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Enseignement supérieur de type long de niveau universitaire

Hedge fund activism in Europe and its impact on target firms: An empirical study

Mémoire présenté par :

Carolina RAMOS POTES

Pour l'obtention du diplôme de :

Master's degree in Management Science

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I would like to express my sincere thanks to my Promoter, Anh Nguyen, for his time, valuable insights and guidance throughout this process.

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GENERAL INTRODUCTION

The hedge fund industry has been rapidly growing in the past decade. According to data from BarclayHedge (2022), the assets under management (AUM) for the hedge fund industry went from $1408 USD billions in 2011 to $5136 USD billions in the 1st Quarter of 2022.

Moreover, hedge funds have been making it to the headlines in the past few years, being the recent events with GameStop perhaps one of the most well-known for the general public. It is clear that hedge funds, today more than ever, play an important role not only in the financial markets but also in the corporate world, and the phenomenon known as hedge fund activism is an evident example.

Shareholder activism refers to the activities carried out by one or more shareholders of a company with the aim of making some changes in the firm (Cloyd, 2015). Hedge fund activism is then a form of shareholder activism carried out by hedge funds. According to Cloyd (2015), it corresponds to a more aggressive form of activism that seeks substantial changes to the firm's strategy, board or financial structure. Furthermore, hedge funds have access to more complex investment strategies and are subject to less regulations, which allows them to be better equipped than other institutional investors to engage in activist interventions (Brav *et al*, 2008).

In general, the evidence suggests that hedge fund activism creates value for the shareholders in the short term, in the form of abnormal stock returns. However, the evidence is mixed for the case of the improvements in the firm performance after being targeted by an activist hedge fund, representing an ongoing debate. Moreover, despite the growing popularity of hedge fund activism in Europe, this phenomenon has not been extensively documented, with the majority of the studies focusing on the abnormal stock returns or including outdated samples.

Therefore, we decided to focus on the phenomenon of hedge fund activism in Europe and more precisely, its impact on the target firms. We start by analyzing a set of descriptive statistics, aiming to have a better understanding of the nature of activist events in Europe. In order to measure the impact of hedge fund activism on target firms, we focus our attention on two dimensions. First, following the literature, we intend to confirm the positive market reaction (in the form of abnormal stock returns) to hedge fund activism. Second, we aim to analyze whether this initial positive reaction widely documented by the literature actually translates into improvements in the target firm's performance. By performing these analyses, this thesis aims to provide a more accurate and recent picture of the phenomenon of hedge fund activism in Europe.

This thesis is divided into two parts. The first part focuses on the theoretical concepts necessary to the further understanding of hedge fund activism and its impact on European target firms. We start by reviewing some key notions regarding market efficiency and portfolio management, which provide us with the appropriate financial background. Then, we explain the concepts of hedge funds and hedge fund activism, presenting some case studies. Finally, we discuss the findings of previous academic work, through the literature review. In this case, the focus is on the concept of hedge fund activism. More precisely, we explore the empirical evidence about this phenomenon in the U.S. and Europe, concentrating on the findings regarding abnormal stock returns, characteristics of the target firms and changes in the target firm's performance. This analysis will provide us with a suitable framework for the empirical study.

The second part is dedicated to the practical part. By conducting an empirical study, we aim to obtain a better understanding of the phenomenon of hedge fund activism in Europe and more specifically, analyze its impact on target firms. First, we describe the methodology used. Then, we explain the data collection process. Finally, we present the results of the study and the corresponding analysis.

The methodology used in this thesis is divided in two. First, we conduct an event study in order to obtain the abnormal stock returns surrounding the event date. Then, we use ordinary least squares (OLS) regressions to analyze the changes in the firm performance after being targeted by an activist hedge fund.

PART I: THEORETICAL PART

1. INTRODUCTION TO CONCEPTS

1.1. Efficient market hypothesis

The Efficient Market Hypothesis (EMH) is perhaps one of the most well-known hypotheses in finance. It was initially proposed by Eugene Fama in 1970 and suggests that stock prices fully incorporate and reflect all available information, and therefore, the price is the true representation of the stock value. This implies that the market cannot be outperformed or "beaten" by any investor because all available information is already included in the stock prices (Singh and Yadav, 2021).

There are some market conditions that are consistent with this concept of efficiency. Fama (1970) identifies the following:

- No transaction costs when trading securities
- Information is freely available to all market participants
- All market participants agree on the implications of the current information for the current prices of each security

In practice however, finding markets that meet all of these conditions is not an easy task. Fortunately, these conditions are sufficient but not necessary to have efficient markets. This means for example, that it is not necessary that all market participants have access to the available information but a "sufficient number of investors". Similarly, large transaction costs that might affect the flow of information do not imply themselves that the market is inefficient, as long as the investors take into account all available information when the transactions take place. Furthermore, the disagreement among investors on the implications of the available information does not represent market inefficiency by itself, as long as there are no investors who are constantly making better evaluations of the available information than the one already incorporated in the market prices. It is important to note that even though the information not always being available for all market participants, the existence of large transaction costs and the disagreement among investors regarding the available information do not necessarily imply market inefficiency, they do represent potential sources of it (Fama, 1970).

There are three different degrees of market efficiency, as discussed by Singh and Yadav (2021):

- The ***weak form*** of market efficiency implies that the current security prices reflect only the historic prices. In other words, the current prices incorporate past information.

- The ***semi-strong form*** indicates that all publicly available information (such as corporate earnings or share splits) is incorporated in the securities' current prices. The semi-strong form of the hypothesis implies that the market will quickly adapt to the recent available information and incorporate it into the stock prices, leaving the investor with small chances of performing arbitrage, as the stock prices will quickly reflect the new information.

- The ***strong form*** suggests that the stock prices reflect both the publicly available and the private information, such as insider information.

1.2. Portfolio management

Portfolio management alludes to "the art of creating an efficient portfolio with minimum risk and maximum returns." (Singh and Yadav, 2021, p. 297). Investment managers apply different methods or portfolio management strategies in order to maximize the returns of a portfolio at the lowest possible risk. These strategies can be classified in two main groups: active management and passive management. (Singh and Yadav, 2021). Hence, the following pages will focus on the key notions of the so-called active vs passive debate.

1.2.1. Active management

This strategy implies that investment managers use their skills and perform their own assessment in order to select the most attractive investments. Overall, the goal with active strategies is to "beat the market" or outperform specific benchmarks such as the S&P 500 or the Russell 3000 in the case of the U.S. (Hunt, 2022). Because it is necessary to pay for analysts and portfolio managers who will carry out the corresponding research, active strategies are usually more expensive and therefore, many active managers do not succeed in beating the market after taking into account all the costs. It is important to note that active managers charge higher fees because of their ability to generate *alpha.* That is, the portion of return and risk generated by an active manager that does not depend on the market. In the absence of alpha, the investors are better off with less expensive investment vehicles such as exchange traded funds (ETFs), index funds or derivatives. In other words, without alpha investors are better off obtaining market exposure through passive strategies (Brown, n.d.; Hunt, 2022; Merker and Peck, 2019).

1.2.2. Passive management

This strategy relies on the idea that markets are efficient (cf. supra p.3) and therefore, the investor cannot "beat the market" (Singh and Yadav, 2021). Consequently, managers who employ passive strategies focus on matching the performance of certain market indexes, instead of trying to outperform them. Unlike active strategies, the employment of passive strategies is less expensive since the investment managers do not have to undergo the process of assessing all the investments to look for the most attractive. Thus, because of its lower fees, passive strategies have often outperformed active ones (Hunt, 2022).

Deciding which strategy to use is not always crystal clear. One strategy might be more adequate than the other depending on different factors such as the market conditions. Usually, active managers might outperform when the market is volatile or in weakening economic conditions. On the other hand, passive strategies might be a better option when the securities' valuations are more uniform or when particular securities within the market are moving in a similar way (Hunt, 2022). It is also important to consider the market where the manager is planning to invest. Often, the active vs passive debate has only examined the large cap U.S. equity market, but not all markets across the globe are the same in terms of efficiency. Since the large cap U.S. market includes the most researched and visible companies worldwide, it is likely that this market is more efficient than other less well-known markets (Nasdaq Dorsey Wright, 2020). As a consequence, consistently succeeding with active strategies has historically proven more difficult in this type of environments and therefore, it would make more sense to rely a bit more on passive strategies in the case of the large cap U.S. market and make more use of active strategies where they have historically proven more effective, like the case of emerging markets or smaller cap U.S. equities. It is important to note that even if the investment manager is mixing both passive and active strategies, the market conditions are constantly changing and hence, it is necessary to be well informed about the specific market circumstances in order to be able to design an accurate strategy mix (Hunt, 2022).

Figure 1 illustrates an example of the performance of active and passive strategies in the U.K. for the case of a *bear market*. The blue line represents the performance[1] of an equity fund employing an active strategy, the red line shows the performance of a passive equity fund and the black line displays the performance of the FTSE All Share index.

A *bear market* is when stock prices on considerable market indexes fall by at least 20% from a recent high. Bear markets are usually a result of a slow-growing economy with rising unemployment rates and therefore, investors often feel pessimistic about the market conditions during this period (Tretina and Curry, 2022). There are some things worth pointing out regarding the figure below. First, it is important to note that as explained above, passive strategies try to replicate the performance of a market index, which is clear in this case where the fund employing a passive strategy is trying to match the performance of the FTSE All Share index. Secondly, it is evident that the active strategy outperforms the passive one in these particular market conditions (bear market). This supports the idea that active strategies might be a better option for a weakening market, as previously discussed.

[1] In the form of total returns.

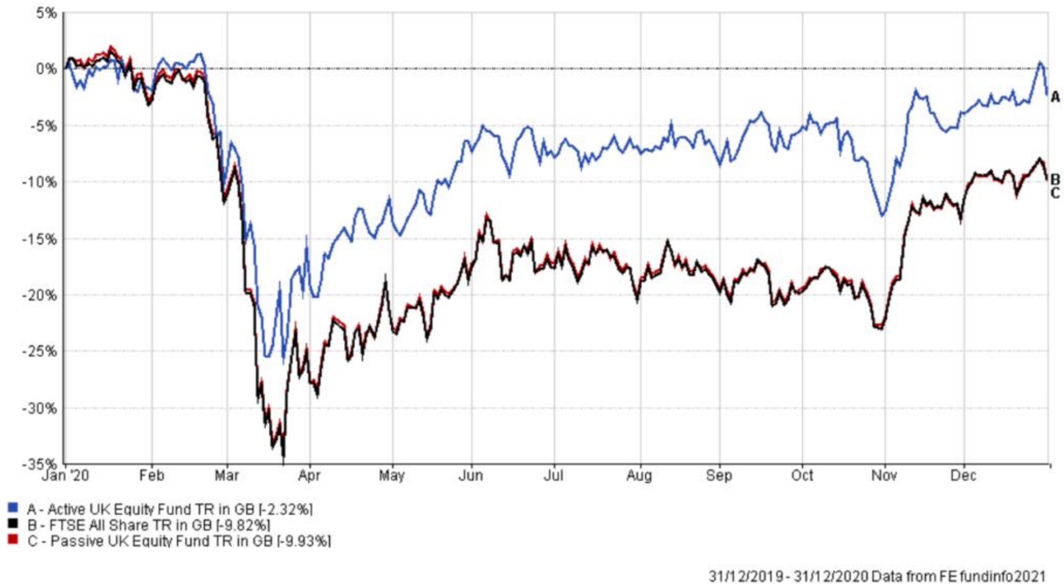

Figure 1: *Example of active vs passive performance in the U.K. for 2020 (bear market)*

Source: PKF Francis Clark. (2021, November 16). *Active vs passive investing – the great debate.* Financial Planning PKF Francis Clark. Retrieved from https://fcfp.co.uk/insights/active-vs-passive-investing-the-great-debate/

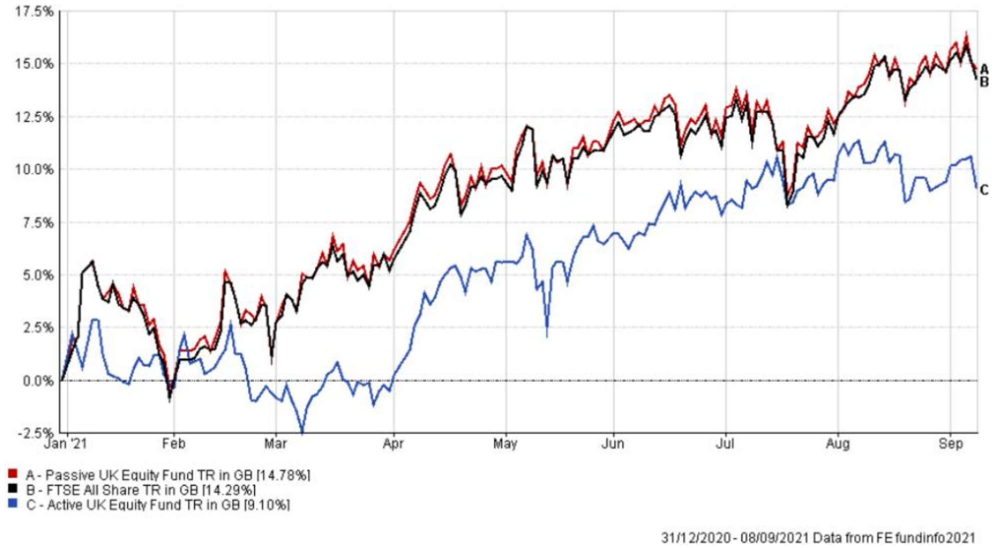

Figure 2: *Example of active vs passive performance in the U.K. for 2021 (bull market)*

Source: PKF Francis Clark. (2021, November 16). *Active vs passive investing – the great debate.* Financial Planning PKF Francis Clark. Retrieved from https://fcfp.co.uk/insights/active-vs-passive-investing-the-great-debate/

On the other hand, *Figure 2* displays the performance of active and passive strategies in the U.K. for the case of a *bull market*, that is, when stock prices or considerable market indexes rise at least 20% from a recent low. A bull market is often an indicator of a strong economy characterized by low unemployment rates and steadily increasing stock prices. Consequently, investors are optimistic and confident about the market conditions during this period (Tretina and Curry, 2022).

As mentioned before, passive strategies might be the way to go when the securities are moving in a similar way, which is the case during a bull market (cf. supra pp.4-6). Moreover, since the stock prices and indexes are rising during this period, we can assume that it is more difficult for investment managers to beat the market under such conditions. Correspondingly, *Figure 2* shows how the fund employing a passive strategy clearly outperforms the active fund in a bull market.

1.3. Hedge funds

The popularity of hedge funds has been growing in recent years, and not only because of its ability to bring colossal returns to its investors, but also because of the aura of exclusivity surrounding them (Simon, 1998). Hence, the following paragraphs will aim to explain the concept of hedge funds.

