect on stock return, the data is further transformed to include an average across all observations over time. This results in the cumulative average abnormal return variable (CAAR), which is computed as

$$\widehat{CAAR}_{(\tau1,\tau2)} = \frac{1}{N}\sum_{i=1}^{N} \widehat{CAR}_{i(\tau1,\tau2)}.$$

In order to test if abnormal return in the event window across securities differs from zero, the following cross-sectional θ-test is conducted:

$$\theta_1 = \frac{\widehat{CAAR}_{(\tau1,\tau2)}}{\sqrt{var\left(\widehat{CAAR}_{(\tau1,\tau2)}\right)}} \sim N(0,1).$$

In case of a rejected test we can conclude that the entry of an activist hedge fund has significant impact on stock return. The test is conducted on the following alpha levels; $\alpha = 0,1$, $\alpha = 0,05$, $\alpha = 0,01$.

3.4. Data Collection

In the absence of a database gathering all ownership announcements within Europe, we constructed our sample by identifying activist funds and events in three steps. Step one consisted of scrutinizing *Activist Investing in Europe* (Grumberg et al. Editions 2014, 2016 & 2017), a paper written by partners at Skadden, Arps, Slate, Meagher & Flom LLP that is published on the Harvard Law School Forum on Corporate Governance and Financial Regulation. Having identified the activists that were most frequently mentioned in these publications, the second step was to search for each activist both in the Bloomberg Terminal and the Factiva database to see whether there was sufficient information regarding previous

holdings and activist campaigns. Hedge funds yielding insufficient information were dropped. The third step was to scan the Bloomberg Terminal for the remaining funds' holdings, both current and previous, to identify distinct events to study. The criterion for inclusion was that the held firm was listed on a European stock exchange. Furthermore, each event that fulfilled the inclusion criterion was investigated to find the date of the first notification of the activists' entrance to the firm. The investigation consisted searching for news primarily on the Bloomberg Terminal and Factiva, but also through regular internet search. The first announcements of the activists' positions come in different forms and include ownership filings, such as disclosure filings at Finansinspektionen for Swedish firms, public statements by fund managers and occasionally even articles in business press such as Bloomberg, Financial Times and Dagens Industri among others. Table 1 shows the different hedge funds included in the study as well as their contribution to the study. For countries included in the study and benchmarks used to estimate normal return, see table 2.

Table 1 Sample summary by hedge fund

Hedge fund	Country of origin	Events	% of sample
Third Point Management	United States	2	2,78
Elliott Capital Advisors	United States	16	22,22
ValueAct Capital	United States	4	5,56
TCI Fund Management	United Kingdom	6	8,33
Cevian Capital	Sweden	20	27,78
Oasis Management Company	Hong Kong	1	1,39
Polygon Global Partners	United Kingdom	3	4,17
Amber Capital	United Kingdom	2	2,78
Knight Vinke Asset Management	Monaco	7	9,72
Teleios Capital	Switzerland	9	12,5
Corvex Management	United States	2	2,78
Total:		72	100,00

Table 2 Sample summary by target firm market where firm market is determined by the exchange on which the target firm is listed.

Country	Benchmark	Firms	% of sample
Netherlands	AEX	3	4,17
France	CAC40	9	12,50
Germany	DAX	13	18,06
Italy	FTSEMIB	4	5,56
Finland	OMXH25	2	2,78
Norway	OSEBX	1	1,39
Spain	IBEX35	1	1,39
Denmark	OMXC20	1	1,39
Sweden	OMXS30	6	8,33
Switzerland	SMI	5	6,94
United Kingdom	FTSE100	27	37,50
Total:		72	100,00

3.5. Excluded events

When gathering the data, events had to be excluded for various reasons. Firstly, if we could not ascertain the date of the first announcement or if no information regarding the intervention could be found through our search methods, the event was dropped. Secondly, if the target firm had recently gone through an IPO and as a result did not have sufficient trading days to estimate its normal performance through the Market model, it was excluded. Furthermore, according to McWilliams and Siegel (1997) event studies are sensitive to outliers, especially when using small samples. Therefore, if the target had recently been subject to a tender offer close to the activist intervention that had a severe impact on the abnormal returns, we decided to drop the observation when testing hypotheses I and II. An example of such a case is that off SLM Solutions, where General Electric had made a tender offer five days prior to the entrance of Elliott Capital Advisors, generating a 39% increase in the stock price and abnormal returns of 45% in the (-10, +10) event window that cannot be ascribed to the entrance of Elliott. For such reasons, the interventions in SLM Solutions, Schuler and Akzo Nobel have been removed from the sample when testing for hypothesis I & II, which is why it is presented as the adjusted sample in the results. However, when testing for hypothesis III, these events are included since we are then interested in the result of following the activist, regardless of the development in the days preceding the intervention.

3.6. Aggressive versus non-aggressive

When sorting the sample into aggressive and non-aggressive interventions, our criterias differ from those of Brav et al. (2008) and Bessler et al. (2015). As this paper is investigating short-term stock development, we decided to look solely on the comments made by the acquirer, if any, on the day of the announcement. Bessler et al. (2015) define a hedge fund as aggressive if the hedge fund is known to resort to open hostility such as media campaigns, open letters to management and threats of lawsuit, whereas this study classifies a hedge fund as aggressive only if they resort to such tactics on the day that their presence is revealed. When using small samples, such as the aggressive sample shown in Table 3, McWilliams & Siegel (1997) recommend using bootstrap methods to make up for the violation of the normality assumption. However, due to time constraint and MacKinlay's (1997) argument that small samples with abnormal returns exceeding 1% still has high power, such bootstrap methods have not been conducted.

Table 3 Summary of events by category

Category	Events	% of sample
Aggressive	22	31,88
Non-aggressive	47	68,12
Total:	69	100,00

In order to give a more comprehensive understanding regarding our definition of aggressive and non-aggressive activism and make it easier to distinguish between the two, the following two examples have been constructed.

