

What matters for Investor Activism: An Investigation of Activists' Incentives vs. Activist Types*

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Abstract

We provide an empirical assessment of two incentivizing mechanisms that help overcome agency costs caused by the separation of ownership and control: namely inside ownership and external blockholdings. Our findings suggest that defining features of these mechanisms, like high ownership and costly (active) effort provision, are important determinants for a successful outcome. On the other hand, the type of activist seems to be of minor importance only. We find that announcements of activist hedge fund holdings are not accompanied with larger abnormal returns than a base-group of activist investors. The only group standing apart with a smaller effect are financial institutions. Our sample covers all Schedule 13D filings from 1985-2012. Incidences of active blockholders are very frequent with over 10,000 filings per year (1,900 initial filings). Additionally, these events are associated with substantial abnormal returns, 7% for initial filings (4% for all filings).

Keywords: investor activism, activist blockholders, hedge funds, stock ownership

JEL Classification: G30, G32

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1 Introduction

The seminal contribution of Berle and Means (1932) highlights the separation of ownership and control in public corporations and how this causes agency problems. Since management acts in its own interest rather than in the interest of shareholders, capital will be misallocated and resources will be wasted. The literature suggests two incentivizing mechanisms to help mitigate the problem. On the one hand, high managerial ownership will align the interests of management and shareholders. On the other hand, large monitoring shareholders may supervise management to act in the interest of shareholders.

Both incentive mechanisms share two common features: ownership is concentrated (either inside or outside ownership), and the large shareholder will engage in privately costly activities to help improve the value of the firm. Both situations describe variants of principal-agent problems. Shareholders of the firm may be interpreted as the principal, while the agent would be either the management or the monitoring shareholder. Therefore, both solutions to the agency problems embedded in the separation of ownership and control are similar from the perspective of principal-agent theory. At the same time, both incentive mechanisms may differ in other dimensions, e.g. the type of active blockholder and the intended strategy for the target company.

We use filings from Schedule 13D to investigate both incentive mechanisms and to highlight commonalities and differences. Investors have to fill a Schedule 13D filing if they acquire more than 5% of a security of a listed company, *and* if they plan to actively “change or influence the control” of the company. Schedule 13D filings are particularly useful in this set-up as they contain the two discussed common features by definition: Ownership has to be high (at least 5%) and the large shareholder has to be following some active strategy to improve the firm value. This is due to the special feature of the regulation. Active shareholders owning less than 5% of the shares do not fall under Regulation 13D and large shareholders without activist intentions have strong incentives to file a shorter Schedule 13G instead.

Our paper contains three sets of results. First, we find that active blockholders filing a Schedule 13D are very common and economically important. Our sample covers 248,398 13D filings (48,902 initial filings) from 1985-2012 which is, to the best of our knowledge, the most comprehensive sample of activist events analyzed so far. The large number of 13D filings (roughly 10,000 filings per year, over 1,900 initial filings per year) is accompanied

by substantial abnormal returns for all filings (roughly 4%) and even higher returns for initial filings (about 7%). Second, we investigate the determinants of abnormal returns surrounding a 13D filing in detail. It is noted that the two common features (high ownership and an active plan) are two major determinants of abnormal returns. A third large driver of abnormal returns are future mergers and acquisitions. In contrast, the identity of the filer plays a minor role in determining abnormal returns around 13D filings. In particular, the price impact of hedge funds and corporate insiders is not significantly different from other active blockholders. One group, however, seems to stand apart: abnormal returns associated with 13D filings from financial institutions lead to significantly lower abnormal returns. This finding is corroborated in our analysis of the real effects of investor activism where the impact of activism seems to be similar across filer type. Third, our analysis studies in detail the timing when the information of an activist campaign gets incorporated into the stock price. The results underline the relative importance of effects that take place on or around the trigger day (the day on which the 13D filing was triggered through an activist ownership stake greater than 5%) in comparison to the announcement day. This indicates that a proposed shortening of the reporting window may come with substantial costs, while the anticipated benefits in terms of informationally more efficient markets may be small.