Essentially, hedge funds perform the same economic function as mutual funds. The investors entrust a fund manager with their money, expecting to receive back their investment plus a return (Stulz, 2007). However, there are some specific characteristics that make them so unique. Stulz (2007) points out some elements that differentiate hedge funds from other types of funds. In the first place, hedge fund managers have more flexibility and frequently make use of more complex investment strategies like short selling, borrowing or use of derivatives. Secondly, the compensation of the hedge fund managers differs from that of the mutual funds managers. For mutual funds, the compensation has to be symmetric, in other words, a dollar of gain has to have the same impact on the compensation as a dollar of loss (with the opposite effect). On the other hand, hedge fund managers usually have an asymmetrical compensation, meaning that they receive a significant portion of the returns they achieve. Another difference is that, unlike mutual funds where investors can withdraw their funds daily, hedge funds usually require that their investors do not withdraw their funds for a determined period of time. This contributes to the fact of hedge funds being able to invest in more complex strategies that could result too risky for mutual funds. Furthermore, hedge funds are not required to disclose information to the investors. They can agree to do so if they think that it will help to get more investors but it is not mandatory. In contrast, mutual funds have to disclose considerable information to investors. For example, in the case of the U.S. this includes having audited statements and reporting their holdings to the financial market authority.[2] Finally, hedge funds are restricted to a selected type of investors. Usually, you have to be an accredited investor with a minimum level of funds or assets to be able to invest in a hedge fund. Institutional investors such as companies or pension funds and wealthy

[2] i.e., The Securities and Exchange Commission (SEC) in the case of the U.S.

individuals are common examples of hedge funds investors (U.S. Securities and Exchange Commission [SEC]'s Office of Investor Education and Advocacy, 2012).

As stated before, one of the complex investment strategies hedge funds usually employ is short selling. A recent example that can help illustrate how this strategy works is the well-known *GameStop saga*, back in January 2021*.* GameStop is a video game retailer that was the center of Wall Street headlines because its stock price had been escalating to around 8,000% within six months. This company ended up being the target of short selling by hedge funds, a strategy where the investors borrow stocks to sell them when prices are high and then expect the stock price to fall so that they can buy them back at a lower price to return them and pocket the difference. In other words, the investors expect the stock price to go down, so they can make a profit. In contrast, the traditional "buy low, sell high" strategy implies that investors buy stocks at a low price predicting that the price will go up so they can make a profit by selling them (Ingram and Bayly, 2021).

The so-called *GameStop saga* began when amateur investors on the Reddit community WallStreetBets started noticing that the GameStop stock was being massively shorted by hedge funds. These investors believed the company was undervalued and started buying stocks. Then, on Monday January 11 2021, GameStop announced that three new directors would join its board, increasing GameStop's stock a little less than 13% on that day. However, it did not stop there. The stock continued rising, and as of Friday was already up 1,587% compared to the beginning of January. This forced short sellers to buy more stocks to cover their positions, which in turn created a further increase in the price, a phenomenon known as a *short squeeze.* During this, the trading app Robinhood used by amateur investors restricted trading in this stock, attributing extreme volatility. Later on, Robinhood lifted the restrictions but users of this free-trading app expressed their frustration with the decision attracting also the attention of regulatory bodies, as institutional investors like the hedge funds who do not need platforms such as Robinhood were able to continue trading during this period (Morrow, 2021). This saga resulted in heavy losses for the hedge funds who were shorting the stock. Some examples include the hedge fund Melvin Capital losing 53% in January 2021 and the London-based hedge fund White Square Capital closing its main fund (Fletcher and Darbyshire, 2021).

Evidently, the *GameStop saga* not only illustrates the more complex and riskier strategies hedge funds usually make use of, but also, displays the role they play and influence they have in the financial world as less regulated investment vehicles.

Figure 3 summarizes some of the key events of this saga and the corresponding changes in the GameStop stock price.

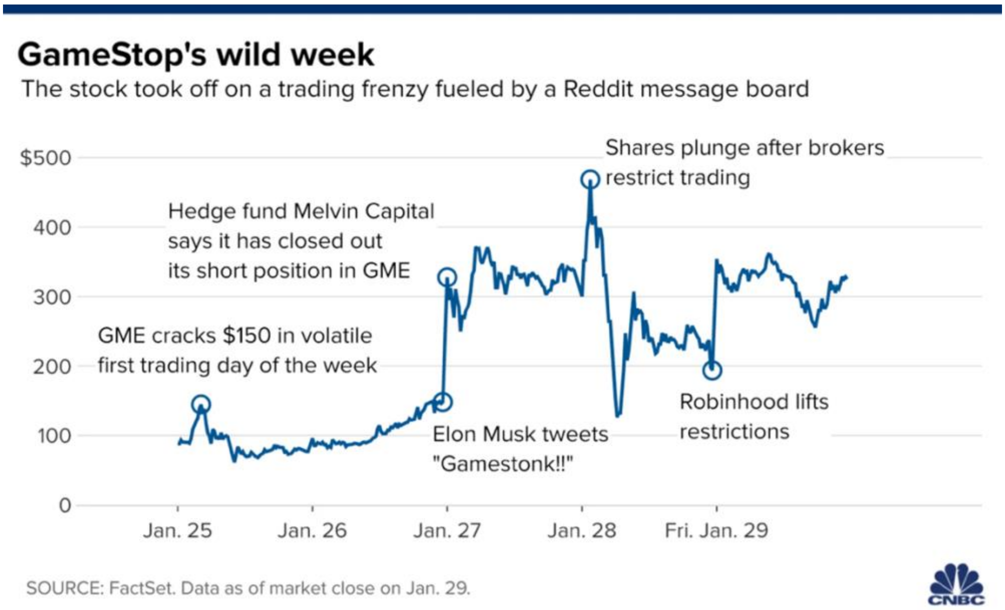

Figure 3: *GameStop saga key events and market reaction*

<u>*Source:*</u> Li, Y. (2021, January 30). *GameStop, Reddit and Robinhood: A full recap of the historic retail trading mania on Wall Street.* CNBC. Retrieved from https://www.cnbc.com/2021/01/30/gamestop-reddit-and-robinhood-a-full-recap-of-the-historic-retail-trading-mania-on-wall-street.html

After having reviewed some aspects that characterize hedge funds, it is clear that they cannot be categorized as traditional funds and although there is not a single way to describe them due to their particularity, the following definition results appropriate: "A hedge fund is any fund other than a conventional investment fund, such as a typical bond fund, equity fund or money market fund. Think of a hedge fund as an (sic) a series of alternative investment strategies." (Croft, 2002, para.2).

Now, if we look at the portfolio management strategies, hedge funds can be situated within the active management approach, attempting to deliver alpha to the investors. However, hedge funds do represent a particular business model within this active management industry. The way hedge funds deliver alpha is quite different and perhaps one of the most notable aspects is that hedge funds frequently deliver alpha with less exposure to markets, in comparison with the traditional long only funds. The evolution of the asset management industry has made this possible, by bringing a broader array of options for the investors. More specifically, individual instruments to get alpha and beta. Thus, investors can now have access to beta exposure in an easy and inexpensive way through the development of ETFs, low-cost index tracking funds and derivatives, and obtain a purer form of alpha through the hedge funds (Brown, n.d.).

1.3.1. Types of Hedge funds

Since hedge funds employ diverse investment strategies, there does not exist a single standard classification. However, Snoussi and Hellara (2004) discuss the following main groups:

1. **Global:** Hedge funds in this group sometimes make a broad use of leverage and derivatives while focusing on economic changes around the world. Global funds can be divided into international, emerging markets and macro funds. *International* consists of funds that pick stocks in selected markets around the world. *Emerging markets* are funds that focus on emerging and less developed markets. Because these funds target less mature markets, they tend to be long only, since sometimes short selling is not permitted in these markets and other instruments like futures or options are not available. *Macro funds* aim to make a profit from major events in the global economy such as considerable changes in currency and interest rates.

2. **Event-driven:** These funds focus on corporate events and include the subgroups of distressed securities and risk arbitrage. *Distressed securities* are funds that trade securities of companies that are in reorganization and/or bankruptcy whereas *risk arbitrage* funds trade the securities of companies that are involved in merger & acquisition events. In this case, the hedge fund usually buys the stocks of the company being acquired and short sells the stocks of the acquirer.

3. **Market neutral:** This type of funds can be divided in several subgroups, namely long/short equity, convertible arbitrage, equity and fixed-income funds. *Long/short equity* are funds that invest in both long and short positions. *Convertible arbitrage* consists of funds that buy undervalued convertible securities in the aim of hedging some of the risks. *Equity* refers to funds that simultaneously take long and short positions and are designed to have zero market risk. In these funds, leverage is regularly used to improve the returns. Finally, *fixed-income* are funds that exploit price anomalies in the global market for securities that involve interest rates and their derivatives.

Alongside this more conventional approach to the classification of hedge funds, there is an additional type worth mentioning:

Funds of hedge funds: These are essentially funds that invest in other hedge funds (Snoussi and Hellara, 2004). The basic idea is to hold a portfolio of unrelated hedge funds that is diversified across sectors, fund style or markets. It is an attempt to make the advantages of hedge funds accessible for the conventional investor. This approach seeks to deliver consistent returns while providing a diversified portfolio, as it should not be correlated with the other more traditional assets held by the investor (Croft, 2002).

1.4. Shareholder activism

Before moving further into the understanding of shareholder activism, it is necessary to define a term that is often present when talking about this concept: *corporate governance*. McCahery states that "corporate governance acts as a facilitator, enabling managers and shareholders to move toward the optimal governance structure within the firm." (2009, p.227). Consequently, corporate governance should be seen as a means and not as an end (Lipton and Rosenblum, 1991).

The urgency for having a corporate governance system arises from the potential *agency problems*, that is, conflicts of interest among the stakeholders within the corporate structure. These conflicts can arise from two sources. First of all, stakeholders have different interests and goals. Second, there is asymmetric information among stakeholders regarding each other's preferences, knowledge and actions. It is important to note that there also exists an issue known as the *separation of ownership and control*. In other words, the fact that the corporate ownership and the corporate management are designated to different actors within the firm. More precisely, the ownership corresponds to the shareholders whereas the control to the management executives. In absence of corporate governance instruments, this separation can potentially lead to situations where the management executives might act according to their own interests rather than the shareholders' interests. Hence, a suitable corporate governance design should not only provide rules and institutions that establish and manage internal ownership and control structures, but should also involve some measures that protect the firm's stakeholders from behaviors that might result opportunistic (Gillan and Starks, 2003; McCahery, 2009).

Since the shareholders are the owners of the firm, they are often given certain rights. Among others, shareholders have the right to appoint the board of directors, a body that has a responsibility in watching the performance of the management. In other words, the board of directors can be considered as the shareholders' agent accountable for monitoring the management. Shareholder activism can thus potentially appear when the shareholders believe that the board of directors has failed in doing its job and therefore, are not satisfied with the performance of the board or even the performance of the firm. To put it another way, the separation of ownership and control as well as the agency problems between the shareholders, the board and the corporate management are a clear basis for shareholder activism. In such a situation, the shareholders have three options: sell their shares (exit), hold their shares and express their discontent (voice) or hold their shares and do nothing (loyalty) (Gillan and Starks, 1998). An activist shareholder can then be defined as "an investor who tries to change the status quo through 'voice', *without* a change in control of the firm." (Gillan and Starks, 1998, p.3).

According to Gillan and Starks (1998), shareholder activism often tries to address issues regarding social policy or corporate governance. More specifically, it encompasses a wide range of activities that goes from direct negotiation with the management to a public targeting of the firm, that is, sending information to other investors through the media concerning changes needed at a firm.

It is reasonable to think that the shareholders within a firm are not uniform, leading to different approaches to shareholder activism. However, we will focus our attention on a particular group of shareholders: hedge funds. The following pages will thus aim to explain the concept of shareholder activism by hedge funds.

1.5. Hedge fund activism

Law professor Jonathan Macey conveyed in 2008 that hedge funds as well as private equity “are the newest big thing in corporate governance and are likely to remain an important and controversial feature of the legal and financial landscape for some time to come.” (quoted by Cheffins and Armour, 2011, p.3). Indeed, activism by hedge funds has been making it to the headlines in recent years and this might be attributed to the fact that the way hedge funds carry out activism is quite particular.

Cheffins and Armour (2011) stress that activism by hedge funds should be differentiated from that performed by more conventional institutional shareholders such as mutual funds or pension funds, and that an appropriate way of doing so is by employing the terms “defensive” and “offensive”. Activism performed by other institutional shareholders, if it occurs, often falls into the category of defensive activism. This is the kind of *ex post* activism that takes place when an investor that already has a stake in a firm, is not satisfied with its performance or corporate governance and reacts by advocating for changes (publicly or behind the scenes). In other words, when engaging in this defensive activism, the investor will have held a considerable stake in the firm before moving forward to lobby for changes. On the other hand, offensive activism can be described as *ex ante.* That is, an investor that does not have a significant stake in a firm, builds up one “offensively” under the belief that the firm is not currently maximizing returns for the shareholders and with the intention to advocate for changes that will boost shareholder value. This more proactive form of activism is commonly the one carried out by hedge funds.

It is important to note that in this case the term “offensive” does not necessarily refer to an aggressive approach towards the firm’s management. Even though activist hedge funds have the reputation of having a confrontational posture, they often aim for a cooperative and hands-on approach with the management (Cheffins and Armour, 2011). As Brav, Jiang, Partnoy and Thomas (2008) also noted, in order to implement their agendas, activist hedge funds frequently seek cooperation from the management or even support from other shareholders.

There are some characteristics intrinsic to the hedge funds (cf. supra pp.7-10) that provide them with more suitable tools to engage in activism and to take a more proactive approach. First, since hedge funds managers have a strong incentive to generate positive returns (because of the performance fees they receive), it is reasonable to think that they will aim for a successful engagement in which they can implement their value-enhancing agendas. Second, hedge funds are less regulated investment vehicles, which implies that they can be more flexible when engaging with the firms. Thus, since hedge funds are not legally required to have diversified portfolios, they can take significant stakes in a certain number of target firms without major complications. Moreover, they can make use of more complex strategies like derivatives or leverage for their investments. Third, hedge fund managers generally suffer from fewer conflicts of interest than other institutional investors such as mutual funds or pension funds. These institutional investors often maintain some kind of relation with the firms they invest in, or have agendas that might be subject to local or political influences, leading to potential conflicts of interest. Finally, since hedge fund investors are usually not allowed to withdraw their funds for a certain period of time, hedge fund managers can have more flexibility to pursue long-term activist objectives in the target firms (Brav *et al,* 2008; Brav, Jiang and Kim, 2010).

1.5.1. Objectives and tactics

When engaging in activism, hedge funds pursue diverse objectives. In a comprehensive study conducted in the U.S., Brav *et al* (2008) reported the following categories of objectives as the most sought-after by activist hedge funds:

- **Shareholder value maximization:** This first category includes cases where the hedge fund believes that the firm is undervalued and thus, shareholder value can be enhanced. In this case, there is not a specific agenda that the hedge fund intends to implement.
- **Payout policy and capital structure:** This category comprises events in which the hedge fund is advocating for changes related to a reduction of excess cash, an increase in the firm leverage, debt restructuring or higher shareholder payouts through dividends or stock buybacks.
- **Business strategy:** In this case the hedge fund proposes changes aiming to increase operational efficiency, spinning off some divisions of the firm in order to focus on the core business or improving the firm's growth strategy. Cases where the hedge fund plays an active role in the target firm's mergers or acquisitions fall also into this category.
- **Target sale:** In this category the hedge fund is attempting to sell the target firm to a third party or taking over the company.
- **Corporate governance:** In this last category the hedge fund addresses issues related to corporate governance. This might include efforts to oust the CEO, rescind takeover

defenses, advocate for board representation, improve the requirements of information disclosure or challenge the executive compensation policy.