3.6.1. Aggressive

On May 2, 2013, hedge fund Knight Vinke notified the stakeholders of UBS via an open letter saying that they "[…] question the merits of keeping the Investment Bank under the same roof as the Wealth Management and Swiss Banking businesses" due to its different risk-profile, arguing that separating them into different entities would unlock value for the shareholders (Knight Vinke, 2013, p.1). Statements such as this, where the hedge fund is confrontational towards the management of the firm, are sorted into the aggressive category in this paper.

3.6.2. Non-aggressive

On February 19, 2018, it was revealed that ValueAct had acquired a 5.4% ownership stake in Merlin Entertainment through a holding notification provided by the London Stock Exchange (2018), thus making them the third largest shareholder in the company. In connection to the filing, no further comments on the acquired stake were given by ValueAct nor Merlin Entertainment other than by a Merlin official who stated that they wish to "[…] maintain a strong relationship with all major shareholders" (Financial Times, 2018, p.1). Events such as this, when no confrontational statements are made towards the management of the firm, are sorted into the non-aggressive category.

4. Results

In this section the results of our statistical tests are presented, and we touch briefly on the implications they provide. The critical discussion and analysis are left for the next chapter. All tests are performed in Stata. The results of our hypotheses are displayed and then the robustness section is presented in which we have conducted cross sectional tests with a variety of event windows as well as a test where target firms are separated by country of origin to see if the reactions differ across markets.

4.1. Hypothesis I

Figure 2 Plotted cumulative average abnormal returns (CAARs) during the (-10, +10) event window for the adjusted, aggressive and non-aggressive samples (69, 22 and 47 observations, respectively). The y-axis represents CAAR in terms of percentages and the x-axis represents days relative to the ownership disclosure.
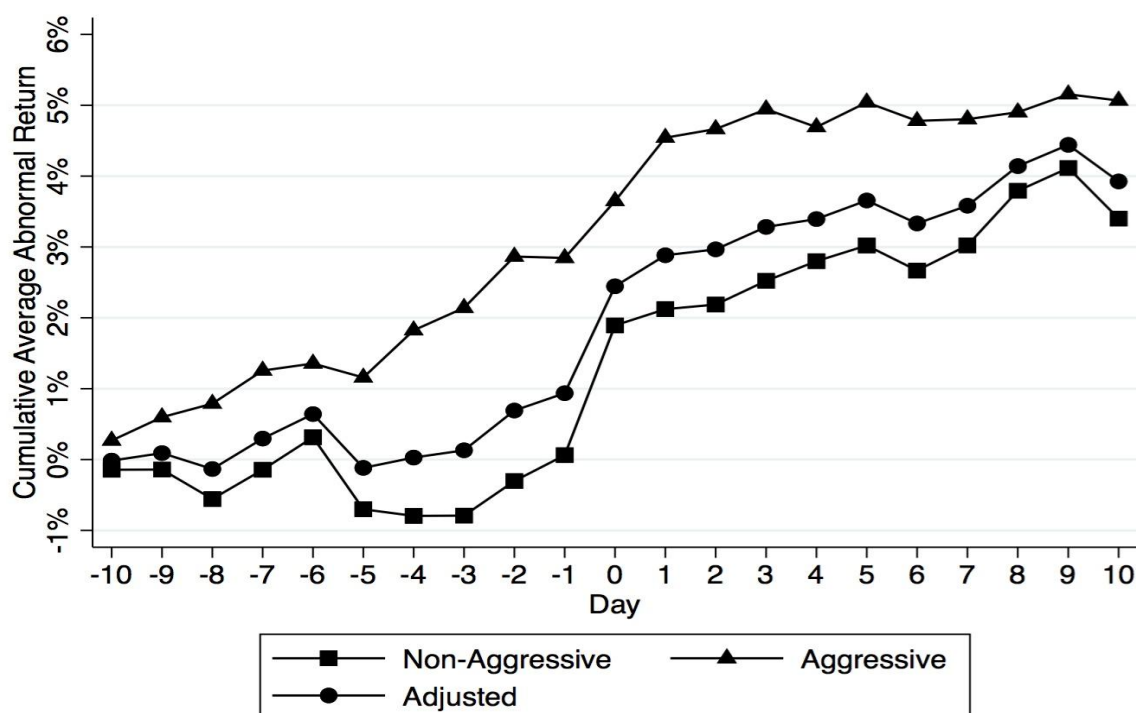
As illustrated in Figure 2, we can see that the CAAR for the adjusted sample is a bit tentative, balancing above and below zero until day -4 when a longer period of positive abnormal returns starts. A major spike in abnormal returns occurs on the day of the announcement. In the days following the announcement, CAAR continues to rise with the exceptions of day 6 and 10. On day 10 we see the first substantial drop after the event which could potentially be a correction of a market overreaction to the activist entry. To complement Figure 2, Table 4 shows the exact CAARs during the (-10, +10) event window where we can see that the activist entries generated

average abnormal returns, significant at the 1% level, of 3,92%. These results confirm Hypothesis I, indicating that the entrance of an activist does in fact generate short term abnormal returns. Interestingly, the abnormal returns are not statistically significant until the day of the event, after which it is immediately significant at the 1% level.

Table 4 Adjusted sample cumulative average abnormal returns (CAARs) during the (-10, +10) event window. The sample consists of 69 observations where the estimation period for normal return is a (-200, -40) day window. The benchmark differs depending on where the target firm is listed, see Table 2 for details. A θ-test is used in order to test if the CAARs significantly differs from zero.