These findings provide empirical support for the importance of agency problems caused by the separation of ownership and control as pioneered by Berle and Means (1932). However, the incentive mechanisms that mitigate agency problems are also important, both in terms of frequency and economic magnitude. Focusing on the unifying elements between high inside ownership and large external shareholders, ownership stakes and costly effort provision are particularly effective in explaining the impact of activist blockholders. Differentiating between internal or external blockholders or across classes of external blockholders (e.g. hedge fund vs. other investors) is of less importance when it comes to understanding variation in abnormal returns around 13D filings.

Schedule 13D filings are based on the Williams Act instituted in 1968. An initial Schedule 13D filing is required if a) an investor passes the 5% threshold of beneficial ownership of a security in a publicly listed company and b) the 5% shareholder has plans to take an active role. Passive large shareholders who “*acquired ... securities in the ordinary course of his business and not with the purpose nor with the effect of changing or influencing the control of the issuer*” can file a shortened Schedule 13G instead. This supports our claim that 13D filers are indeed active blockholders. Schedule 13D filings require a large amount of

information to be reported, which may be used in empirical work. In particular, it includes information on the class of securities acquired, the identity of the activist blockholder, the amount of securities held, the day that triggered the necessity to file a schedule 13D, a description of the intent of the activist blockholder, and the sources of funds of the activist blockholder.

Apart from the content, the timing of the filing is regulated in detail too and currently subject to a regulatory discussion. Activists have an obligation to submit their filing within 10 days after passing the 5% ownership threshold. The 10-day window is currently subject to a proposed shortening, after the prominent law firm Wachtell, Lipton, Rosen, and Katz (2011) submitted a petition to the SEC. They propose to allow only 2 days instead. Brav, Bebchuk, Jackson, and Jiang (Forthcoming) provide counter-arguments and suggest to tighten the enforcement of existing legislation first. Their results are mainly in line with our interpretation. Any blockholder who previously filed a 13G filing and now has activist intentions is not allowed to acquire any additional beneficial ownership until 10 days after the filing of a Schedule 13D. The previously mentioned petition also suggests a general extension of this so-called *Cooling-off Period* to all 13D filers.

As the starting point of our analysis, we consider all filings from the Thomson Research database. This database covers the complete spectrum of 13D filings from October 1985 until the end of 2012.¹ The Thomson Research database provides information on the class of security acquired by an activist, the name of the activist, date of filings, and the number of filed pages. These data items are very accurate and can be readily used as is in our empirical analysis. We enhance the existing database by adding the day that the 5% threshold is passed (the trigger day), ownership information, classification of the activist investors, etc. from other data sources.

Our paper is structured around three major themes:

i) We provide a complete account of all 13D filings from 1985 until 2012, covering in

¹This distinguishes our paper from earlier literature on 13D activist which looked at a hand-collected subsample based on the SEC news digest filings, (for example Mikkelsen and Ruback (1985), Shome and Singh (1995), Barclay and Holderness (1991), Holderness and Sheehan (1985)) and from more recent literature on activist investors focusing on hedge funds built around the EDGAR database (for example Brav, Jiang, Partnoy, and Thomas (2008), Klein and Zur (2009), Clifford (2008), or Greenwood and Schor (2009)). A major advantage of using the Thomson Research database is that it covers all filings (including filings submitted on paper) while EDGAR only covers electronic filings. By comparing the two databases, we learned that EDGAR only has complete coverage after October 2002. Between 1996 EDGAR fails to cover about 10% of all filings, while prior to 1996, EDGAR was not covering a very significant number of 13D filings.

total over 248,398 filings with 57,264 initial filings. The frequency of activist filings is more than what we expected. There are on average about 800 Schedule 13D filings per month including more than 200 initial filings. In contrast to the public attention, our time-series evidence indicates a slightly declining trend in the number of activist events. Even more surprising to us is, however, the price impact of these events. Abnormal returns in a 40-day window around the announcement of a 13D filing are on average about 4% for all filings and 7% for initial filings. We expected to see significantly smaller effects in comparison to the results shown in Klein and Zur (2009) or Brav, Jiang, Partnoy, and Thomas (2008). However, the pattern of abnormal returns and abnormal trading volumes around all initial 13D filings looks almost identical to the ones reported in Figure 1 of Brav, Jiang, Partnoy, and Thomas (2008) and Brav, Jiang, and Kim (2010), who focus on the special class of hedge fund activists.² Both, Klein and Zur (2009) and Brav, Jiang, Partnoy, and Thomas (2008) use a very convincing sample selection process that allows them to identify incidences of hedge funds. Yet, abnormal returns for activist hedge funds are not substantially larger than that of the average 13D filer. This finding motivates us to look in more detail into cross-sectional differences across filer types as discussed below.