In order to achieve these objectives, hedge funds employ different tactics. The following are the main categories of tactics noted by Brav *et al* (2008), listed from the least to the most aggressive:

- The first category refers to cases where the hedge fund intends to maintain a constant communication with the target firm's board and management in order maximize shareholder value
- The second tactic group comprises the events where the hedge fund seeks for board representation without a confrontational approach (no proxy contest[3])
- The third category includes the cases where the hedge fund takes a more formal approach by publicly criticizing the firm or making shareholder proposals
- The fourth group is related to events where the hedge fund intends to gain board representation (threatening with a proxy fight)
- The fifth category corresponds to the cases where the hedge fund intends to replace the board (by means of a proxy contest)
- The final category is assigned to the most aggressive tactics. In this case, the hedge fund sues the company or intends to take control of the firm (with a takeover bid)

Interestingly, this study suggests that even though hedge funds do enter in proxy fights, they generally do not seek corporate control. Moreover, instead of having the control of the board as a priority, hedge funds are usually focused on enhancing shareholder value in the target firm as minority shareholders (Brav *et al*, 2008). Cheffins and Armour (2011) also support this idea, and observe that a possible explanation to the fact that hedge funds do enter in numerous proxy fights is that they frequently use these contests for board seats as a way to show the future targets that they are willing to take a proactive and hands-on approach when engaging in activism.

Another tactic that is commonly employed by activist hedge funds is known as the *wolf pack.* In this case, several hedge funds buy a stake in the firm without formally acting as a group. The way this strategy works and the advantages it brings by avoiding the concept of a "group" can be better illustrated with an example. Let us say that the leader of the wolf pack first acquires a stake of 5.1%. This hedge fund has a ten-day window before having to disclose this stake to the financial market authority[4]. During this period, this hedge fund buys another 3.9%, building up a total stake of 9% in the target firm. At the same time, some hedge funds allies

[3] A proxy contest or proxy fight occurs when "insurgents conduct a campaign to persuade shareholders how to vote on contested issues and board seats." (Sridharan and Reinganum, 1995, p.57).
[4] According to the beneficial ownership reporting rules adopted by the U.S. Securities and Exchange Commission (SEC), an investor who acquires a stake of more than 5% in a company must disclose this information within 10 days of the acquisition (Arcano, Breheny, Grossman and Rapp, 2022).

(avoiding formally forming a group) buy another 12% to 15% during the same window. Taking into account the investments from the leader and its allies, the total stake in the firm goes from 21% to 24%. Now, if the leader and its allies were formally acting as a group, it would have been a different story. First of all, they would have had to disclose these acquisitions at an earlier stage. More precisely, when the group would have crossed the 5% threshold. This means that it would have been more expensive to acquire more shares after the disclosure (assuming that the stock price trends upwards after the stake filing), leading to a scenario where the group would have probably held a smaller aggregate stake in the target firm (lower than 24%). Second, a common response of the target firm to the stake disclosure is to adopt a poison pill[5], preventing the group from acquiring additional shares. In conclusion, the *wolf pack* tactic allows activist hedge funds to surpass the poison pill and amass a larger stake before the target firm becomes aware of it (Coffee and Palia, 2016).

An additional tool that is part of activist hedge funds' playbook is known as *tipping.* In this case, the hedge fund that is filing reveals its plan to a small group of investors before the stake disclosure goes public in exchange for some favors. It is often reasonable for activist hedge funds to combine the tipping and the wolf pack tactics. By tipping some hedge funds allies and assuring that a larger stake is held in the target firm, the wolf pack leader increases its chances of victory for example in any proxy contest it decides to enter in (Brav *et al,* 2008; Coffee and Palia, 2016). Having reviewed these tactics, it becomes evident that activist hedge funds often work in cooperation with other shareholders, as mentioned before.

It should be noted that since the phenomenon of hedge fund activism has been widely documented in the U.S., the previously described objectives and tactics correspond to this particular market, and although they can be considered as a comprehensive representation of the manner activist hedge funds operate, it should not be assumed that they behave exactly the same way across the globe.

1.5.2. The rise of hedge fund activism

Now that we have a better understanding about what makes hedge fund activism so unique, we will focus on discovering some key events that preceded the emergence of hedge funds as the kind of activists they are today.

The closest precursors to this kind of activism date back to the 1980s in the U.S. This period known as the "deal decade" was characterized by the corporate raiders, who employed

[5] A poison pill, also known as a shareholder rights plan is a defensive strategy used by firms against a hostile takeover bid. When triggered, it allows the current shareholders (except the bidder) to acquire shares at a discount price with the objective of diluting the stock value and makes it more costly for the bidder to acquire the company (Legal Information Institute, n.d.).

aggressive tactics in order to take over companies. These kinds of interventions were rather risky. First, the raiders would need a large amount of financial resources in order to buy enough shares to threaten the control of the firm. Second, since they were aiming for a hostile takeover, they would typically face legal actions from the management (Cheffins and Armour, 2011; Shin, 2018).

Even though corporate raiders were known for seeking control in the firms they invested in, some of them were also buying significant stakes in the companies, closer to the form of offensive shareholder activism. The raiders that were focused on the latter used to operate through publicly traded companies. Some examples include Charles Bludhorn, CEO of Gulf & Western, who would use this firm as a vehicle to invest in undervalued companies, or T. Boone Pickens, who would use the public company Mesa Petroleum to carry out his transactions (Cheffins and Armour, 2011).

The decision of operating through a publicly traded corporation instead of an investment fund might have been influenced by the Investment Company Act of 1940. This legislation regulates companies that perform mainly investment activities (e.g., mutual funds). Under this Act, the companies are required to disclose information to the investors regarding the company's operations, structure and investment objectives. Publicly traded companies carrying out their own business and with no more than 40% of their assets invested in stocks in other firms were not subject to these requirements, being a less complex vehicle for the corporate raiders in order to execute their investment activities (Cheffins and Armour, 2011; U.S. Securities and Exchange Commission, 2020).

Although during this period activism was mainly executed through publicly traded companies, there was a small group of corporate riders who would start using private investment funds to carry out their investments. This type of investors can be considered the closest precursors to activist hedge funds (Cheffins and Armour, 2011).

In the 1990s hedge funds gained substantial prominence as investment vehicles. The most notable hedge funds during this period were the ones focusing on a "macro" strategy, that as mentioned before, are the funds aiming to take advantage from events in the global economy such as fluctuations in currencies and interest rates. However, they were not the only protagonists of the industry. Some funds were also engaging in "stock picking", but usually without launching activist demands. The exception was the banking sector, where hedge funds began to follow an activist approach (Cheffins and Armour, 2011).

However, it was in the 2000s when the hedge funds finally started to be in the spotlight as activist investors. Alan Murray, a reporter for The Wall Street Journal expressed this by writing in 2005: "The hedge funds have become the new sheriffs of the boardroom. But they are less concerned with legal processes and accounting procedures and more with returns to shareholders." (Murray, 2005, para.7).

1.5.3. Hedge fund activism and European landscape

Even though the way hedge funds engage in activist campaigns in Europe has not been extensively documented, there are some key characteristics that have been identified regarding European activism.

The tactics employed by activists in Europe can also vary from friendly to hostile. However, activists in Europe have adopted a more cooperative approach compared to their counterparts in the U.S. This can be related to differences in the way business is conducted in Europe, including a less aggressive tone and an approach that tends to focus on all the firm's stakeholders rather than just the shareholders (European CEO Magazine, 2015). As the lead portfolio manager of RWC's European focus fund Maarten Wildschut commented: "If you are immediately hostile, you will not get cooperation from the company's board." (quoted by Marriage, 2013, para. 3). Accordingly, activists in Europe have been less direct and have rarely made use of personal attacks towards the management (Fortado, 2016).

Moreover, activist campaigns in Europe have traditionally been more private, often being conducted behind closed doors (Marriage, 2013). According to Raice (2014), the fact that Europe has more shareholder-friendly regulations compared to the U.S., has to some extent, facilitated the achievement of activists' goals by working directly with the management, without the need of launching public campaigns. However, this does not mean that activist campaigns following a public approach have been completely nonexistent. In fact, the case studies presented in the next section illustrate three high-profile campaigns in European targets. Furthermore, a study conducted by Skadden (2022) shows that European firms are expecting more public activist interventions for 2022 compared to previous years, with 86% of the companies agreeing with the statement suggesting the prominence of public campaigns for 2022.

When talking about hedge fund activism in Europe, it is essential to understand that Europe's corporate ownership structures are generally more complex than the ones in the U.S. As reported in a study conducted by Faccio and Lang (2001), firms in western Europe are commonly family controlled (44.29%) or widely held (36.93%). Moreover, they observed that firms controlled by the State are also important in countries like Austria, Finland, Italy and Norway, where the State controls more than 10% of the listed companies. These two additional actors (families and the State) can certainly add some layers of complexity to the ownership structures in Europe, and therefore, to activism.

According to a study conducted by La Porta, Lopez-De-Silanes and Shleifer (1999), widely held firms are more common in countries with good shareholder protection. Likewise, large firms with ultimate owners are frequent in countries with poor shareholder protection. Given the high percentage of European firms that are controlled by families, these findings would suggest that Europe does not have the best landscape for shareholders. However, this is not necessarily true. Europe has been making substantial efforts to become more shareholder-friendly, including the introduction of the Regulation on securities settlement and on Central Securities Depositories in the European Union (CSD Regulation) in 2014, which aims to harmonize at the European level some aspects of the settlement of securities and to provide a common regulatory framework for the Central Securities Depositories (CSDs), which are the institutions that operate the settlement process. The harmonization of these rules provided by the CSD Regulation therefore facilitates the cross-border settlement of securities within the European Union (European Commission, 2014; European Securities and Markets Authority, n.d.). Another key effort is the revision of the Shareholder Rights Directive by the European Union in 2017, which aims to encourage long-term shareholder engagement (Segal, 2018). More precisely, the revised directive intends to facilitate the identification of the shareholders and the flow of information between shareholders and firms, improve the supervision of the directors' compensation and increase transparency (EUR-Lex, 2020).

Furthermore, it is important to note that since Europe comprises diverse countries, there are some European countries that might have a more shareholder-friendly environment compared to others, which is the case of the U.K. According to a study conducted by Faccio and Lang (2001), the U.K. and Ireland have a high percentage of widely held firms compared to continental Europe. Moreover, they reported that the U.K. and Ireland are also among the countries with a low percentage of firms that are controlled by the State. Similarly, La Porta *et al* (1999) found in a study that the sample of countries with good shareholder protection is led by common law countries (like the U.K) while the one referring to countries with a poor shareholder protection is dominated by civil law countries. Additionally, some activist advisors have observed that the corporate governance code in the U.K. is more shareholder-friendly than the one in the U.S. regarding disclosure requirements and the nomination of board directors (Flaherty and Cruise, 2015). These factors might explain why the U.K. has traditionally been, and still remains, the main European target for activism. However, there are more elements that might have contributed. The greater similarities between the U.S. and the U.K. regarding language and the way business is conducted compared to other European countries could have made it easier for activists based in the U.S. to initiate and settle campaigns in the U.K. (Roach, 2022). Moreover, recent events including the Brexit, the Covid crisis, supply chain issues and some companies' missteps have contributed to the underperformance of U.K. firms compared to other European companies, leading to depressed share prices for U.K. listed firms, which in turn, make U.K. firms attractive targets for activists due to their great opportunity for improvement (Agnew and Massoudi, 2022; Dummett, 2022; Quinio and Agnew, 2021). To summarize, as Sarah Ketterer, CEO of the asset management firm Causeway Capital commented regarding the U.K.: "There's a confluence of undervalued companies and good corporate governance." (quoted by Agnew and Massoudi, 2022).

When analyzing the nature of hedge fund activism in Europe it is also necessary to talk about some of the key trends in European activism for this year and the near future. Activism is expected to continue growing in 2022 and 2023 in Europe, however, as a result of a more complex landscape. The war in Ukraine combined with the remaining effects of the pandemic, inflationary pressures, global supply chain disruptions and the consequences of Brexit have led to a market turmoil, creating the ideal environment for activism (Alvarez & Marsal, 2022).

One of the key trends is the prominence of ESG (Environmental, Social and Governance) factors as drivers for activist campaigns. Compared to 2021, such campaigns increased 20% in the first two months of 2022 and are expected to continue increasing, especially in the energy sector. This sector is experiencing a growing pressure to seek greener alternatives, creating interesting opportunities for activists. Furthermore, the conflict in Ukraine exposed Europe's dependence on Russia for its gas supply, giving activists more incentives to launch campaigns advocating for more local production and secure the supply of energy (McKenzie, 2022). Regarding the target countries, the U.K. is expected to continue being the most attractive target for activism in 2022, as a result of some of the recent events previously mentioned including the Brexit and supply chain issues. However, Germany, France and Switzerland are also expected to see a slight increase in the number of activist campaigns. For the case of Switzerland, some corporate law changes in 2023 in order to make the country more shareholder-friendly could lead to an increase in the number of activist interventions (McKenzie, 2022).

Despite the growing popularity of activism in Europe, European firms seem not to be fully prepared to face activists (Herbst-Bayliss, 2019). A study conducted by AlixPartners (2019) including over 500 public companies in Europe showed that even though 65% of the executives recognize the importance of managing activism in their companies, around half of them (53%) acknowledge that they do not have a clear plan to face activism. Moreover, the study reported that the management's three main concerns regarding shareholder activism include not having a clear strategy to face activism, cost barriers for the preparation and the changing nature of activism. It should be noted that although this study was conducted in 2019 and the landscape might have changed, the report does show some concerning results regarding the readiness to deal with activism in Europe.

1.5.4. Case studies

In order to better illustrate the nature of hedge funds' activist campaigns in Europe, three case studies are presented in this section.

Case study 1: Third Point and Nestlé

"Nestlé is the world's largest, most diversified food and beverages company." (Nestlé, 2022, para.1). This Swiss giant was established more than 150 years ago and owns a portfolio with world-leading brands such as Nespresso and S. Pellegrino water (Nestlé, 2022).

In June 2017, Dan Loeb's hedge fund Third Point announced through an open letter that it had acquired a stake in the Swiss giant amounting to about 1%. Despite the fact that most activist campaigns in European firms have involved bigger stakes, Third Point is proposing clear changes for the company including the sale of low-growth businesses, more stock buybacks, a plan with formal margin targets and the sale of Nestlé's stake in the French cosmetics firm L'Oréal (Chaudhuri and Blackstone, 2017; Wilmot, 2017).

Although Third Point recognizes that Nestlé has the best positioned portfolio in the industry, the fund expressed its concern about the firm's shares, arguing that they have underperformed compared to most of their U.S. and European peers on a three-, five- and ten-year basis. The fund also indicated that the earnings per share have stalled for five years, leading to low-growth dividends (Chaudhuri, 2017). Moreover, Third Point said that "Nestlé has remained stuck in its old ways" (quoted by Chaudhuri, 2017, para.4) while its rivals have adapted to the changing consumer's shopping habits (Chaudhuri, 2017).

Following the activist campaign initiated by the fund, Nestlé announced a share buyback plan worth $20 billion Swiss Francs starting in July 2017 and running for a three-year period. This plan represents Nestlé's second biggest share buyback since 2007. Even though Nestlé said that this decision was the result of a review of its priorities that started early that year and did not mention the fund's demand in the announcement, the firm was not expected to give any news to the shareholders until September, but its plans were accelerated as a result of shareholder pressure topped off by Third Point's demands (Chaudhuri and Blackstone, 2017; Geller and Koltrowitz, 2017).

Nestlé also said that "the company will continue to adjust its portfolio in line with its strategy and growth objectives." (quoted by Geller and Koltrowitz, 2017, para.16). This includes investing in high-growth categories such as coffee, pet care, infant nutrition and bottled water, looking for opportunities to expand its consumer healthcare business and making some divestitures like selling its U.S. confectionery business. The company has also received some calls from analysts to sell its U.S. frozen food business (Geller and Koltrowitz, 2017).