Day	CAAR (%)	θ-value
-10	-0,01	-0,07
-9	0,09%	0,26
-8	-0,13%	-0,34
-7	0,30%	0,73
-6	0,64%	1,57
-5	-0,12%	-0,23
-4	-0,03%	0,04
-3	0,13%	0,18
-2	0,69%	1,09
-1	0,94%	1,44
0	2,45%***	3,36
1	2,88%***	3,83
2	2,97%***	3,75
3	3,28%***	3,83
4	3,39%***	3,78
5	3,66%***	3,90
6	3,33%***	3,61
7	3,58%***	3,68
8	4,14%***	4,13
9	4,44%***	4,18
10	3,92%***	3,66

*/**/*** indicates significance at the 10%/5%/1% level

Table 5 Descriptive statistics of cumulative abnormal returns (CARs) during the (-10, +10) to complement the CAARs given in Table 4. The sample consists of 69 observations where the estimation period for normal return is a (-200, -40) day window. The benchmark differs depending on where the target firm is listed, see Table 2 for details. The spread is computed as the difference between the maximum and minimum CAR on day 10.

Statistics	Adjusted Sample
25th Percentile	0,42%
Median	2,77%
75th Percentile	8,63%
Standard Deviation	8,78%
Spread	49,24%

4.2. Hypothesis II

As illustrated by Figure 2, there appears to be a distinct difference in abnormal returns generated by aggressive and non-aggressive activist events. CAAR remains positive throughout the entire event window for aggressive events, whereas for the non-aggressive events, CAAR is negative until the day prior to the event with the exception of day -6. Abnormal returns seem to stabilize on day 2 and onwards for the aggressive sample, while the abnormal return is trending upwards for the non-aggressive sample. This signals that the market is quicker to digest and adjust to the information in the aggressive interventions. Figure 2's shortcoming of not showing exact CAARs and whether or not the results are significant is overcome by Table 6. The abnormal returns become statistically significant at various levels prior to the event day in the aggressive sample whereas it takes until the event day for the non-aggressive sample to become significant at the 10% level. As shown in Table 6, the aggressive sample CAAR for the full event period (10, +10) is 5,07% and statistically significant at the 1 % level while the non-aggressive sample's CAAR is 3,40% and statistically significant at the 5% level. In line with Hypothesis II, there appears to be a difference in abnormal returns depending on the activist's approach and the market appears to favor the aggressive interventions.

Table 6 Aggressive and non-aggressive cumulative average abnormal returns (CAARs) during the (-10, +10) event window. The aggressive and non-aggressive samples consist of 22 and 47 observations, respectively, where the estimation period for normal return is a (-200, -40) day window. The benchmark differs depending on where the target firm is listed, see Table 2 for details. A θ-test is used in order to test if the CAARs significantly differs from zero.

Day	Aggressive		Non-aggressive	
	CAAR	**θ-value**	**CAAR**	**θ-value**
-10	0,27%	0,63	-0,14%	-0,62
-9	0,60%	0,89	-0,14%	-0,36
-8	0,79%	1,03	-0,56%	-1,25
-7	1,26%*	1,76	-0,14%	-0,29
-6	1,36%*	1,88	0,31%	0,64
-5	1,16%	1,43	-0,70%	-1,11
-4	1,82%*	1,91	-0,80%	-0,97
-3	2,14%**	2,23	-0,79%	-0,85
-2	2,86%***	3,21	-0,30%	-0,38
-1	2,85%**	2,73	0,06%	0,08
0	3,65%***	3,84	1,89%*	1,96
1	4,54%***	4,38	2,12%**	2,17
2	4,66%***	4,40	2,19%**	2,12
3	4,94%***	4,54	2,52%**	2,22
4	4,69%***	4,09	2,80%**	2,34
5	5,04%***	4,24	3,02%**	2,41
6	4,78%***	4,25	2,67%**	2,15
7	4,80%***	4,39	3,02%**	2,28
8	4,90%***	4,19	3,79%***	2,78
9	5,16%***	4,64	4,11%***	2,80
10	5,07%***	4,28	3,40%**	2,32

*/**/*** indicates significance at the 10%/5%/1% level

Table 7. Descriptive statistics of cumulative abnormal returns (CARs) during the (-10, +10) for the aggressive and non-aggressive sample to complement the CAARs given in Table 6. The aggressive and non-aggressive samples consist of 22 and 47 observations, respectively, where the estimation period for normal return is a (-200, -40) day window. The benchmark differs depending on where the target firm is listed, see Table 2 for details. The spread is computed as the difference between the maximum and minimum CAR on day 10.

Statistics	Aggressive	Non-Aggressive
25th Percentile	1,52%	-2,58%
Median	3,21%	2,51%
75th Percentile	8,63%	8,63%
Standard Deviation	5,23%	9,94%
Spread	21,37%	49,24%

4.3. Hypothesis III

Figure 3 displays the cumulative average abnormal return in the (+1, +5) window for the full sample which amounts to 1.19% and is significant at a 1% level (see Table 8). Similar to the findings for the adjusted sample, abnormal returns are present in each of the five days following the announcement. To an investor, these returns will also be subject to compounding but due to the low returns and the short time frame, the effect of compounding is infinitesimal (Table 13, appendix). Hence, in order to keep the result section uniform, CAAR is presented. These findings indicate that an investor taking a long position in an activist target on the day after the announcement and keeps it during the post-revelation trading week can expect a higher return than under normal conditions. It is important to understand that this does not always translate to a positive return, but generally a higher return during times when normal return would be positive and at least a less negative return during times when normal return would be negative.