ii) We shed light on the determinants of abnormal returns around 13D filings. To test for cross-sectional differences across filer groups, we consider 4 types of activist blockholders: hedge funds,³ financial institutions, insiders (officers and directors), and finally 10% blockholders together with unidentified filers who also form our benchmark-group. Consistent with a visual comparison of our Figure 3 and Figure 1 in Brav, Jiang, Partnoy, and Thomas (2008), we find that abnormal returns around hedge fund filings are *not* different from our benchmark-group, and the same holds for insider filings. Only filings submitted by financial institutions show significantly different (lower) abnormal returns. This is consistent with the interpretation in Black (1998), and Gillan and Starks (2007) who argue that financial institutions are not particularly effective shareholder activists. Nevertheless, even abnormal returns for this filer group remain economically meaningful at roughly 5%. The differences in the impact of the identity of the activist is somewhat reminiscent of the observation in McCahery, Sautner, and Starks (2011) that the corporate governance preferences are not particular different within the group of institutional investors.

The two previously discussed incentive mechanisms large inside ownership and moni-

²Updated results of their paper can be obtained under http://faculty.fuqua.duke.edu/~brav/HFactivism_SEPTEMBER_2013.pdf.

³We are able to identify hedge fund filings by merging the names of our activists with the hedge fund database developed in Agarwal, Daniel, and Naik (2011) and Agarwal, Jiang, Tang, and Yang (2013).

toring outside blockholdings share two features that are well reflected in 13D filings: high ownership and active participation (i.e. privately exerting costly effort). Next, we investigate whether these unifying features have an impact on abnormal returns around initial 13D filings. The first one, ownership, can be directly tested in cross-sectional regressions since the ownership stake of the active blockholder is a required item in a Schedule 13D filing. The second one, effort provision, is a more vaguely defined concept and for that reason not as straightforward to capture. We follow two different approaches. First, we consider the number of pages of a filing as a proxy for the extent of activity or effort provided by the filer. The idea is that active blockholders with detailed plans will submit longer filings with a clearly formulated description of their strategies. Therefore, these filers are also likely to exert more effort in restructuring the firm, monitoring the management, or running the firm in a cost efficient way. Second, we compare the price impact of 13D filings with 13G filings, the regulatory counterpart for passive blockholders (as proposed in Clifford (2008)). Empirically, our results support the importance of both features. Ownership as well as our proxies for effort provision have a significantly positive impact on abnormal returns around Schedule 13D filings. This is consistent with principal-agent theory in which ownership interests and effort costs are explicitly highlighted as a determinant of the success of active blockholders.

We are also interested in identifying the main drivers of abnormal returns from an economic standpoint, i.e. quantitatively what are the major determinants of abnormal returns around 13D filings. To do so we look at the implied change of abnormal returns if we increase an independent variable by one standard deviation. It turns out that most variation is explained by three variables: ownership, complexity of the filing (as measured by the length of the filing), and subsequent M&A activity of the firm (is the firm delisted due to a merger?). A one standard deviation increase in one of these variables leads to approximately 1.15% higher abnormal returns. In contrast, a one standard deviation increase in an activist type leads to roughly 0.25% higher abnormal returns (for hedge funds and insiders) and a -0.45% difference for financial institutions.