In October 2017, Third Point sent another letter where it praises Nestlé CEO Mark Schneider for his first steps, emphasizes its demands and indicates that there are still more opportunities to unlock shareholder value. The company has delivered on some of Third Point's requirements by implementing the share buyback plan, setting for the first time a margin target, agreeing to sell its U.S. confectionery business and acquiring the coffee brand Blue

Bottle (Geller and Herbst-Bayliss, 2017). In January 2018, Nestlé announced the sale of its U.S. confectionery business to Ferrero, aiming to focus on the categories with a high growth potential (Nestlé, 2018).

However, in July 2018 Dan Loeb's Third Point sent a letter and a 34-page presentation to Nestlé CEO Mark Schneider insisting that the company should organize its corporate structure and continue reshaping its portfolio by selling all businesses that do not fit. Third Point also stressed that Nestlé should sell the stake it has in the French cosmetics company L'Oréal and that it should focus on nutrition, health and wellness categories. The fund even launched a website in order to boost its case publicly, being only the third time Third Point has gone this far with a campaign. These steps generated different reactions among investors. To some, it represents an aggressive U.S. hedge fund bringing its tactics to Europe while to others, these moves are a proof that Dan Loeb is doing things differently nowadays, claiming that in the past, Dan Loeb would have directly criticized the CEO and used personal attacks. What is true is that the fund is taking a more careful approach, trying to understand the importance of motivating other investors to back its demands and getting cooperation from management by explaining its point of view and giving suggestions on how to improve the company's performance (Herbst-Bayliss, 2018).

Finally, one of the latest interactions reported between Third Point and Nestlé was a letter the fund sent to the investors in February 2019. In the letter, Third Point said it was satisfied with the progress that some of its holdings have made, including Nestlé, and reassured its confidence regarding Nestlé CEO's direction (Reuters, 2019b).

Case study 2: Elliott Advisors and Whitbread

Whitbread owns the U.K.'s biggest hotel chain, Premier Inn. This chain also has a presence in Germany, and offers accommodation combining quality and affordability. Along with its hotel business, the group also operates the U.K.'s well-known restaurant chains Beefeater and Brewers Fayre, and was the former owner of the coffee chain Costa (Whitbread, 2022).

A disclosure in April 2018 revealed that the activist hedge fund Elliott Advisors secretly amassed a stake of more than 6% in the leisure giant, becoming the firm's largest shareholder. Elliott was urging the British company to spin off its Costa Coffee business arguing that the hotel (Premier Inn) and coffee (Costa) businesses would perform better if they split up, creating approximately £3 billion in value for investors. Even though both Premier Inn and Costa Coffee have a good operational performance, for the past years Whitbread's shares had been drifting. Furthermore, most hotel businesses and coffee businesses that operate as separate entities have a better stock performance than Whitbread (Meddings, 2018).

The company had also been facing calls from other investors to split up its coffee business. At the beginning of 2018 another shareholder made some demands including the split up of Costa, suggesting a possible sale of the coffee chain. However, Elliott was interested in demerging Costa by listing it as a standalone business. Whitbread CEO Alison Brittain had commented that she was open about splitting up Whitbread's coffee business, but that it was not the best time since Costa was in the middle of a three-year turnaround plan (Fildes, 2018; Keidan and Jessop, 2018).

In August 2018 Whitbread announced that it had agreed to sell Costa Coffee to Coca-Cola for a value of £3.9 billion (Whitbread, 2018). Regarding this announcement, Whitbread CEO Alison Brittain said: "This transaction is great news for shareholders as it recognises the strategic value we have developed in the Costa brand its international growth potential and accelerates the realisation of value for shareholders in cash." (quoted by Ali, 2018, para.6).

Nevertheless, in May 2019 Elliott expressed again its frustration, this time referring to Whitbread's hotel chain Premier Inn. The fund said that the company should sell around 10% to 15% of its hotel business and do not rule out the possibility of selling the rest. Elliott argued that owning the entire Premier Inn hotel business was slumping the firm's share price and leaving it open to a "cut-price hostile takeover." (quoted by Dalugdug, 2019, para.2). The fund also mentioned that it was looking for directors with experience in the hotel industry to join the company's board. Whitbread CEO Alison Brittain said that the hotel business carries on increasing its market share in the UK and that the company will be giving back to the investors up to £2 billion corresponding to the sale of Costa Coffee, once the share buyback plan was concluded (Dalugdug, 2019).

Although it is not clear to identify whether Elliott's activist campaign in the leisure giant came to an end, a filing revealed that in July 2019 the hedge fund trimmed its stake in Whitbread to below 5% (Reuters, 2019a).

Case study 3: The Children's Investment Fund (TCI) and Volkswagen

Volkswagen is "one of the world's leading automobile manufacturers and the largest carmaker in Europe." (Volkswagen, 2022, para.1). The group owns several brands around Europe including Volkswagen, Škoda, Seat, Audi, Lamborghini and Porsche and also offers a variety of financial services like banking and insurance, leasing and customer financing (Volkswagen, 2022).

In May 2016, the hedge fund TCI that built up a stake of €1.2 billion corresponding to 2% in the German carmaker, sent a letter to Volkswagen's management and board urging the company to make major changes in its executive compensation policy (Johnson and McGee, 2016). The fund also stated that Volkswagen's compensation structure had "encouraged aggressive management behavior, contributing to the diesel emission scandal." (quoted by Fletcher, 2016, para.9).

TCI mentioned that the board members had been paid around €400 million over the past six years, while Volkswagen's business had not made any significant progress during the same period, and also that despite the company's low productivity, the German carmaker had made a 50% increase in the wages since 2011 (Fletcher, 2016). Moreover, Sir Chris Hohn, who runs TCI said: "The dirty secret of Volkswagen group is that for years management has been rewarded with massive compensation despite presiding over a productivity and profit collapse." (quoted by Johnson and McGee, 2016, para.5).

The activist campaign arrived in turbulent times for Volkswagen, which a few months earlier had been the target of investors and workers' discontent because of the diesel emission scandal. More specifically, shareholders and labor unions were not happy about former CEO Martin Winterkorn's resignation following the scandal, after he was paid €7.3 million (Fletcher, 2016).

TCI was not the only one attacking Volkswagen's corporate governance. Other shareholders had been complaining about the company's complex ownership structure for some time. Volkswagen's board of directors comprises 20 members divided evenly between workers and shareholders. The issue is that there are hardly any independent shareholders in the board. As of the end of 2015, the Porsche and Piëch families controlled 52.2% of the company's voting shares, the German state of Lower Saxony (where Volkswagen's headquarters is located) owned 20% and Qatar had 17%, leaving less than 11% of the firm's voting shares to independent shareholders. Furthermore, the fact that the state of Lower Saxony occupies 2 of the shareholders seats can create an imbalance of power, since both the workforce and the representatives from Lower Saxony might share the same interest in preserving the jobs at Volkswagen, which is the state's biggest company (Cremer, Taylor and Prodhan, 2016; Johnson and McGee, 2016). *Figure 4* summarizes the shareholders' voting rights structure.

One of the latest moves of TCI's activist campaign was in September 2016, when the fund sent another letter to the company. This time, TCI was demanding a new bonus system that would align the executive compensation policy with shareholders' interests, and giving some suggestions on this matter. TCI said that the company should not pay its executives bonuses if the earnings per share are lower than €20. Moreover, Sir Chris Hohn argued that the bonuses should be paid in shares instead of cash and vest over three to five years. He added that "for executives to truly have their interests aligned with shareholders they must own shares." (quoted by McGee, 2016, para.4) and stressed that the new system should be simple and transparent (McGee, 2016).

According to Johnson and McGee (2016), this campaign represents one of the most publicly exposed activist interventions in a European firm since the financial crisis.

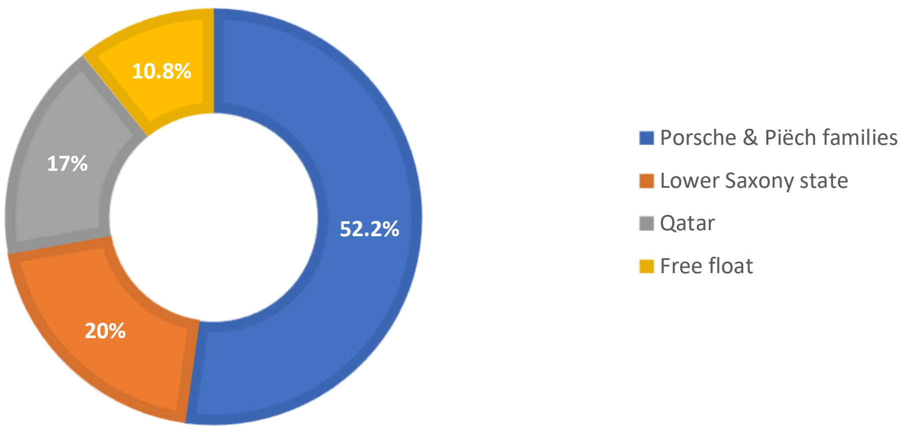

Figure 4: *Volkswagen's shareholder's voting rights structure (December 2015)*

Source: own elaboration based on Johnson and McGee (2016)

Now that we have reviewed the case studies, there are some interesting insights worth pointing out. First of all, it is important to note that the stakes acquired by the hedge funds in the target firms are relatively small in size (all below 10%), showing that indeed, as suggested by Brav *et al* (2008), activist hedge funds are generally not seeking for corporate control. Second, the cases presented indicate that the interventions are not completely developed in the short-term, since they involve different engagements between the funds and the firms lasting at least a couple of months. Third, the case of Volkswagen clearly displays how corporate structures in Europe can definitely be more complex than the ones in the U.S., involving different actors such as families and the State. As noted in a study conducted by Faccio and Lang (2001), family-controlled firms are quite predominant in continental Europe. Moreover, they observed that for the case of Germany, families are the largest ultimate owners in 90.6% of the firms included in the sample. Finally, it is important to note that the three campaigns were largely public. Although hedge fund activist campaigns in Europe have traditionally been "behind closed doors" as described by Marriage (2013) and Raice (2014); these case studies suggest that activists in Europe are also open to follow a fully public approach.

1.5.5. Hedge fund activism debate

The popularity that hedge fund activism has achieved in recent years has not come alone, as it has also put this phenomenon at the center of a controversial debate. On the one hand, its advocates consider it as a proactive and effective approach to activism, being able to drive changes and get early results. On the other hand, its opponents argue that its short-term horizon acts in detriment of the firm's long-term value (DesJardine and Durand, 2020).

More precisely, hedge fund activism has been the target of the "myopic claim". Supporters of this claim stress that the positive stock returns obtained after the disclosure and the following improvements in the target firm's operating performance suggested by the evidence (cf. infra pp.26-30) are only temporary, and that in the long-run the performance will decline, bringing important costs that are not reflected in the initial positive returns and that will negatively affect the firm's long-term value (Bebchuk, Brav and Jiang, 2015). Moreover, opponents of hedge fund activism also argue that these activists often follow a "pump and dump" strategy, where they engage in order to create a short-lived spike in the target's stock price and then leave before they can feel the costs that come along with the decrease in stock returns in the long-term (Coffee and Palia, 2016). As Harvard Business School professor Bill George explains: "They [activists] lobby publicly for significant structural changes, hoping to drive up the share price and book quick profits. Then they bail out, leaving corporate management to clean up the mess." (George, 2013, para.3).

Activist hedge funds have also been deemed as mere "stock-pickers", suggesting that the improvements in the stock prices and firm performance described by the evidence are not a result of hedge funds' efficient approach to activism, but rather, a reflection of hedge funds' ability to select the right targets. That is, firms that are "undervalued" and thus are expected to have an improvement in shareholder value under any circumstances, even in the absence of hedge fund intervention (Bebchuk *et al,* 2015; Cheffins and Armour, 2011).

Although these claims only represent a small part of this debate, we will see in the next section that they have played an important role in the academic work regarding hedge fund activism.

2. LITERATURE REVIEW

In the previous section, we reviewed some key theoretical notions regarding portfolio management, hedge funds and hedge fund activism. In this second section, we will focus our attention on the concept of hedge fund activism through an examination of the previous academic work. More precisely, we will explore the empirical evidence about this phenomenon in the U.S. and in Europe, and discuss the major findings of these studies regarding the returns of hedge fund activism, characteristics of the target firms and changes in the firm performance after being targeted by an activist hedge fund. This will provide us with enough evidence for a better understanding of the hedge fund activism debate and also, with an appropriate basis of comparison for the empirical study.

2.1. Hedge fund activism in the U.S.

Literature about hedge fund activism in the U.S. abounds, with several empirical studies not only providing evidence about the abnormal stock returns after the disclosure (which has been one of the main research topics), but also some valuable information regarding the target firms and their performance.

Overall, the evidence demonstrates the existence of positive abnormal stock returns surrounding the event date, that in most of the cases refers to the date when the stake in the target company is publicly disclosed. In a comprehensive study including a sample of 1,059 hedge fund activism events from 2001 to 2006 in the U.S., Brav *et al* (2008) found positive average abnormal stock returns between 7% and 8% during the (-20, +20) event window. Similarly, in an empirical study about hedge fund activism across different countries for the 2000-2010 period, Becht, Franks, Grant and Wagner (2017) reported positive abnormal stock returns of 7% for the case of the U.S. during the same event window. Using a sample of hedge fund activism events from 2001 to 2007, Brav *et al* (2010) also identified positive cumulative abnormal returns of around 6% during the 20 days prior to the 20 days after the stake disclosure. This is consistent with the findings of Bebchuk *et al* (2015), who observed positive average abnormal returns of approximately 6% for a 41-day event window. This evidence therefore suggests that hedge fund activism indeed creates value for the shareholders of the target firm, at least in the short-term.

Another question that is of particular interest when talking about hedge fund activism is whether this creation of value for the shareholders in the form of positive abnormal stock returns is also valid from a long-term perspective. Some studies have explored further this matter, analyzing the abnormal stock returns in the long-run. Brav *et al* (2008) observed that there was no reversal of this positive market reaction one year following the stake disclosure. Bebchuk *et al* (2015) examined the stock returns for a period of five years following the initial stock price spike after the hedge fund engagement and found no evidence in the data of a reversal or negative stocks returns in the long-term, contrary to what supporters of the "myopic claim" predict. Furthermore, they analyzed the long-term stock returns during the three years following the exit of the hedge fund and reported no evidence of negative abnormal returns during this period. Accordingly, they argue that there is no evidence suggesting that activist hedge funds follow a "pump and dump" strategy as some opponents have claimed, since as noted before, such strategy would have implied negative stock returns following the exit of the hedge fund from the target company. However, the evidence is not completely homogeneous for the case of long-term returns. Greenwood and Schor (2009) computed the cumulative monthly abnormal returns for the 19-month period surrounding the stake disclosure for different activism outcomes and found that high long-term returns are linked to the specific event of an ex-post acquisition of the target firm. In other words, in case of a different outcome, abnormal returns in the long-run might be positive but are not significantly different from zero. Similarly, deHaan, Larcker and McClure (2019) argue that previous work frequently documented equal-weighted long-term returns that fail to reflect the reality for all the firms. They found that the equal-weighted positive long-term returns are mainly driven by 20% of the firms that have a significant market value and that the other 80% of the firms initially experience positive returns but bear insignificant returns within three months of hedge fund activist engagement and insignificantly negative returns by the end of two years after activism. Moreover, they observed that cumulative long-term returns are not significantly different from zero when employing a value-weighted approach. Consistent with Greenwood and Schor (2009), deHaan *et al* (2019) also found that positive long-term returns are more frequent among the firms that experience an ex-post acquisition.