Figure 3 Plotted cumulative average abnormal returns (CAARs) during the (+1, +5) event window for the full sample consisting of 72 observations. The y-axis represents CAAR in terms of percentages and the x-axis represents days relative to the ownership disclosure.
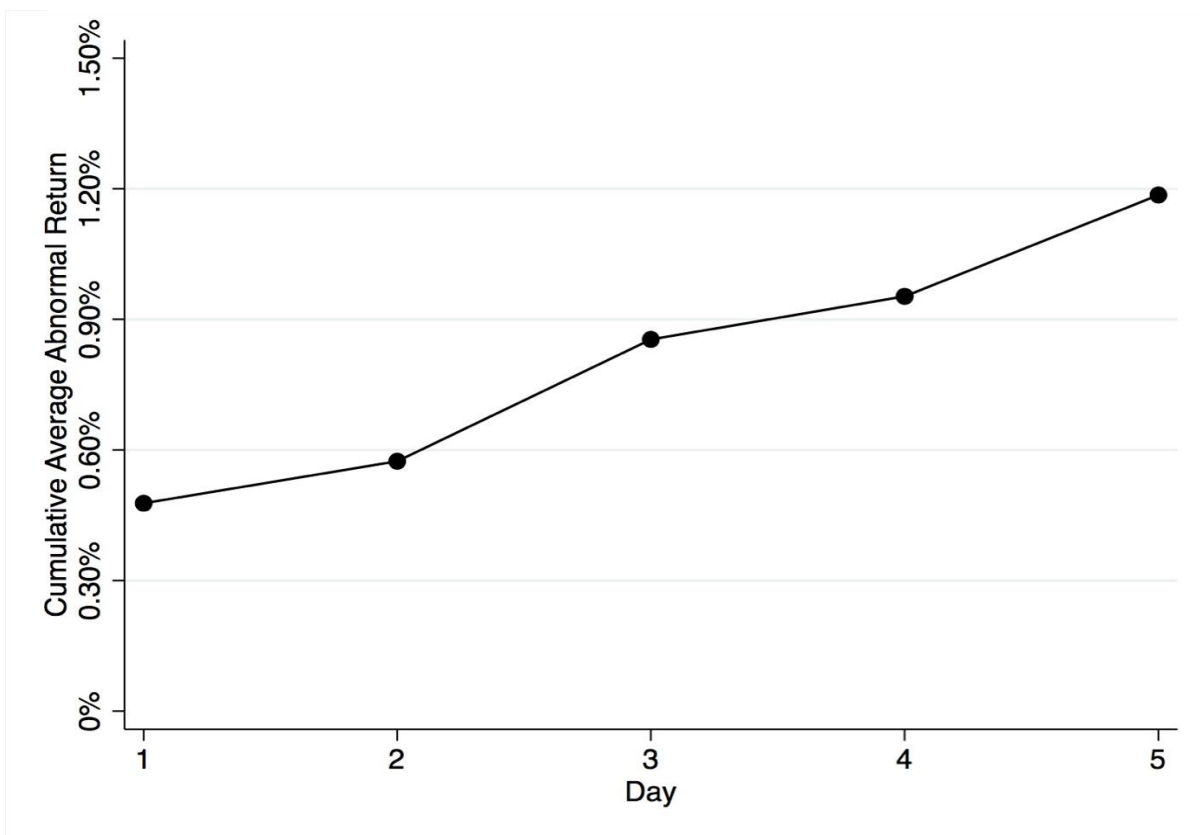
Table 8 Full sample cumulative average abnormal returns (CAARs) during the (+1, +5) event window. The full sample consists of 72 observations where the estimation period for normal return is a (-200, -40) day window. The benchmark differs depending on where the target firm is listed, see Table 2 for details. A θ-test is used in order to test if the CAARs significantly differs from zero.

Day	CAAR (%)	θ-value
1	0,48*	1,93
2	0,57**	2,12
3	0,85**	2,44
4	0,95**	2,58
5	1,19***	3,00

*/**/*** indicates significance at the 10%/5%/1% level

Table 9 Descriptive statistics of cumulative abnormal returns (CARs) during the (+1, +5) for the full sample to complement the CAARs given in Table 8. The full sample consists of 72 observations where the estimation period for normal return is a (-200, -40) day window. The benchmark differs depending on where the target firm is listed, see Table 2 for details. The spread is computed as the difference between the maximum and minimum CAR on day 10.

Statistics	Full sample
25th percentile	-0,47%
Median	0,52%
75th percentile	3,50%
Standard deviation	3,24%
Spread	16,49%

4.4. Robustness

In order to test the accuracy of our findings, two different types of robustness tests have been used. Firstly, 5 additional cross-sectional tests with different event windows are conducted. The longer windows serve as tests to see if the abnormal returns are due to a temporary price overreaction and not the result of fundamental value changes in the firms, and the shorter windows test if the results stay significant when there is less risk of confounding events affecting the abnormal returns. Secondly, in light of the discussion regarding Europe not being a unified market, cross-sectional θ-tests with a (-10, +10) window are conducted on each of the 11 markets represented in the sample to see if the results differ across markets. For three of the markets, t-tests are conducted instead of cross-sectional tests since they only contain a single event.

Table 10 Cumulative average abnormal returns (CAARs) during the several different event windows for the adjusted, aggressive and non-aggressive sample. The adjusted, aggressive and non-aggressive samples consist of 69, 22 and 47 observations, respectively, where the estimation period for normal return is a (-200, -40) day window. The benchmark differs depending on where the target firm is listed, see Table 2 for details. A θ-test is used in order to test if the CAARs significantly differs from zero.

Event window	CAAR (%)		
	Adjusted sample	**Aggressive**	**Non-Aggressive**
(-30, +30)	3,11%*	5,78%**	1,89%
(-20, +20)	4,06%**	5,89%***	3,23%
(-5, +5)	3,01%***	3,69%***	2,70%**
(-3, +3)	3,25%***	3,12%***	3,32%***
(-1, +1)	2,19%***	1,68%***	2,43%***

 */**/*** indicates statistical significance at the 10%/5%/1% level

Table 10, displaying different event windows, indicates that the length of the event window has effect on both the significance and the magnitude of the results. For the adjusted sample, expanding the event window leads to a higher CAAR, yet lower (5%) significance level in the (-20, +20) window and a lower CAAR with even lower (10%) significance in the (-30, +30) window. In the shortened event window, CAAR is lower than in the original (-10, +10) case yet significant at a 1% level.