In attributing abnormal returns around 13D filings to the value increasing impact of activist blockholders, we follow the typical interpretation in the literature. While the overall value increase does not exhibit large variations across types of activist blockholders, we see similarities and differences along other dimensions. We find similar impacts of activists on decreased cash holdings, increased dividends, and an ambiguous impact on leverage across all filer types. Furthermore, the short term impact on profitability is negative but becomes

positive after two years and this is again similar across filer types. Major differences in the policies employed by our filer groups occur on other dimensions. Hedge funds are more often involved in takeover cases, but we also find differences in the filing behavior (late vs. early filings), or differences in day-to-day trading patterns around trigger and announcement day. The latter two are closely related to the main arguments of the petition that was recently submitted to the SEC. We discuss these arguments in detail as our next point.

iii) We provide a detailed event time analysis of 13D filings. The goal is to depict the precise timing of when the activist information is processed in the market. According to theory, informed traders will smooth out trades in order not to reveal their private information early on. Regulation 13D limits the period in which active blockholders may keep private information to ten days. Therefore, we would expect stock prices of target companies to increase particularly towards the announcement date of a 13D filing. What we find is the opposite. Centering our event study around the trigger day instead yields much steeper price increases. The evidence from the abnormal trading volume is even more striking. An event study of the trigger day shows that the trade volume spikes on the trigger day and reverts within two days to the regular level (similar to the finding of Brav, Bebchuk, Jackson, and Jiang (Forthcoming)).

One aspect of Regulation 13D offers a surprisingly direct explanation for the timing pattern, which has not been mentioned in the literature before. It affects, however, only a subset of all 13D filers. Blockholders changing status from a 13G filing to a 13D filing are *not* allowed to acquire additional securities from the trigger day until 10 days after the filing of a Schedule 13D. These filers may discard the pricing impact of their trades and buy aggressively on the trigger day. Such a switch to a 13D filing is either triggered because the investor develops activist intentions, or because the blockholder's ownership stake passes the 20% threshold. To what extent our findings on the timing are driven by filing switchers needs to be settled in further research.

Our latest findings suggest that the stock market is (on average) very efficient in anticipating the announcement of 13D filings once the trigger day has passed. This highlights a possible source of underestimation in the analysis of abnormal returns around 13D filings: Choosing a narrow event window (for example 2 days before until 2 days after the filing) will underestimate the abnormal returns around a 13D filing substantially. The largest part of abnormal returns occurs around the trigger day which will not be part of the event

window for the filings with sufficient days between trigger day and announcement day.⁴

The event study results provide important facts when it comes to evaluating the consequences of a 2-day filing window for a Schedule 13D. Wachtell, Lipton, Rosen, and Katz (2011) build their case for a tightened Regulation 13D on the following idea: after the trigger day, active blockholders have private information about the outlook of a stock, and they exploit this to the detriment of small shareholders. According to Wachtell, Lipton, Rosen, and Katz (2011), hedge funds are particularly involved in this strategy. The following findings directly address the arguments of the proposal. First, using a subsample of 13D filings with at least 2 trading days between trigger day and announcement day, we only identify small abnormal buy-and-hold returns from two days after the trigger day until announcement (0.9% vs. 8% for the entire 40-day event window). Market efficiency will, therefore, only marginally improve due to a reduction in the filing period. Second, our results indicate that hedge fund filings see the lowest abnormal returns in the secret period between trigger day and announcement day. This is the opposite of what the petition suggests.

Furthermore, we find that hedge funds seem to obey the law in general more closely. As compared to other activists, they file more often on time (i.e. hedge funds file within the 10-day window). Also the abnormal trading volume of hedge fund filings spikes in a cleaner way around the trigger day. Even though we do not observe the individual trading activity of active blockholders, this could indicate that hedge funds smooth their trading activity less.⁵

On the other hand, reducing the filing window may impose a cost on desired shareholder activism. We show that the filing complexity, as measured by the length of a filing, is a major determinant of the time it takes to report a 13D filing. This is inconsistent with the view that any activist filer could easily file within one or two days. More to the contrary, increased filing requirements would be particularly costly for activists reporting complex filings. As we discussed already, these filers are also the ones increasing the firm value most.

The paper proceeds as follows. In Section 2, we give a short preview of our results, how they relate to the institutional details, and review the literature. Section 3 describes our data. In Section 4 we give a description of activist events, focusing on changes in the

⁴This would explain why we report substantially larger abnormal returns around 13D filings in our paper as, for example, in Clifford (2008) who analyzes a 5-day event window.