Finally, another issue that has been widely documented is whether hedge fund activism improves the target firm's performance. In this case, the evidence is mixed. Brav *et al* (2008) used ROA (return on assets) and operating profit margin in order to measure the changes in the target firm's operating performance and analyzed these variables for the period corresponding to two years before to two years after hedge fund activism. They reported a decline during the event year followed by a slight recovery one year after activism and a considerable improvement of these variables two years after the hedge fund engagement. Consistent with these findings, Bebchuk *et al* (2015) documented an improvement in the target firm's ROA and Tobin's Q when analyzing the firm performance during the five years following the intervention. More precisely, they observed that both the average Tobin's Q and the average ROA exceed their event year level for the period corresponding to three, four and five years after the hedge fund intervention, reaching their highest level in the year five. Correspondingly, these findings seem to show no evidence to support the "myopic claim", which as noted before, suggests a decline in the long-run firm performance following activist intervention. Furthermore, Clifford (2008) conducted a study differentiating between hedge funds that target firms for active purposes from those that engage with firms to follow a passive approach, and observed an improvement in the operating performance when firms are targeted for active purposes. More specifically, he noted an increase in ROA the year following the stake acquisition by the activist hedge fund and comparable results two years after. Nevertheless, Clifford (2008) attributes this improvement in ROA to a decline in the investment in assets (i.e., divestiture of less-performing assets) rather than an increase in the cash flows. Finally, Boyson and Mooradian (2011) analyzed the change in ROA and the change in cash flows as a portion of assets from one year prior to one year after hedge fund activism and reported positive and statistically significant coefficients for these ratios, implying an improvement in operating performance for target firms compared to the matching firms. This evidence suggests that firms experience an improvement in their operating performance after being targeted by activist hedge funds. However, other studies show contrasting results.

Klein and Zur (2006) found no evidence that the firm performance improves after hedge fund activism. More precisely, they reported a decline in the EPS (earnings per share), ROA and ROE (return on equity) and no significant changes in the operating cash flows one year after the stake disclosure. This contrasts with the findings of Clifford (2008) and Boyson and Mooradian (2011), who as stated before, reported an increase in ROA when analyzing the changes in this performance indicator for the same time frame. Likewise, DesJardine and Durand (2020) found no evidence of long-term improvement in the firm performance when studying financial performance metrics for the five years following the hedge fund intervention. Specifically, they reported that target firms experienced a short-lived improvement in their market value (Tobin's Q), increasing one year after the intervention but decreasing in year four and five. Similarly, they observed an increase in ROA but only for year one and two and an almost immediate decline in the cash flow from operations, showing no significant recovery in the following years. Moreover, deHaan *et al* (2019) argue that most of the studies showing evidence of an improvement in the operating performance fail to take into account the previous trend of the metrics in the period preceding activism, and that no evidence is found of a performance improvement when employing an appropriate matching sample approach that considers these trends.

Although a considerable amount of literature has focused on the effects of hedge fund activism, some studies have also attempted to describe the type of firms targeted by activist hedge funds. In general, evidence shows that hedge funds target undervalued firms that are relatively small. However, evidence is mixed regarding the pre-activism performance of the target firms. To a large extent, previous research suggests that hedge funds target firms with a solid operating performance, but some studies show contrasting results. Boyson and Mooradian (2011) identified the typical target firm as a "cash cow". That is, a firm with low growth potential but a solid operating performance (high ROA and high cash flow as a portion of assets). Additionally, they noted that target firms have a weak stock performance (low Tobin's Q and high book to market ratio) and are relatively small in size. Similarly, Brav *et al* (2008) observed that target companies are commonly firms with a low market value compared to their book value and described them as "value" firms. However, they noted that these firms typically have a strong operating performance with robust operating cash flows and ROA. They also pointed out that target firms are generally not big in size, being only a few of them large-cap companies, and that are characterized by having a high level of institutional ownership and trading liquidity. Similar work by Klein and Zur (2006) and Brav *et al* (2010) reported comparable results. Greenwood and Schor (2009) and Bebchuk *et al* (2015) however, observed that target firms tend to be companies that are underperforming compared to their industry peers previous to the hedge fund engagement.

2.2. Hedge fund activism in Europe

Unlike the case of the U.S., literature about hedge fund activism in Europe is more limited and has mainly concentrated its attention on the abnormal stock returns surrounding the event date, with only a few studies documenting the characteristics of target firms or changes in operating performance. Furthermore, it is important to note that previous research in Europe has not always focused on activism solely by hedge funds or included a comprehensive sample of the European continent.

Consistent with the results in the U.S., evidence in Europe shows the existence of positive abnormal returns surrounding the event date. Becht, Franks and Grant (2010) conducted a study with a sample including both public and private activist events by hedge funds, focus funds and other activists across Europe for the years 2000 to 2008. For the case of the database including the public interventions, they reported statistically significant average abnormal returns of 4.4% during the 20 days prior to the 20 days after the event date. They further analyzed the abnormal returns over the same period according to the fund style, observing returns of 6.9% for the case of specialist funds (i.e., funds that are exclusively activists) and returns of 0.57% for non-specialist funds (i.e., commonly multi-strategy hedge funds that are not necessarily focused on activism). Likewise, in an international study about hedge fund activism during the 2000-2010 period, Becht *et al* (2017) found abnormal returns of 4.8% for a 41-day event window for the case of Europe. Furthermore, in a study including a sample with some European countries for the period 2000-2007, Stokman (2007) identified statistically significant average cumulative abnormal returns of 12.19% during the period corresponding to 25 days before to 25 days after the stake disclosure.

Some studies have focused on single European countries, finding similar results. Mietzner and Schweizer (2014) conducted a study comparing hedge fund and private equity activist interventions in Germany using a sample between 1993 and 2007. For the hedge fund sample, they reported statistically significant mean cumulative abnormal returns of 6.24% for the (-20, +20) event window. Similarly, Croci and Petrella (2015) conducted a study in Italy separating the effects of hedge fund trading (i.e., hedge fund's buying activity) and hedge fund disclosure (i.e., the market's reaction to the hedge fund's stake ownership announcement, anticipating an activist campaign) for the period between 2000 and 2007. They found positive and statistically significant abnormal returns for both cases for the (-4, +3) window. However, they observed that for the case of hedge fund trade, the abnormal returns for this period were larger than the ones related to hedge fund disclosures, being 1.76% and 0.93% respectively. Accordingly, they argue that this positive market reaction should not be only attributed to the expectation of activism, and that other factors such as the hedge fund trades play an important role in the price reaction.

Finally, a few studies have examined further the phenomenon of hedge fund activism in Europe, analyzing other matters that include the abnormal stock returns in the long-term, changes in the firm performance or the target firm characteristics, finding in some cases mixed evidence. Stokman (2007) studied the stock returns of a sample with some European countries for the period corresponding to 25 days prior the stake disclosure to 3 and 6 months after, and reported average cumulative abnormal returns of 9.24% and 9.66% respectively, both statistically significant. Using the same sample, Stokman (2007) also analyzed the changes in ROA, ROE, ROI (return on invested capital) and operating profit margin from one year before to one year after the intervention in order to measure the changes in the firm performance, but did not find any significant results. Similarly, Mietzner and Schweizer (2014) examined further their sample of hedge fund activism events in Germany, analyzing both the abnormal returns in the long-run and the target firm characteristics. In contrast with the results reported by Stokman (2007), they identified negative buy-and-hold abnormal returns of -21.46% for the 250-day period after the stake disclosure. For the case of the target firm characteristics, Mietzner and Schweizer (2014) observed that German target firms are typically relatively small companies, with the presence of other blockholders and with a high book-to market ratio or in other words, "undervalued" firms. These results seem to be consistent with the ones found in the U.S. regarding the kind of firms commonly targeted by activist hedge funds. However, it is important to note that these results correspond only to the case of Germany and should not be generalized for the rest of Europe.

PART II: EMPIRICAL STUDY

1. INTRODUCTION

As reviewed in the theoretical part, several studies have aimed to analyze the effect of hedge fund activism on the target firms. However, the majority of the available literature about this phenomenon has focused on the U.S., and the one targeting Europe has mainly concentrated on the abnormal stock returns surrounding the event date or includes outdated samples (cf. supra p.29). This is the reason why we have decided to focus our attention on the phenomenon of hedge fund activism in Europe, and more specifically, its impact on the firms. To measure this impact, we will focus not only on the abnormal stock returns, but also on the changes in some operating performance indicators; using a more recent sample. In other words, this study will intend to confirm the initial positive market reaction[6] documented by previous work and analyze whether this first positive reaction also translates into improvements in the firm performance. The aim is then, to have a more recent picture of hedge fund activism in Europe and its effects on the firms.

The second part of the thesis consists of three sections. The first one displays the methodology and formulas used, the second one explains how the data was collected and the last section aims to present the results from the study and the corresponding analysis.

2. METHODOLOGY

Two different methodologies are used in order to address our research question about the impact of hedge fund activism on European target firms. First, an event study is conducted to obtain the abnormal stock returns surrounding the event date and second, ordinary least square (OLS) regressions are performed to analyze the changes in the firm performance after being targeted by an activist hedge fund. Both methodologies will be explained in detail in this section.

2.1. Event study for abnormal stock returns

"Using financial market data, an event study measures the impact of a specific event on the value of a firm." (MacKinlay, 1997, p.13). More specifically, this method is appropriate to determine whether there is a stock price effect in the form of "abnormal" stock returns linked to an unexpected event (McWilliams and Siegel, 1997).

McWilliams and Siegel (1997) discuss some assumptions that are relevant when using the event study methodology to identify abnormal returns:

[6] Characterized by positive abnormal returns surrounding the event date.

1. **Market efficiency:** This assumption implies that the stock prices incorporate all the relevant information that is available (cf. supra pp.3-4). In other words, the stock prices will instantaneously adjust in order to reflect any new financial information that is disclosed. Therefore, this assumption provides the basis of the event study methodology.
2. **Unanticipated events:** This assumption is based on the idea that before the announcement, the market did not have any information about the event. In this case, the abnormal returns can be presumed as the market reacting to new information.
3. **Confounding events:** This assumption implies that the researcher has isolated the event of interest from other events that might have an effect on the stock prices during the event window. Examples of confounding events include the announcement of a new product, declaration of dividends or changes of top-level executives. Thus, the longer the event window, the more difficult it is to control for these other events that might have an effect on the stock prices.

Now that we have reviewed some of the key assumptions that this methodology relies upon, it is time to move on to the steps necessary to develop the event study.

According to MacKinlay (1997), the first task in order to conduct an event study is to identify the event that is intended to be studied and to determine the event window, defined as the period over which the stock prices of the firms will be analyzed. Following the literature, the event of interest in this thesis is **the announcement of a stake ownership by an activist hedge fund in a target company**[7]. The date of the first stake announcement is then the event date. However, it is accustomed to define the event window as a period larger than the day of the event itself, in an effort to capture the price effects that might have happened outside of this day. As an example, due to information leakages, the market could have acquired information before the formal announcement to the public is made. Likewise, the announcement could have been made when the stock market was already closed, leading to price adjustments in the days following the event. Taking into account these matters, it is reasonable to have an event window that includes some time before and afterwards the announcement day (MacKinlay, 1997).

Although McWilliams and Siegel (1997) argue that having a long event window will make it more difficult to control for confounding events, Brav *et al* (2008) reported an increase in both abnormal stock returns and trading volumes of the target company shares beginning 1 to 10 days prior to the event date. Similarly, Brav *et al* (2010) found an increase in the abnormal returns during the same period prior to the event date, and noted that this increase keeps trending upwards until 20 days following the day of the event.

[7] Following the literature, we make the assumption that the stake disclosure by an activist hedge fund in a target firm implies that the hedge fund will follow an activist campaign in the company.

These findings support the reasoning presented by MacKinlay (1997) and indicate that indeed, it is reasonable to have a long event window when studying abnormal stock returns.
In agreement with the literature (cf. supra pp.26-30), a 41-day event window is used in the study. More specifically, the abnormal stock returns are measured on day -20 until day +20, where the event date is 0. This event window is the most used in previous work, allowing the comparison between our results and the ones obtained in previous studies.

Once the event of interest has been identified and the event window has been determined, it is necessary to set an estimation window, being the period used to estimate the parameters for the normal returns (MacKinlay, 1997). Following Becht *et al* (2017) and MacKinlay (1997), the estimation window for this study consists of 250 trading days preceding the event window. More specifically, from day -21 until day -271.

It is important that the event window and the estimation window do not overlap. If this happens, the event effects would be captured by both the normal and abnormal returns leading to a problem with the methodology, since it relies on the assumption that only the abnormal returns capture the event impact on the stock prices (MacKinlay, 1997).
Figure 5 shows the timeline for the event study. The period from T_0 to T_1 represents the estimation window, the event window comprises the period from $T_1 + 1$ to T_2 (preventing overlapping) and the event date is defined as $\tau = 0$.

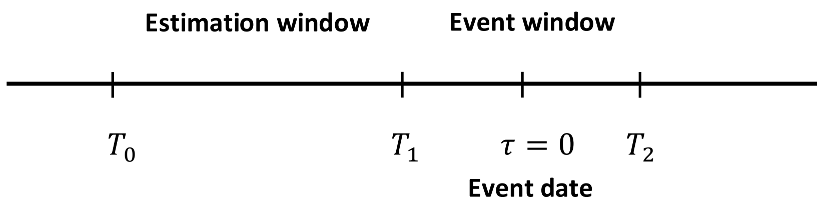

Figure 5: *Timeline for event study*

2.1.1. Normal returns

The expected returns of a security i when the event does not occur are known as the normal returns (MacKinlay, 1997). There are different models available to calculate the normal returns of a stock. The models can be divided into two main groups: statistical and economic. Models in the first category use statistical assumptions regarding the behavior of the securities' returns whereas the economic models, on top of the statistical assumptions, rely also on assumptions concerning the investor's behavior (MacKinlay, 1997). In this thesis, a statistical model known as the market model is used.

Market model

"The market model is a statistical model which relates the return of any given security to the return of the market portfolio." (MacKinlay, 1997, p.18). Moreover, a linear relation between these two variables is assumed in this model (MacKinlay, 1997).

On the other hand, there is the Constant Mean Return Model, another commonly used statistical model which assumes that "the mean return of a given security is constant through time." (MacKinlay, 1997, p.15). Since this latter model depicts a simpler representation by assuming that the stock returns depend on a constant term, it seems more reasonable to employ the market model, as it takes into account the role of the market in the security returns. Furthermore, other multifactor statistical models require more input data without bringing significant gains when employing them and the use of economic models such as the Capital Asset Pricing Model (CAPM) or the Arbitrage Pricing Theory (APT) has decreased as they do not represent additional gains over the market model (MacKinlay, 1997).

According to MacKinlay (1997), ordinary least squares (OLS) is a consistent estimation method for the market model parameters. Hence, the following formula is used in order to compute the normal returns for each security i using the estimation window:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

$$E(\varepsilon_{it} = 0) \qquad\qquad var(\varepsilon_{it}) = \sigma_{\varepsilon i}^2$$

Where:

R_{it} is the return of the security i in period t

R_{mt} is the return of the market portfolio in period t

ε_{it} is the zero mean disturbance term

α_i, β_i and $\sigma_{\varepsilon i}^2$ are the parameters of the market model

In practice, a comprehensive stock index is used to measure the market portfolio (MacKinlay, 1997). However, since our sample comprises different European countries, a benchmark stock index of each country is used as a proxy for the market portfolio. Thus, the FTSE 100 index is used as the proxy for the United Kingdom, the DAX for Germany, the CAC 40 for France and so on. The country is determined by the main stock exchange where the target firm is listed (see Table 3). It is important to note that there are some cases where the main stock exchange of the European target company is located in the U.S. (i.e., the New York Stock Exchange) and therefore, the S&P 500 index is used as the benchmark in those cases.