There appears to be a distinct difference between the aggressive and non-aggressive sample both in terms of CAAR and significance of the results. In the (-30, +30) window, the aggressive sample generates a substantially higher CAAR (5,78%), which is significant on a 5% level, as compared to the insignificant non-aggressive sample CAAR of 1,89%. Furthermore, in the (-1, +1) and (-3, +3) event windows, non-aggressive interventions generate higher CAARs than its aggressive counterparts, all of which are significant at a 1% level.

Table 11 Cumulative average abnormal returns (CAARs) during the (-10, +10) event window for the different markets where the target firms are listed. The estimation period for normal return is a (-200, -40) day window. For a detailed description of the indices used for respective market, see Table 2. A θ-test is used in order to test if the CAARs significantly differs from zero for the markets where the number of firms exceeds one. For the remaining markets, namely Norway, Spain and Denmark, CAR is displayed, and its significance is tested through a t-test. The computation for the t-statistic is found in the appendix.

Country	Number of firms	CAAR (%)	θ-value	
Netherlands	2	−0,17%	−0,10	
France	9	0,25%	0,06	
Germany	11	3,16%*	2,06	
Italy	4	9,37%*	2,52	
Finland	2	2,08%	0,43	
Norway	*1*	*13,40%*	*1,04*	*T-test*
Spain	*1*	*25,40%*	*0,97*	*T-test*
Denmark	*1*	*−2,58%*	*−0,26*	*T-test*
Sweden	6	5,05%*	2,41	
Switzerland	5	3,61%	1,21	
United Kingdom	27	3,82%*	2,00	
Total:	69			

*/**/*** indicates statistical significance at the 10%/5%/1% level.

Table 11 displays CAAR and significance for interventions in each separate market within the sample, indicating that the abnormal returns differ depending on where the target firm is listed. Significant positive returns at the 10% level are found on the Swedish, Italian, German and United Kingdom markets. Notably, only the Dutch and Danish markets generate negative, yet insignificant, CAARs.

5. Analysis

The purpose of this section is to critically evaluate the results presented in Section 4 in light of the theoretical framework established in Section 2 as well as to discuss possible explanations as to what could be driving the abnormal returns.

It appears that abnormal returns as an effect of activists taking interest in a firm is not a phenomenon restricted to the US market but that it also exists on the European market. The market reaction to the revelations suggests that the market values the entrance of an activist to an average of 3,92% of the target firm's market capitalization. This hints that the market believes that the European firms targeted by activists are not run as efficiently as they could be

and that it has positive expectations on the activists' interventions. In line with our suspicion, the average abnormal return in Europe is lower than what Brav et al. (2008), Clifford (2008) and Boyson & Mooradian (2011) found in the US. However, since firm characteristics were not researched, we cannot guarantee that our sample is representative for the typical ownership structures mentioned in Faccio & Lang (2002). This means that the lower abnormal returns compared to the US does not necessarily stem from firms having concentrated ownership. The fact that the UK, which has similar ownership structures to the US (Faccio & Lang, 2002; Porta et al., 1999), also show substantially lower abnormal returns than the US further suggests that ownership concentration is not the main reason to the lower abnormal returns. The large variance in abnormal returns across countries indicates that it is not necessarily as simple as to interpret the results of our study as representative for the entire European market.

However, the fact that the market is welcoming to activists and value their entrance positively suggests that activism is a good tool to improve corporate governance. Thus, European regulators should work to facilitate a regulatory environment that supports the growth of activism. Seretakis (2014) argues that the current ownership disclosure regulation impedes activism and deprives shareholders as well as society from the economic benefits that stem from it. Possibly, an investigation on the current regulation regarding ownership disclosures could be a first step towards a more beneficial environment for activists which could also benefit the economy as a whole.

As for hypothesis II, our results are similar to those found by Brav et al. (2008), Clifford (2008) and Bessler et al. (2015), where there is a distinct difference in abnormal returns generated by the different intervention types. This shows that interventions where the activist is openly critical to the management, shareholders or bidders on the announcement day generate higher abnormal returns than interventions where the entrance is subtler. We hypothesize that there are three different reasons for these differences. Firstly, the aggressive approach is usually accompanied by news articles regarding the activist's interest and intended changes in the firm which could potentially lead to attention-driven purchases by investors (Barber and Odean, 2008). Secondly, it could be due to market beliefs that concerns being addressed publicly run a bigger chance of being considered and thus motivate a higher valuation. Thirdly, it could be that it is more difficult to value the changes that an activist wants to implement in the company as well as the probability of successfully implementing them when they are not clearly stated.

If both types of activist entries had generated positive abnormal returns in the days prior to the event, one could have argued in line with Ordóñez-Calafi & Bernhardt (2017) that it is driven by an increase in demand as the activist wants to acquire as many stocks as possible prior to the announcement of its presence. However, as can be seen in Table 6, this is not the case which means that there must be an alternative, or rather a complementing, explanation to the different developments prior to the event day. Since the abnormal returns generated on the event day are substantially higher for the non-aggressive sample than for the aggressive one, it suggests that the market somewhat anticipates the aggressive interventions. This, in combination with the run-up in abnormal returns prior to the event and the lower impact of the aggressive interventions in the shorter time windows, suggests that the activist may have leaked information to other investors, possibly in order to increase the odds of a successful campaign by gaining voting power in case there will be a proxy contest. This is in line with Brav et al.'s (2008) suspicion that hedge funds commonly resort to "tipping" (leakage). However, an alternative explanation might be that the target firm management or another stakeholder, who may have incentives to keep the current strategy and management, leaks the information in order to make it more expensive for the activist to gain influence.

Furthermore, the fact that abnormal returns stagnate for the aggressive sample from day 1 and onwards, whereas the trend is more positive for the non-aggressive sample, has two possible explanations other than that leakage has already allowed the market to fully incorporate the new information in the stock prices of the aggressive sample. Either the market is having difficulties valuing the entrances by activists whose intents are unclear, or confounding events that were not accounted for are driving the abnormal returns. After all, the sample consists of hedge funds known to demand change in the firms they invest in, which makes it plausible that confounding events related to the entry could occur after the interventions.

The findings shown in Table 8 indicate that the market does not digest new information instantaneously as the efficient market hypothesis suggests, and that an uninformed investor can achieve abnormal returns by trading in the post-revelation week. However, this strategy fails to catch the lion's share since most of the abnormal returns are generated up until the event day. Thus, in the absence of fees for assets under management and performance, as well as if a hedge fund charges fairly low fees, it would most likely be more profitable for an investor to be a part of the hedge fund. Be that as it may, it is important to keep in mind that hedge funds are not widely available to the public (Partnoy & Thomas, 2006) which means that following

their investments could be a viable alternative for the average uninformed investor. Nonetheless, there are some obstacles that an investor would have to consider before applying a pan-European follow strategy. Firstly, one would need to secure access to the market on which the security is traded. Secondly, transaction costs such as commission will incur. As we are seeing abnormal returns just above 1%, these might be completely eradicated by commission. Lastly, if the target firm is traded in a foreign currency, the investor is exposed to currency exchange rate risk which will also impact the return. Taking this into consideration, achieving net abnormal returns is all but guaranteed in the short run, especially if the target is not listed in the investors' home market.

The implications from the robustness tests with different lengths of event windows show that our findings are consistent with longer event windows for the adjusted as well as the aggressive sample, but not for the non-aggressive sample where the results are insignificant. However, as confounding events have not been accounted for in the longer event windows, we cannot safely say that the additional abnormal return does not stem from sources other than the activist entries. The low abnormal return of the aggressive sample, relative to the non-aggressive in the shortest event window (-1, +1) further indicate that the market was not caught entirely off guard by the aggressive entrances.

6. Conclusion

This thesis contributes to the growing body of research on activism conducted by hedge funds by investigating how the market reacts to European hedge fund activism, as it has been increasing despite the suboptimal market conditions for it. When measuring abnormal returns in proximity to ownership disclosures, we have found positive and statistically significant abnormal returns in our adjusted sample (3,92%) as well as in the two sub-groups of the sample, aggressive (5,07%) and non-aggressive (3,40%). This indicates that the market believes that target firms will see improvements as a result of the activist interventions. Thus, we suggest that regulators should provide a setting which encourages activism.

Furthermore, we have found that abnormal returns are present in each of the five trading days following an activist intervention, creating a possibility for an uninformed investor to achieve abnormal returns in the post-revelation week (1,19%) by following the activists. However, it is plausible that market imperfections might offset the relatively low abnormal returns.

Although our findings are robust to longer event windows at large, there are some shortcomings with the way the research was conducted. The fact that we aggregated our observations originating from 11 different markets into one large pool of observations despite the discussion of Europe not being a single market is troublesome. Evidently, the reactions seem to differ between markets. Furthermore, according to MacKinlay (1997), a broad index to proxy the market is preferable in event studies. However, this thesis has utilized fairly narrow indices that usually includes the largest and/or most actively traded stocks on respective markets which is not necessarily as representative for the market as a broad index. Hence, a larger selection of observations using broader indices in the different markets that Europe consists of could be researched in order to answer if and why reactions actually differ between markets.

Ordóñez-Calafi & Bernhardt's (2017) claim that activists typically target firms with dispersed ownership, yet the typical European firms have concentrated ownership (Faccio & Lang, 2002). McWilliams and Siegel (1997) propose that the researcher should regress the abnormal returns on explanatory variables in line with a given theory in order to see what truly drives the results. In this case, using ownership concentration as an explanatory variable could provide more depth to the study. Perhaps the targeted European firms were actually subjects to dispersed ownership since making an impact in firms controlled by a large shareholder could prove too difficult, or maybe the activists have found a way to circumvent this issue. Is there a specific type of ownership structure that attracts European activists, and could there be a difference in activist success rate in firms with dispersed versus concentrated ownership?

The data collection method potentially causes a selection bias in the sample, as interventions that received more publicity are more likely to be noted and thus included in the sample. The problem of gathering a more comprehensive sample stems from the restricted accessibility to databases on European activism. Moreover, since the sample consisted of hedge funds that are known activists, it can be expected that they will eventually attempt to make changes in the firms they invest in, making our definitions of aggressive and non-aggressive quite arbitrary. In fact, a few of the hedge funds included in the sample are known to have an aggressive strategy but some of their interventions were categorized as non-aggressive because they did not make criticizing comments in connection to the ownership disclosure. Thus, an alternative way of researching the differences in abnormal returns would be to divide the sample into the

two groups based on what strategy the hedge fund usually adopts, similar to Bessler et al. (2015).

By studying hedge fund activism and the market reaction to it, we have realized that we have merely scratched the surface of the subject. As discussed in this section, the findings of this study give rise to a range of new questions that academics may investigate further. Nevertheless, the fact that abnormal returns arise in European listed firms upon ownership disclosures by hedge fund activists suggests that the market has positive expectations towards the activism agenda and believes that it contributes to more efficient corporate governance.

7. References

Admati, A. and Pfleiderer, P. (2009), The 'Wall Street Walk' and Shareholder Activism: Exit as a Form of Voice, Review of Financial Studies, Stanford Graduate School of Business Research Paper No. 1918(R2); Rock Center for Corporate Governance Working Paper No. 22

Barber, B.M. & Odean, T., 2008. All That Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors. The Review of Financial Studies, 21(2), pp.785–818.

Berle, A. and Means, G. (1932), The Modern Corporation and Private Property, New York: Harcourt, Brace & World

Bessler, W., Drobetz, W & Holler, J, 2015. The returns to hedge fund activism in Germany. European financial management: the journal of the European Financial Management Association, 21(1), pp.106–147.

Black, Bernard (1990), Shareholder passivity reexamined, Michigan Law Review 89, pp.520-608

Boyson, N. & Mooradian, M., 2011. Corporate governance and hedge fund activism. Review of Derivatives Research, 14(2), pp.169–204.