2.1.2. Abnormal returns

Once the parameters for the normal returns are estimated, the abnormal returns during the event window can be calculated. The abnormal returns are determined by the actual stock returns over the event window (given the occurrence of the event) minus the normal returns over the same period, which are predicted by the parameters obtained using the OLS regression proposed by the market model (MacKinlay, 1997). Following the methodology discussed by MacKinlay (1997), the abnormal returns for each firm are determined using the algebraic expression below:

$$AR_{it} = R_{it} - \hat{\alpha}_i + \hat{\beta}_i R_{mt}$$

Where AR_{it} are the abnormal returns for the security i in the event window, R_{it} is the actual return during the same period and $\hat{\alpha}_i$ and $\hat{\beta}_i$ are the parameters estimated by the market model.

Now that the abnormal returns for each security have been obtained, it is necessary to aggregate them over the event window. Thus, the cumulative abnormal returns (CAR) for each security over the 41-day event window are computed using:

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

These cumulative abnormal returns can then be aggregated throughout the sample by obtaining the cumulative average abnormal returns ($\overline{CAR}$) as follows:

$$\overline{CAR}_{(t_1,t_2)} = \frac{1}{N} \sum_{i=1}^{N} CAR_{i\,(t1,t2)}$$

Finally, the statistical significance of the $\overline{CAR}$ must be tested. In order to do so, the test below proposed by MacKinlay (1997) is performed:

$$\theta_1 = \frac{\overline{CAR}_{(t_1,t_2)}}{var\,(\overline{CAR}_{(t_1,t_2)})^{1/2}} \sim N\,(0{,}1)$$

Corresponding to the following null hypothesis, tested at the 10%, 5% and 1% levels:

H_0: the abnormal stock returns across the sample are equal to zero during the event window

In other words, if the null hypothesis is rejected, it can be assumed that the event does have an impact on the security prices in the form of abnormal stock returns.

2.2. OLS regression for firm performance

A standard ordinary least squares (OLS) regression is employed in order to test whether the announcement of a stake ownership by an activist hedge fund has a positive impact on the target firm performance. The changes in the performance are measured for the period corresponding to one year before to one year after the stake disclosure (i.e., the event year).

In agreement with DesJardine and Durand (2020), the dependent variable corresponds to the performance metric and the independent variable is a dummy variable equal to 1 for the event year and the subsequent year and equal to 0 for the year previous to the stake disclosure. In line with the literature, the following performance metrics are analyzed: return on assets (ROA), operating profit margin and Tobin's Q. While the latter assesses the market performance by measuring the firm value, the ROA and the operating profit margin measure the firm's operating profitability (Brav *et al*, 2008; DesJardine and Durand, 2020). Since it is also necessary to take into account other factors that might have an impact on the dependent variable, control variables are included in the regressions. According to DesJardine and Durand (2020), firms can perform differently subsequent to the changes pursued by activist campaigns depending on whether it is a small or a large firm. Similarly, performance can be affected by the firm's financial leverage. Accordingly, firm size and firm leverage are included as control variables. A detailed description of how the variables included in the regressions are defined can be found in the next section (cf. infra pp.42-43).

To account for the temporal trends specific to each year, year-fixed effects are included. Likewise, firm and industry fixed effects are included in order to take into account all the aspects that do not change over time and that are specific to each firm or each industry. It is important to note that the firm-fixed effects automatically contain the industry-fixed effects (since the industry corresponds to a time-invariant factor particular to each firm) and therefore, industry-fixed effects are not used when including firm-fixed effects (Bebchuk *et al*, 2015; DesJardine and Durand, 2020).

Furthermore, since the performance metrics are presented on a yearly basis (based on the firm's financial reporting year), additional regression models were run in order to make sure that the changes in the performance were measured only after the stake disclosure. In this case, the dummy variable was adjusted to 1 only for the year following the disclosure and to 0 otherwise. A summary of the 4 regressions models run for each performance metric is presented in *Table 1.*

Statistical significance is tested at the 10%, 5% and 1% levels, corresponding to the following null hypothesis:

H_0: the changes in the firm's performance after being targeted by an activist hedge fund are not significantly different from zero.

Table 1: *Regression models for target firm performance*

Variable	Model 1	Model 2	Model 3	Model 4
Dependent variable (ROA, operating profit margin, Tobin's Q)	YES	YES	YES	YES
Event dummy	1: event year and following year 0: otherwise	1: event year and following year 0: otherwise	1: year following disclosure 0: otherwise	1: year following disclosure 0: otherwise
Firm size	YES	YES	YES	YES
Leverage	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	YES	NO	YES	NO
Industry FE	NO	YES	NO	YES

3. DATA COLLECTION

The final database used in the empirical study was built upon three main dimensions: the hedge fund activism events, the stock data and the corporate performance data. The process of how the data was collected for these three dimensions will be explained in detail in the following pages.

3.1. Hedge fund activism events

For the hedge fund activism events, a manually-collected sample was built in several steps. The starting point was a database retrieved from *EIKON* including shareholder activism events from the year 2000 to 2020. Since the focus of this thesis is on hedge fund activism in Europe, the first step was to filter the database depending on the country of the target firm. Only target companies based in European countries were included. The next step was to identify the events in the period of interest. Considering the fact that most of the previous studies regarding hedge fund activism in Europe include outdated samples collected for periods

before the financial crisis of 2008 or including the year of the crisis (cf. supra p.29), the sample for this study was collected for the years 2010 to 2020. This, aiming to have a newer sample and one that is not biased by the years of the financial crisis.
Once the database has been narrowed down according to the period and countries of interest, the following step was to identify which of the investors initiating activism were actually hedge funds. In order to do so, the news database *Factiva* was used. All the investors present in the initial database were searched in *Factiva* using the name of the investor and the term 'hedge fund' as key words, aiming to see whether they were identified as hedge funds by the news. All the events following the criteria about the period and country and being initiated by hedge funds were then included in the database. A summary of all the hedge funds included in the sample is presented in *Table 2.* Several events were also deleted for diverse reasons (cf. infra pp.38-39), resulting in a final database of 64 hedge fund activism events (see Appendix 1: Sample of hedge fund activism events).

Since it is necessary to identify an accurate event date to conduct the event study, additional research was performed aiming to identify the date when the first ownership stake announcement was made to the public (event date) and to collect other relevant information about the activist event. This research was performed using two main sources: the database *Factiva*, where the name of the target company and the corresponding hedge fund were used as key words, and the website of the financial market authority of each country. It is important to note that since there is not a unified database that comprises all the regulatory filings across European countries, the disclosure documents for each country had to be searched individually. The criteria used to identify the event date is described below:

- If a regulatory filing with the stake disclosure of the corresponding hedge fund in the target company was found, the earliest date when the disclosure document was published was used as the event date. In other words, the date when the hedge fund crosses for the first time the disclosure threshold in the target company.
- In the case no regulatory filing is found, the start date of the activist event suggested by the initial *EIKON* database was used as the starting point. Since the date of the actual event sometimes differs from the date of the ownership stake disclosure (event date), this date was double checked with news from *Factiva* and adjusted accordingly, taking the earliest reported date as the event date. Among the reasons why there can be cases where no regulatory filing is found include when the stake acquired by a hedge fund in the target company falls below the regulatory threshold and thus, it is not mandatory to disclose it.

3.1.1. Deleted events

There are diverse reasons why an event was deleted from the final database. First of all, if the target company was private, the event was dropped off the database. This, because the stock and firm performance data is not available for private companies. Additionally, in agreement with DesJardine and Durand (2020), events where the same company was targeted again (by the same hedge fund or by a different one) were also deleted from the database aiming to isolate the effects of one case of activist ownership per company and thus avoid misinterpreting the impact of a stake ownership by an activist hedge fund. Finally, events with not enough information or no clear disclosure date were also dropped off the database, since having an accurate event date is an essential step for conducting the study.

Table 2: *Hedge funds included in the sample*

Hedge funds	Activist events
Elliott Management	11
Cevian Capital	6
Third Point	5
Amber Capital	4
Trian Fund Management	4
Sherborne Investors	3
The children's investment fund (TCI)	3
Knight Vinke Asset Management	2
Charity Investment Asset Management (CIAM)	2
Teleios Capital Partners	2
Sandell Asset Management	1
Marcato Capital Management	1
Icahn Partners	1
Centaurus Capital	1
Schoenfeld Asset Management (PSAM)	1
Valueact Capital Partners	1
Toscafund Asset Management	1
Oasis Management	1
Starboard Value	1
RBR Capital Advisors	1
Odey Asset Management	1
Orange Capital	1
Oceanwood Capital Management	1
Gatemore Capital Management	1
Southeastern Asset Management	1
Wyser Pratte Management	1
Eminence Capital	1
Rbr Strategic Value	1
Active Ownership Capital	1

(continued)

Table 2 – continued

Hedge funds	Activist events
Laxey Partners	1
PrimeStone Capital	1
ENA Investment Capital	1
Total	**64**

3.2. Stock data

Once the main sample with the hedge fund activism events was built, the next step was to collect the stock data. More specifically, the first assignment was to identify the country of the main stock exchange where each target company was listed using the database *ORBIS Europe.* The main stock exchange will determine the stock from which the security prices are obtained and the stock index used as proxy for the market portfolio (see Table 3). For each security, the daily adjusted closing prices[8] were obtained using *Yahoo! Finance,* for the days corresponding to the estimation and event windows. Likewise, the stock index data was retrieved using *Yahoo! Finance* and *MarketWatch* for the same periods.

Table 3 shows a summary of the benchmark indices for each country used as a proxy for the market portfolio in the study.

[8] "Adjusted close is the closing price after adjustments for all applicable splits and dividend distributions." (Yahoo!, 2022).

Table 3: *Benchmark index used for market portfolio*

Main stock country	Benchmark index	Observations
United Kingdom	FTSE 100[9]	18
Germany	DAX[10]	10
France	CAC 40[11]	9
Netherlands	AEX[12]	6
United States	S&P 500[13]	5
Switzerland	SMI[14]	4
Italy	FTSE MIB[15]	3
Spain	IBEX 35[16]	3
Belgium	BEL 20[17]	2
Portugal	PSI 20[18]	1

(continued)

[9] FTSE 100 data gathered from MarketWatch (2022). *FTSE 100 index.* Retrieved March 7, 2022 from https://www.marketwatch.com/investing/index/ukx/download-data?countrycode=uk&mod=mw_quote_tab

[10] DAX data gathered from Yahoo! Finance (2022). *DAX performance index.* Retrieved March 7, 2022 from https://finance.yahoo.com/quote/%5EGDAXI/history?p=%5EGDAXI

[11] CAC 40 data gathered from Yahoo! Finance (2022). *CAC 40 index.* Retrieved March 7, 2022 from https://finance.yahoo.com/quote/%5EFCHI/history?p=%5EFCHI

[12] AEX data gathered from Yahoo! Finance (2022). *AEX index.* Retrieved March 7, 2022 from https://finance.yahoo.com/quote/%5EAEX/history?p=%5EAEX

[13] S&P 500 data gathered from MarketWatch (2022). *S&P 500 index.* Retrieved March 7, 2022 from https://www.marketwatch.com/investing/index/spx/download-data?mod=mw_quote_tab

[14] SMI data gathered from MarketWatch (2022). *Swiss Market Index SMI index.* Retrieved March 7, 2022 from https://www.marketwatch.com/investing/index/smi/download-data?startDate=5/2/2014&endDate=03/28/2022&countryCode=ch

[15] FTSE MIB data gathered from MarketWatch (2022). *FTSE MIB index.* Retrieved March 7, 2022 from https://www.marketwatch.com/investing/index/i945/download-data?countrycode=it&mod=mw_quote_tab

[16] IBEX 35 data gathered from Yahoo! Finance (2022). *IBEX 35 index.* Retrieved March 7, 2022 from https://finance.yahoo.com/quote/%5EIBEX/history?p=%5EIBEX

[17] BEL 20 data gathered from Yahoo! Finance (2022). *BEL 20 index.* Retrieved March 7, 2022 from https://finance.yahoo.com/quote/%5EBFX/history?p=%5EBFX

[18] PSI 20 data gathered from Yahoo! Finance (2022). *PSI 20 index.* Retrieved March 7, 2022 from https://finance.yahoo.com/quote/PSI20.LS/history?p=PSI20.LS

Table 3 – continued

Main stock country	Benchmark index	Observations
Finland	OMX Helsinki 25[19]	1
Denmark	OMX Copenhagen 20[20]	1
Ireland	ISEQ 20[21]	1
Total		**64**

Following Lusyana and Sherif (2017), the daily stock returns of each firm were computed as follows:

$$R_{it} = \frac{(P_{it} - P_{it-1})}{P_{it-1}}$$

Where R_{it} corresponds to the stock return of the security i on day t and P_{it} is the adjusted closing price of the security i on day t.

Similarly, the returns of the market portfolio were obtained using the same algebraic expression, but for the corresponding stock market index instead.

3.3. Firm performance data

The database *Orbis Europe* was used to collect the company data. In order to measure the changes in the firm performance after the activist intervention, the following metrics were obtained for each target firm for the year before *(t -1),* the event year *(t)* and the year following the intervention *(t +1)*:

- **Return on assets (ROA) using net income (%)**

$$\frac{net\ income}{total\ assets} * 100$$

[19] OMX Helsinki 25 data gathered from MarketWatch (2022). *OMX Helsinki 25 index.* Retrieved March 7, 2022 from https://www.marketwatch.com/investing/index/omxh25/download-data?countrycode=xx&mod=mw_quote_tab

[20] OMX Copenhagen 20 data gathered from MarketWatch (2022). *OMX Copenhagen 20 index.* Retrieved March 7, 2022 from https://www.marketwatch.com/investing/index/omxc20/download-data?countrycode=dk&mod=mw_quote_tab

[21] ISEQ 20 data gathered from Yahoo! Finance (2022). *ISEQ 20 index.* Retrieved March 7, 2022 from https://finance.yahoo.com/quote/%5EIETP/history?p=%5EIETP

- **Operating profit margin (%)**

$$\frac{EBITDA^{22}}{operating\ revenue\ (turnover)} * 100$$

- **Tobin's Q**

$$\frac{market\ capitalization}{total\ assets}$$

Similarly, the control variables were computed for the same period, as follows:

- **Firm size**

$$Ln\ total\ assets$$

- **Gearing (%) as a proxy for leverage**

$$\frac{non - current\ liabilities + loans}{shareholder\ funds} * 100$$

For the case of the target firms that are part of the financial sector, some metrics needed to be adjusted due to data availability. More precisely, the following metrics were computed as a proxy for the operating profit margin and gearing:

- **Profit margin (%) as proxy for operating profit margin**

$$\frac{P\&L\ before\ tax}{operating\ revenue\ (turnover)} * 100$$

- **Proxy for gearing (%)**

$$\frac{(total\ liabilities\ \&\ equity - equity - sub.debts - hybrid\ capital)}{equity} * 100$$

[22] EBITDA corresponds to the earnings before interests, taxes, depreciation and amortization.

Due to data availability, 14 target firms were eliminated from the final sample, resulting in a subsample of 50 firms to measure the changes in the firm performance (see Appendix 1: Sample of hedge fund activism events).