Brav, A., Jiang, W., Partnoy, F., Thomas, R., 2008. Hedge Fund Activism, Corporate Governance, and Firm Performance. Journal of Finance, 63(4), pp.1729–1775.

Brown, S., Goetzmann, W. (2001), Hedge Funds with Style, Yale International Center For Finance, Working Paper No. 00-29

Brown & Warner, 1980. Measuring security price performance. Journal of Financial Economics, 8(3), pp.205–258.

Cheffins, B. & Armour, J, 2011. The past, present, and future of shareholder activism by hedge funds. *The Journal of Corporation Law*, 37(2), p.51.

Clifford, C.P., 2008. Value creation or destruction? Hedge funds as shareholder activists. Journal of Corporate Finance, 14(4), pp.323–33

Cremers, M., Masconale, S. & Sepe, S.M., 2017. Activist hedge funds and the corporation. Washington University Law Review, 94(2)

Cubbin, J. & Leech, D., 1983. The effect of shareholding dispersion on the degree of control in British companies: theory and measurement. Economic Journal, 93(370), pp.351–369.

Davis and Steil, (2001). *Institutional Investors.* The MIT Press. p.1.

European Parliament Council Directives:
- DIRECTIVE 2001/34/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, on the admission of securities to official stock exchange listing and on information to be published on those securities. 2001. Article 85.1 and 89.
- DIRECTIVE 2004/109/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending Directive 2001/34/EC. 2004. Article 9.
- DIRECTIVE 2013/50/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive 2004/109/EC of the European Parliament and of the Council on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market, Directive 2003/71/EC of the European Parliament and of the Council on the prospectus to be published when securities are offered to the public or admitted to trading and Commission Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC. 2013. Article 8.

Faccio & Lang, 2002. The ultimate ownership of Western European corporations. Journal of Financial Economics, 65(3), pp.365–395.

Fama, E. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. Journal of Finance, 25(2), 383–417.

Fama, E., Jensen, M. (1983), Separation of Ownership and Control, Journal of Law and Economics, Vol. 26, June

Financial Times, (2018). US activist ValueAct takes stake in Merlin Entertainments, Financial Times, *available at* https://www.ft.com/content/1fd64b50-156f-11e8-9376-4a6390addb44 (last visited April 24, 2018)

Gantchev, N. & Jotikasthira, C., 2017. Institutional Trading and Hedge Fund Activism. *Management Science*, pp.Management Science, 02/23/2017.

Grumberg, A., Hopkins, S., Corte, L., (2018). Activism in Europe, editions 2017, 2016 & 2014. Harvard Law School Forum on Corporate Governance and Financial Regulation.

Ivanova, M.R., 2017. Institutional investors as stewards of the corporation: Exploring the challenges to the monitoring hypothesis. Business Ethics: A European Review, 26(2), pp.175–188.

Knight Vinke (2013). Open letter to UBS, *available at* http://www.knightvinke.com/wp-content/uploads/2013/05/knight-vinke-open-letter-to-ubs.pdf (last visited April 24, 2018)

Larcker, D. & Tayan, B. (2011) *Corporate Governance Matters: A Closer Look at Organizational Choices and Their Consequences*. Pearson Education Inc.

London Stock Exchange, (2018). Notification of major holding , London Stock Exchange, available at http://www.londonstockexchange.com/exchange/news/market-news/market-news-detail/MERL/13537867.html (last visited April 24, 2018)

Love, I., 2011. Corporate Governance and Performance around the World: What We Know and What We Don't. *The World Bank Research Observer*, 26(1), pp.42–70.

MacKinlay, A.C., 1997. Event studies in economics and finance. Journal of economic literature, 35(1), pp.13–39.

McWilliams, A. & Siegel, D., 1997. Event Studies in Management Research: Theoretical and Empirical Issues. Academy of Management Journal, 40(3), pp.626–657.

Milne, R. (2017). Christer Gardell, Cevian Capital founder, on clearing out boards, *Financial Times,* available at https://www.ft.com/content/1fdd0a6c-92ed-11e7-a9e6-11d2f0ebb7f0 (last visited February 19, 2018)

Ordóñez-Calafí & Bernhardt. 2017, September 28. Blockholder Disclosure Thresholds and Hedge Fund Activism. Job Market Paper.

Porta, R., Lopez-De-Silanes, F. & Shleifer, A., 1999. Corporate Ownership Around the World. Journal of Finance, 54(2), pp.471–517.

Renders, A. & Gaeremynck, A., 2012. Corporate Governance, Principal-Principal Agency Conflicts, and Firm Value in European Listed Companies. Corporate Governance: An International Review, 20(2), pp.125–143.

Seretakis, A. 2014. HEDGE FUND ACTIVISM COMING TO EUROPE: LESSONS FROM THE AMERICAN EXPERIENCE. Brooklyn Journal of Corporate, Financial & Commercial Law, 8, pp.438–557.

Smith M. (1996), Shareholder Activism by Institutional Investors: Evidence from CalPERS, The Journal of Finance, Vol. 51, No. 1., pp. 227-252.

Stulz, R.M., 2007. Hedge Funds: Past, Present, and Future. Journal of Economic Perspectives, 21(2), pp.175–194.

Thomsen, S. and Conyon, M. 2012. *Corporate Governance: Mechanisms and Systems,* McGraw Hill.