4. RESULTS FROM THE STUDY AND ANALYSIS

This last section is dedicated to the results from the empirical study and the corresponding analysis. The results are divided into three main parts. First, a set of descriptive statistics is presented in order to get a more recent picture about hedge fund activism in Europe. Then, the abnormal stock returns are analyzed and finally, the results regarding the changes in the performance of target firms are examined.

4.1. Descriptive statistics

Table 4: *Activist events by country*

Country	Activist events	% of sample
U.K.	19	29.69%
Germany	10	15.63%
France	9	14.06%
Netherlands	6	9.38%
Switzerland	5	7.81%
Ireland	4	6.25%
Italy	3	4.69%
Spain	3	4.69%
Belgium	2	3.13%
Portugal	1	1.56%
Finland	1	1.56%
Denmark	1	1.56%
Total	**64**	**100.00%**

Table 4 shows the number of activist events by country. The U.K. is by far the most targeted country by activist hedge funds in Europe, with 19 interventions representing approximately 30% of the sample. These findings are in line with the ones reported by Becht *et al* (2010), Becht *et al* (2017) and Stokman (2007), who also identified it as the number one targeted country for activist interventions. This is not surprising, since as discussed before, the U.K seems to provide a more favorable environment for activist shareholders (cf. supra p.18).

Germany and France are also among the most preferred countries for activist interventions, which together with the U.K. account for approximately 60% of the sample. This is consistent with Becht *et al* (2010), Becht *et al* (2017) and Stokman (2007), who also reported Germany as the second country with the most interventions and France as part of the top 4. Becht *et al* (2017) observed that although common law countries such as the U.S. and the U.K. have more activist interventions in absolute terms, developed countries with non-common law systems and a weaker governance have more activist interventions relative to the number of listed companies. They suggest that a possible explanation is that the latter countries provide more opportunities for improvement, drawing the activists' attention. Indeed, an evident example is our case study about Volkswagen and TCI in Germany, in which the complex corporate ownership structure and weak corporate governance of the German firm drew TCI's attention in order to propose major changes in its executive compensation policy.

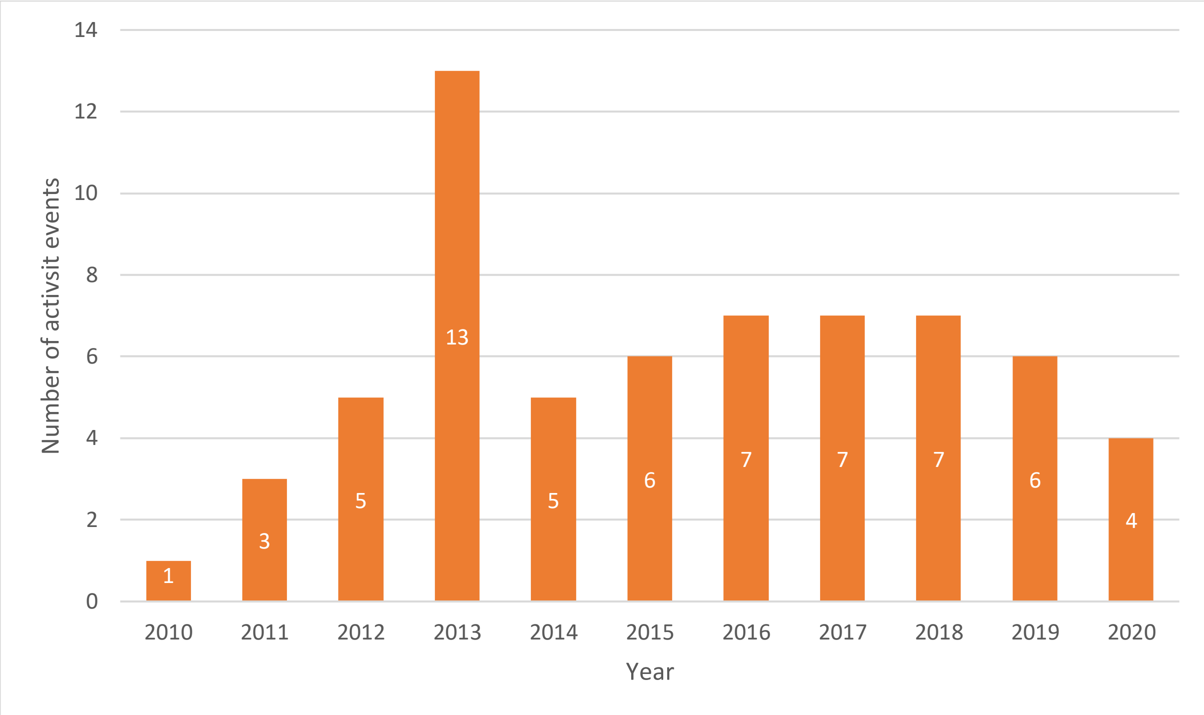

Figure 6: *Activist events by year*

Note. The number of activist events by year is based on the year of the stake disclosure.

The activist interventions by year are presented in *Figure 6.* As shown, there is a clear increase in the number of activist engagements from 2010 to 2013, being 2013 the year with the most activist events in the sample. There is no particular reason for such an increase in hedge fund activist interventions in 2013. However, Flaherty and Cruise (2015) commented that after the financial crisis of 2008, activism outside the U.S. set a record in 2013. This does not particularly refer to hedge fund activism in Europe, but might provide a possible explanation about the peak in 2013.

After 2013, the number of activist events remained relatively steady, without showing a clear upward trend. It is important to note however, that several activist events were deleted from the database for different reasons, including companies that were private at the moment of the data collection or events that did not have enough information regarding the disclosure dates (cf. supra pp.38-39); which could have affected to a great extent the number of activist interventions by year, potentially leading to an underestimated number of events. Therefore, these results should be interpreted with some caution.

Table 5 shows a summary of the hedge funds' stated objectives when engaging in activist campaigns. Out of the 64 activist campaigns, 42 (65.6%) include a single objective and 22 (34.4%) include multiple objectives.

The two most common objective categories are the ones involving changes in the target firm's business strategy or corporate governance. As previously discussed, the category of business strategy comprises the objectives related to spinning off business divisions, improving the firm's operational efficiency or growth strategies. On the other hand, the category of corporate governance includes issues involving board representation, efforts to oust the CEO, changes in the management or in the executive compensation policy (cf. supra pp.13-14). The fact that changes in the firm's corporate governance is among the most popular objectives is not surprising since the hedge fund might be seeking for board representation or changes in the top executives of the target firm in order to have more influence and facilitate the process of putting in place its other activist plans. In this case, pursuing changes in the firm's corporate governance could act as a tool to achieve other goals, encouraging activists to pursue multiple objectives in some circumstances.

Our findings are in line with the ones presented by some studies conducted in the U.S. More specifically, Brav *et al* (2008) and Boyson and Mooradian (2011) identified the objectives related to changes in the business strategy and corporate governance among the most common in activist interventions. However, there are some differences. While Boyson and Mooradian (2011) reported the objectives related to the sale of the target firm among the most popular, we did not find such objectives in our sample. Similarly, both Brav *et al* (2008) and Boyson and Mooradian (2011) observed that the first category related to unlocking shareholder value without a specific agenda is among the most common objectives. In our case, this category ranks last, suggesting that for the case of Europe, activist hedge funds might be seeking to achieve more specific goals.

Table 5: *Campaign's objectives*

Objective category	Observations
Shareholder value maximization	5
Payout policy and capital structure	16
Business strategy	34
Corporate governance	32

Note. The objectives are based on the classification presented by Brav et al (2008). One activist campaign can be classified in more than one category and therefore, the sum of the observations is bigger than the total of the sample that includes 64 activist interventions. However, since the first category corresponds to campaigns that do not include a specific agenda, the first category and the other three categories are mutually exclusive.
The objective category corresponding to the sale of the target firm was not found in our sample and therefore is not reported.

Table 6 presents a summary of the sectors targeted by activist hedge funds throughout the sample period. There is a clear preference for the manufacturing (35.94%) and the financial (18.75%) sectors, which together account for more than 50% of the sample. Campaigns involving target firms in these two sectors were found quite early in our sample period. More precisely, the first activist campaign targeting a firm in the financial sector in our sample was in 2010, and for the case of the manufacturing sector was in 2012. Another relevant sector is the one related to information and communication, which represents around 11% of the sample. Although the number of activist campaigns targeting this sector were relatively not that many, hedge funds have engaged in activist interventions involving big players of the communications sector in Europe, including firms like Vivendi in France, Telecom in Italy or Vodafone in the U.K. (see Appendix 1: Sample of hedge fund activism events). Moreover, according to a study conducted by Skadden (2022) about the sectors that are expected to see the most activist campaigns in 2022, the technology, media and telecoms sector ranks first; showing the growth potential of this sector as a target for activism.

Table 6: *Target firm's sectors*

Target firm's sector	Activist events	% of sample
Manufacturing	23	35.94%
Financial and insurance activities	12	18.75%
Information and communication	7	10.94%
Wholesale and retail trade	4	6.25%
Accommodation and food service activities	3	4.69%
Mining and quarrying	3	4.69%
Professional, scientific and technical activities	3	4.69%
Administrative and support activities	2	3.13%
Construction	2	3.13%
Electricity, gas, steam and air conditioning supply	2	3.13%
Transportation and storage	2	3.13%
Real estate activities	1	1.56%
Total	**64**	**100.00%**

Note. The sectors are based on the statistical classification of economic activities in the European Community (NACE Rev. 2 main sector) obtained from the database Orbis Europe.

The collected company data also yielded additional insights regarding the target firms in Europe. As previously analyzed, the evidence in the U.S. suggests that activist hedge funds tend to target firms that are relatively small in size and undervalued (cf. supra. p.28).

In order to analyze whether a target firm is undervalued, the Tobin's Q metric for the year previous to the year of the disclosure was used. More specifically, the following criteria was considered:

- If Tobin's Q < 1 for the period *(t-1)*: the firm is categorized as undervalued
- If Tobin's Q > 1 for the period *(t-1)*: the firm is categorized as overvalued

Our findings are in line with the literature, suggesting that activist hedge funds generally target undervalued stocks. Furthermore, the 78.33% of the sample[23] corresponds to undervalued firms, while only 21.67% to overvalued companies. However, for the case of the target firm

[23] Due to data availability, 4 target firms were eliminated, resulting in an adjusted sample of 60 target firms.

size, our results differ from the ones indicating that activist hedge funds tend to target relatively small companies.

In order to examine whether a target firm is a large cap, the benchmark index of the country where the firm is listed was used (see Table 3). If the firm forms part of the corresponding benchmark index, it is categorized as a large cap. In the case the firm is not part of the index, it falls into the category of small and medium caps. Our findings suggest that contrary to the case of the U.S., European targets tend to be more diverse regarding their size. Furthermore, 48.44% of our sample corresponds to large cap firms and 51.56% to small or medium cap firms. These results show that even though small or medium cap firms are still predominant, hedge funds are, to a large extent, also focusing their attention on European large caps.

4.2. Abnormal returns

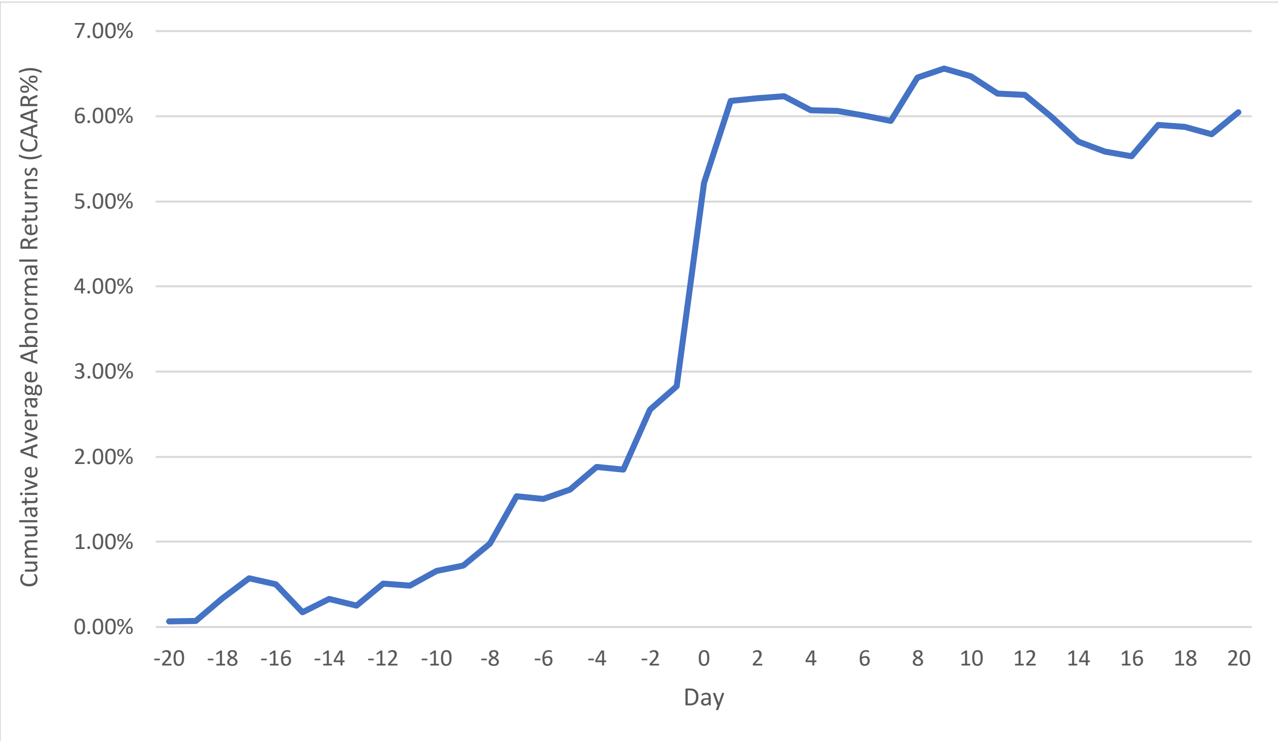

Figure 7: *Cumulative average abnormal returns (CAAR) for the (-20, +20) event window*

Note. Day zero corresponds to the day of the stake ownership announcement (event day).

The abnormal stock returns for the (+20, -20) event window are displayed in *Figure 7.* We found positive abnormal returns, confirming the positive market reaction to the announcement of activist interventions by hedge funds, as documented by previous work (cf. supra. pp.26-30). Consistent with the findings reported by Brav *et al* (2008) and Brav *et al*

(2010), there is a sustained increase in the abnormal returns between day -11 and the day of the announcement. This climb of the abnormal returns prior to the disclosure day not only suggests the existence of information leakages that allow the market to acquire information previous to the public announcement, but also confirms the reasoning behind including an event window that is longer than the event day, as noted by MacKinlay (1997). There is a major rise in the abnormal returns on the day of the announcement, maintaining this level up to a total of 6.05% 20 days following the announcement. These findings are comparable with the ones reported by Becht *et al* (2010) in Europe as well as Brav *et al* (2008), Brav *et al* (2010) and Bebchuk (2015) in the U.S.

It is important to mention that in our case, the largest abnormal returns (6.56%) are reached on day 9 following the stake disclosure. After that, the abnormal returns show a slight downward trend which could suggest that the market is starting to adjust from its overreaction to the announcement of activism. Moreover, these findings indicate that the market needs less than 20 days to fully react to the announcement of activism.