8. Appendix

Table 12 *List of firms included in study*

Company	Index	Event date	Type	Part of adjusted sample
ABB	SMI	2015-06-04	Non-Aggressive	Yes
ADVA Optical	DAX	2017-08-07	Non-Aggressive	Yes
Airbus	CAC40	2013-08-02	Aggressive	Yes
Akzo Nobel	AEX	2017-03-17	Non-Aggressive	No
Alliance Trust	FTSE100	2014-02-26	Non-Aggressive	Yes
Ansaldo STS	FTSEMIB	2016-02-01	Aggressive	Yes
Ashcourt Rowan	FTSE100	2013-12-20	Non-Aggressive	Yes
Atlantia	FTSEMIB	2017-02-14	Non-Aggressive	Yes
Autoliv	OMXS30	2018-03-02	Non-Aggressive	Yes
Axis	OMXS30	2016-03-29	Aggressive	Yes
Bilfinger	DAX	2011-10-31	Non-Aggressive	Yes
British Empire Trust	FTSE100	2016-06-30	Non-Aggressive	Yes
Cambian Group	FTSE100	2017-04-04	Non-Aggressive	Yes
Carrefour	CAC40	2011-03-09	Non-Aggressive	Yes
Celesio AG (McKesson)	DAX	2013-11-06	Aggressive	Yes
Clariant	CAC40	2017-07-04	Aggressive	Yes
Club Med	CAC40	2014-06-02	Non-Aggressive	Yes
Danone	CAC40	2017-08-14	Non-Aggressive	Yes
Danske Bank	OMXC20	2011-11-22	Non-Aggressive	Yes
Darty	FTSE100	2010-06-28	Non-Aggressive	Yes
Dufry	SMI	2017-12-20	Non-Aggressive	Yes
E.ON	DAX	2016-02-17	Aggressive	Yes
Eni	FTSEMIB	2009-09-02	Aggressive	Yes
Ericsson	OMXS30	2017-05-30	Aggressive	Yes
Fenner PLC	FTSE100	2016-04-29	Non-Aggressive	Yes
Ferguson	FTSE100	2010-06-23	Non-Aggressive	Yes
G4S	FTSE100	2013-08-12	Non-Aggressive	Yes
GEA Group	DAX	2017-10-11	Aggressive	Yes
Groupe Eurotunnel	CAC40	2017-08-18	Non-Aggressive	Yes
Hogg Robinson	FTSE100	2016-04-14	Non-Aggressive	Yes
HSBC	FTSE100	2007-09-04	Aggressive	Yes
Intrum Justitia	OMXS30	2004-12-01	Non-Aggressive	Yes
Invensys	FTSE100	2013-04-29	Non-Aggressive	Yes
Kabel Deutschland	DAX	2013-08-16	Non-Aggressive	Yes
KCOM	FTSE100	2017-12-06	Non-Aggressive	Yes
Kongsberg	OSEBX	2015-12-08	Aggressive	Yes
London Stock Exchange	FTSE100	2016-02-23	Non-Aggressive	Yes
McBride	FTSE100	2016-04-05	Non-Aggressive	Yes

Merlin Entertainment	FTSE100	2018-02-19	Non-Aggressive	Yes
Metso	HEX25	2005-05-24	Aggressive	Yes
Muenchener	DAX	2007-12-07	Non-Aggressive	Yes
Nestlé	SMI	2017-06-27	Aggressive	Yes
Nexans	CAC40	2013-10-22	Non-Aggressive	Yes
Old Mutual	FTSE100	2009-05-29	Non-Aggressive	Yes
Panalpina Welttransport	SMI	2010-01-27	Non-Aggressive	Yes
Pendragon	FTSE100	2017-10-27	Non-Aggressive	Yes
Premier Foods	FTSE100	2016-07-06	Non-Aggressive	Yes
Prezzo	FTSE100	2014-11-07	Non-Aggressive	Yes
Promotora	IBEX	2014-11-14	Non-Aggressive	Yes
Rexel SA	CAC40	2016-02-24	Non-Aggressive	Yes
Rolls Royce	FTSE100	2015-07-31	Non-Aggressive	Yes
Royal DSM	AEX	2014-07-18	Aggressive	Yes
RSA Insurance	FTSE100	2014-03-31	Non-Aggressive	Yes
Safran	CAC40	2012-10-09	Aggressive	Yes
Schuler AG	DAX	2012-06-12	Non-Aggressive	No
Shell	AEX	2004-02-09	Aggressive	Yes
SKY PLC	FTSE100	2018-01-29	Non-Aggressive	Yes
SLM Solutions	DAX	2016-09-13	Non-Aggressive	No
Smith & Nephew	FTSE100	2017-10-10	Aggressive	Yes
Smiths group	FTSE100	2015-08-03	Non-Aggressive	Yes
Spirent	FTSE100	2018-01-16	Non-Aggressive	Yes
Stada Arzneimittel	DAX	2017-07-06	Aggressive	Yes
Telecom Italia	FTSEMIB	2018-03-05	Aggressive	Yes
Telia	OMXS30	2006-08-30	Non-Aggressive	Yes
Terex	DAX	2010-05-21	Non-Aggressive	Yes
Thyssenkrupp AG	DAX	2013-09-25	Non-Aggressive	Yes
Tieto	HEX25	2009-11-12	Non-Aggressive	Yes
UBS	SMI	2013-05-02	Aggressive	Yes
Vesuvius	FTSE100	2011-11-14	Non-Aggressive	Yes
Volkswagen	DAX	2016-05-06	Aggressive	Yes
Volvo	OMXS30	2006-09-06	Aggressive	Yes
WH Ireland Group	FTSE100	2014-02-12	Non-Aggressive	Yes

Computation and values for compounded returns referred to in the results section on hypothesis III

$$\prod_{\tau=1}^{5} (1 + \widehat{CAAR})$$

Table 13 CAARs and Compounded Abnormal Returns in the (+1, +5) window

Day	CAAR (%)	θ-value	Compounded Return
1	0,48*	1,93	0,48
2	0,57**	2,12	0,577
3	0,85**	2,44	0,859
4	0,95**	2,58	0,959
5	1,19***	3	1,192

*/**/*** indicates statistical significance at the 10%/5%/1% level

Computation of the t-statistic used in Table 11

$$T_1 = \frac{\widehat{CAR}_{(\tau1,\tau2)}}{\sqrt{var(\widehat{CAR}_{(\tau1,\tau2)})}}$$