In order to confirm our initial results, we tested the statistical significance of the abnormal returns during the event window. The CAAR and corresponding *t*-statistics are reported in *Table 7.*

Table 7: *Statistical significance of CAAR for the (-20, +20) event window*

Day	CAAR (%)	*t*-statistics
-20	0.07%	0.31
-19	0.07%	0.26
-18	0.33%	0.90
-17	0.57%	1.18
-16	0.51%	0.98
-15	0.17%	0.33
-14	0.33%	0.66
-13	0.25%	0.45
-12	0.51%	1.01
-11	0.49%	0.84
-10	0.66%	1.01
-9	0.72%	0.93
-8	0.98%	1.24
-7	1.53%*	1.79
-6	1.51%*	1.69

(continued)

Table 7- continued

Day	CAAR (%)	*t*-statistics
-5	1.61%	1.63
-4	1.88%*	1.69
-3	1.85%	1.50
-2	2.56%*	1.86
-1	2.83%**	2.05
0	5.21%***	3.19
1	6.18%***	3.69
2	6.21%***	3.52
3	6.23%***	3.58
4	6.07%***	3.42
5	6.06%***	3.43
6	6.01%***	3.26
7	5.95%***	3.17
8	6.45%***	3.43
9	6.56%***	3.64
10	6.47%***	3.62
11	6.27%***	3.55
12	6.25%***	3.65
13	5.99%***	3.40
14	5.70%***	3.27
15	5.58%***	3.19
16	5.53%***	3.19
17	5.90%***	3.37
18	5.87%***	3.19
19	5.79%***	3.18
20	6.05%***	3.30

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

Table 7 shows that indeed, the abnormal stock returns are significantly different from zero (null hypothesis is rejected). More precisely, we observe that from the day of the announcement until 20 days afterwards, the abnormal stock returns are statistically significant at the 1% level. Furthermore, the CAAR corresponding to 1 and 2 days prior to the event are also significant at the 5% and 10% levels respectively.

In agreement with the literature in both the U.S. and Europe, these findings confirm that the engagement of an activist hedge fund with a target firm creates value for the shareholders in

the short-term, in the form of positive and statistically significant abnormal stock returns surrounding the event day.
Aiming to have a better control for confounding events that might have had an impact on the stock returns, we also computed CAAR for a shorter event window. More specifically, we estimated the abnormal stock returns for the (-10, +10) event window, obtaining similar results.

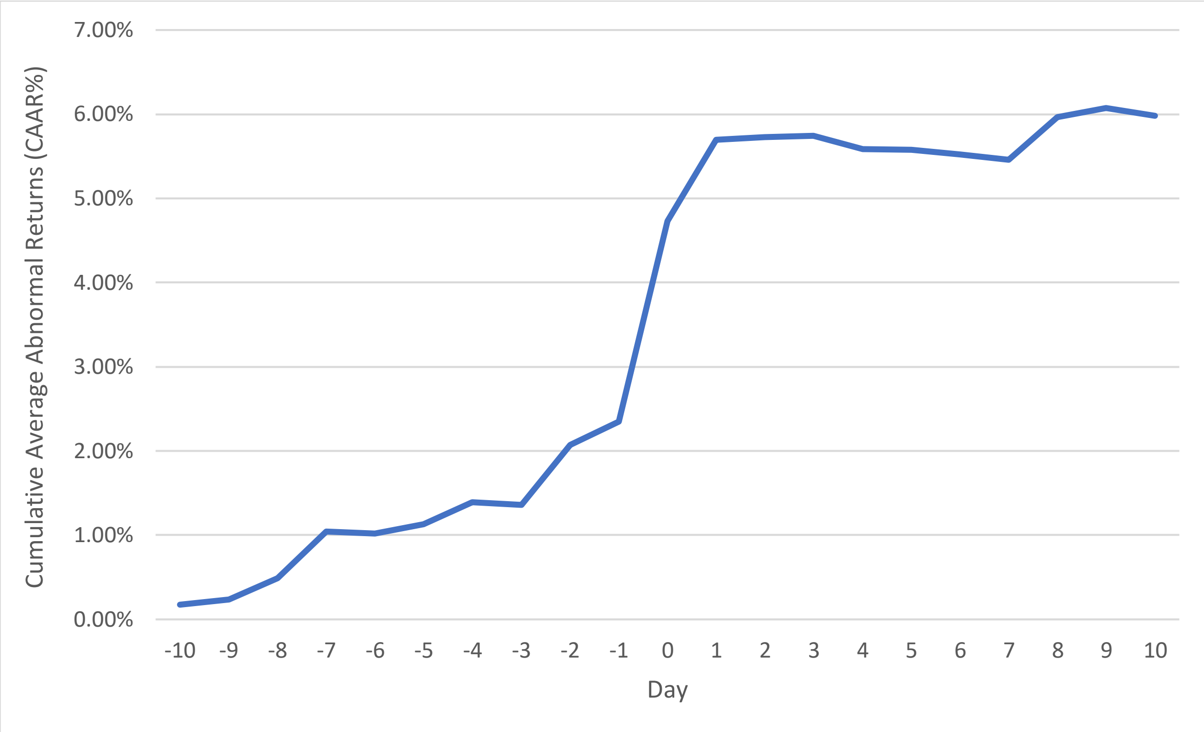

Figure 8: *Cumulative average abnormal returns (CAAR) for the (-10, +10) event window*

Note. Day zero corresponds to the day of the stake ownership announcement (event day).

As presented in *Figure 8*, we found abnormal returns of 5.98% for the (-10, +10) event window. These findings are comparable with the ones reported by Becht *et al* (2010) in Europe for the same period. The largest CAAR (6.07%) is reached on day 9 after the announcement, which is consistent with the results obtained for the (-20, +20) event window. However, in this case the abnormal stock returns are relatively stable after the announcement and do not seem to show a downward trend, indicating that during this period the market is still positively reacting to the announcement.

The statistical significance of the CAAR for this event window was also tested. The corresponding results are presented in *Table 8.*

Table 8: *Statistical significance of CAAR for the (-10, +10) event window*

Day	CAAR (%)	*t*-statistics
-10	0.17%	0.88
-9	0.24%	0.64
-8	0.49%	1.25
-7	1.05%**	2.20
-6	1.02%*	1.89
-5	1.13%*	1.68
-4	1.39%*	1.79
-3	1.36%	1.46
-2	2.07%*	1.99
-1	2.35%**	2.18
0	4.73%***	3.50
1	5.70%***	4.01
2	5.72%***	3.77
3	5.75%***	3.84
4	5.58%***	3.65
5	5.58%***	3.66
6	5.52%***	3.46
7	5.46%***	3.35
8	5.97%***	3.64
9	6.07%***	3.87
10	5.98%***	3.80

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

As reported in *Table 8*, even with a shorter event window the abnormal stock returns are statistically significant at the 1% level for the event day and the following 10 days. Moreover, around 7 days prior to the event the abnormal returns start being statistically significant at the 5% and 10% levels.

These results confirm once again, the positive market reaction to the announcement of hedge fund activism previously documented by the literature.

4.3. Corporate performance

After confirming the market's positive reaction to the stake ownership announcement by an activist hedge fund, we tested the changes in some key variables to analyze whether this initial positive reaction actually translates into improvements in the firm's performance.

Table 9: *Target firm's performance*

Panel A: Return on assets (ROA)

Variable	Model 1	Model 2
Event dummy	-2.42 (-0.56)	-1.12 (-0.44)
Firm size	29.09*** (4.16)	1.20 (1.25)
Leverage	-0.00 (-0.27)	-0.00 (-0.41)
Constant	-491.36*** (-4.22)	-57.28*** (-3.55)
Year FE	YES	YES
Firm FE	YES	NO
Industry FE	NO	YES

Panel B: Operating profit margin (OPM)

Variable	Model 1	Model 2
Event dummy	6.63 (0.81)	0.67 (0.15)
Firm size	29.13** (2.21)	2.63* (1.80)
Leverage	-0.00 (-0.43)	-0.00 (-1.21)
Constant	-462.29** (-2.11)	-26.37 (-1.06)
Year FE	YES	YES
Firm FE	YES	NO
Industry FE	NO	YES

(continued)

Table 9 - continued

Panel C: Tobin's Q

Variable	Model 1	Model 2
Event dummy	0.11* (1.88)	0.05 (1.12)
Firm size	-0.14 (-1.47)	-0.05 (-1.30)
Leverage	-0.00 (-0.54)	-0.00 (-1.20)
Constant	3.07* (1.93)	0.90 (1.28)
Year FE	YES	YES
Firm FE	YES	NO
Industry FE	NO	YES

Note. Panel A provides the coefficients for the ROA, Panel B for the operating profit margin and Panel C shows the coefficients for Tobin's Q. The corresponding t-statistics (for model 1) and z-values (for model 2) are reported in parenthesis.
, **, * indicate statistical significance at the 10%, 5% and 1% levels.*

First, we computed models 1 and 2, where the dummy variable is equal to 1 for the event year and the following year, and 0 otherwise. The results are presented in *Table 9.* The variable of interest is the event dummy, representing the occurrence of the event. As shown, the coefficient is statistically significant (at the 10% level) only for the case of the Tobin's Q. This positive coefficient suggests that there is an increase of 0.11 in the firm value when an activist hedge fund discloses a stake in the target firm. These findings are in line with the ones reported in the U.S. by DesJardine and Durand (2020), who also observed a positive coefficient for Tobin's Q for the year following the stake ownership announcement. It is reasonable to think that the firm value will increase following the disclosure, since according to the literature, hedge funds tend to target firms that are undervalued, aiming to maximize shareholder value. However, it is important to note that when industry-fixed effects are included (model 2), the coefficient for Tobin's Q is not statistically significant.

Regarding the other variables, there might be an indication that after the announcement, there is an increase in the operating profit margin and a decrease in ROA. However, these two variables are not significantly different from zero.

As a second step we computed the models 3 and 4, where the dummy variable is equal to 1 only for the year following the announcement, and 0 otherwise. This, in order to make sure that the changes in the performance are measured after the stake disclosure actually took place. The results are summarized in *Table 10*.

Table 10: *Target firm's performance (adjusted)*

Panel A: Return on assets (ROA)

Variable	Model 3	Model 4
Event dummy	2.42 (0.56)	0.87 (0.34)
Firm size	29.09*** (4.16)	1.24 (1.28)
Leverage	-0.00 (-0.27)	-0.00 (-0.50)
Constant	-482.16*** (-4.11)	-57.10*** (-3.54)
Year FE	YES	YES
Firm FE	YES	NO
Industry FE	NO	YES

Panel B: Operating profit margin (OPM)

Variable	Model 3	Model 4
Event dummy	-6.63 (-0.81)	-3.18 (-0.72)
Firm size	29.13** (2.21)	2.62* (1.80)
Leverage	-0.00 (-0.43)	-0.00 (-1.16)
Constant	-487.47** (-2.20)	-26.73 (-1.08)
Year FE	YES	YES
Firm FE	YES	NO
Industry FE	NO	YES

(continued)

Table 10 - continued

Panel C: Tobin's Q

Variable	Model 3	Model 4
Event dummy	-0.11* (-1.88)	-0.10** (-2.07)
Firm size	-0.14 (-1.47)	-0.07 (-1.60)
Leverage	-0.00 (-0.54)	-0.00 (-1.14)
Constant	2.65 (1.65)	0.80 (1.15)
Year FE	YES	YES
Firm FE	YES	NO
Industry FE	NO	YES

Note. Panel A provides the coefficients for the ROA, Panel B for the operating profit margin and Panel C shows the coefficients for Tobin's Q. The corresponding t-statistics (for model 3) and z-values (for model 4) are reported in parenthesis.
, **, * indicate statistical significance at the 10%, 5% and 1% levels.*

As presented in *Table 10*, the only significant changes for the year following the announcement are seen in the firm value. More specifically, the coefficient for Tobin's Q is statistically significant for both models 3 and 4 at the 10% and 5% levels respectively. When comparing all models regarding this metric, the results obtained seem to indicate that there is an increase in the firm value when taking into account the event year (models 1 and 2). However, this increase seems to be perceived during the short-term, since when we take into consideration only the year following the stake disclosure (models 3 and 4), the coefficients turn negative, indicating a decrease in the firm value. These results would be consistent with the "pump and dump" view of activism.

Even though the coefficients for ROA and the operating profit margin are not statistically significant for these adjusted models, there is an indication of an increase in ROA one year following the stake disclosure. These findings would be in line with the majority of the literature, and might suggest that as part of its activist campaign, the hedge fund pursues divestitures in the less-performing assets, which as pointed out by Clifford (2008), would lead to an increase in this metric. Contrary to the results reported by previous work, we found that there is an indication of a decrease in the operating profit margin one year following the disclosure. It should be pointed out however, that the coefficients for ROA and operating profit margin are not statistically different from zero in all models and therefore, specific conclusions cannot be drawn regarding these metrics.

A possible explanation for the obtained results is that only one year following the stake disclosure was included in our study. As previously noted, when analyzing the metrics for a longer term, some of the evidence in previous work suggests clearer performance improvements. For instance, Brav *et al* (2008) reported a significant improvement in ROA and the operating profit margin two years after the hedge fund intervention. Similarly, Bebchuk *et al* (2015) documented an improvement in the target firm's Tobin's Q and ROA exceeding their event year levels three, four and five years after the intervention.

All in all, we found no evidence of significant improvements in the performance of European target firms, with the exception of the firm value (measured by Tobin's Q).

GENERAL CONCLUSION

The purpose of this thesis was to analyze the phenomenon of hedge fund activism in Europe and more specifically, its impact on target firms. First, we obtained a set of descriptive statistics aiming to have a better understanding of the nature of this phenomenon in Europe. Then, we performed an event study and obtained the abnormal stock returns surrounding the event date. This, intending to confirm the positive market reaction to hedge fund activism widely documented by the literature. Finally, we conducted a regression analysis to test whether this initial positive reaction translates into improvements in the target firm's performance.

We found that despite the differences in culture, corporate ownership structures and regulatory framework, activist interventions in Europe share some common characteristics with the ones in the U.S. This is particularly true for the type of companies targeted by activist hedge funds (being to a large extent undervalued firms), and the campaign's objectives pursued (being the changes in the firm's business strategy and corporate governance among the most popular). However, the differences between European countries play an important role when it comes to the selection of the target market. For instance, we observed that the U.K. has traditionally been and continues to be, one of the most attractive markets for activists due to its more shareholder-friendly environment.

Consistent with the literature, our findings confirm the positive market reaction to hedge fund activism for the case of Europe. We obtained positive and significant abnormal stock returns of approximately 6% surrounding the event date, suggesting that indeed, hedge fund activism creates value for the shareholders in the short-term. However, we found no evidence that this initial positive market reaction translates into improvements in the target firm's performance. Moreover, our results seem to indicate a short-lived increase in the firm value after the stake disclosure, followed by a decrease in this metric, consistent with the "pump and dump" view of activism.

It should be noted that due to data availability, the analysis of the changes in the target firm's performance was conducted for the period corresponding to one year before to one year after the stake disclosure. However, some evidence in previous work shows improvements in the performance when analyzing the metrics for a longer period. Therefore, for future research we suggest performing the study focusing on a longer time frame. Similarly, we suggest to complement the analysis by including a matched-sample approach, aiming to see the changes in the target firm's performance compared to its peers, which could lead to more accurate results.

In conclusion, even though our findings do not show evidence of significant improvements in the target firm's performance for the case of Europe, they do display that the phenomenon of hedge fund activism has an impact on the target firms, at least in the short-term (characterized by abnormal stock returns), and highlight the complexity of the ongoing debate regarding the effects of hedge fund activism on target firms.

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APPENDICES

Appendix 1: Sample of hedge fund activism events