⁵A potential explanation for this finding could be that hedge funds are more often affected by the cooling-off period for status changers.

aggregate time series. Institutional details are laid out in Section 5 which are then used to give a detailed analysis of abnormal returns and abnormal trade volume around 13D trigger days and announcement days. The difference between filings of different groups (hedge funds, individuals, and financial institutions) are investigated in Section 6. Details of the current regulation of Schedule 13D filings are used to shed light on the potential impact of the currently discussed shortened filing window in Section 7. In Section 8, we provide some additional analysis of targeting and on the real effects of 13D activism while Section 9 concludes.

2 Review of the literature

The theoretical motivation for our paper, and shareholder activism in general, lies in the agency problems highlighted in Berle and Means (1932) or Jensen and Meckling (1976). It is impossible to cover all relevant contributions to the topics inside ownership or external blockholdings at this point. For literature reviews on inside ownership, see for example Murphy (1999), Murphy (2013) or Frydman and Jenter (2010). A recent survey about external blockholders is Edmans (Forthcoming). Early papers in the literature on the incentive effects of CEO ownership are Jensen and Murphy (1990) or Morck, Shleifer, and Vishny (1988) and classic papers in principal-agent theory (e.g. Holmstrom, Stiglitz). Models on blockholder behavior include Shleifer and Vishny (1986), Grossman and Hart (1983), and some later theory papers include Burkart, Gromb, and Panunzi (1997), Bolton and Von Thadden (1998), Maug (1998).

More specifically, our paper relates to the literature that studies Schedule 13D filings, which can be roughly divided into an early and a later period. The early sequence of papers includes Mikkelsen and Ruback (1985), Shome and Singh (1995), Barclay and Holderness (1991), Bethel, Liebeskind, and Opler (1998), or Holderness and Sheehan (1985). Holderness and Sheehan (1985), and Shome and Singh (1995)), for example, focus on 13D filings by prominent corporate raiders (for example Carl Icahn or Victor Posner). Mikkelsen and Ruback (1985), instead, study the takeover process of listed companies as mergers and acquisitions are generally preceded by 13D filings.

The more recent literature, on the other hand, focuses on 13D filings by hedge funds (Brav, Jiang, Partnoy, and Thomas (2008), Klein and Zur (2009), Clifford (2008), Boyson and Mooradian (2011), Greenwood and Schor (2009), Gantchev (2013), Gantchev and

Jotikasthira (2013), or Gantchev, Gredil, and Jotikasthira (2013)). Most of these papers stress the value increasing impact of activists and their employed strategies (for example, Brav, Jiang, Partnoy, and Thomas (2008), Holderness and Sheehan (1985), Klein and Zur (2009), Clifford (2008), Boyson and Mooradian (2011), or Greenwood and Schor (2009). We relate to this literature by also examining abnormal returns around the 13D filing, and relating it to takeover activities. We mainly differ from this literature by investigating the differences and the similarities across filings from different types for the entire sample of all 13D filings.

At the same time, some papers focus more on the trading side of these events Collin-Dufresne and Fos (2012). We can contribute to this literature by our analysis of the collapsed trigger day cum announcement day analysis and the observation that the market is very efficient in anticipating the announcement of a Schedule 13D filing (once the trigger day passed).

A first detailed empirical analysis of the proposed shortening of the reporting window is undertaken in Brav, Bebchuk, Jackson, and Jiang (Forthcoming). Our results partly overlap. In particular, Brav, Bebchuk, Jackson, and Jiang (Forthcoming) first looked at whether or not activists submitted their filing on time and also explicitly looked at the trigger day as an event day in an event study. They do not analyze trigger day and announcement day in a collapsed manner as we do in, for example, our figures 5. Our analysis helps to investigate the extent to which the new regulation would be able to increase the informational efficiency of the market.

One major difference between our paper and the existing literature on 13D filings is the sample construction. We are motivated by the idea that from the abstract perspective of principal-agent theory, both internal and external corporate governance mechanisms share some common features, namely ownership and effort. To investigate this in detail, we look at the complete universe of all 13D filings and then try to understand differences and similarities across filer types. The existing literature typically follows a different approach. It picks some particular filer types and tries to understand these filings in detail. Therefore, our sample size will be by construction substantially larger than the ones used in the existing literature (in our sample, for example, we classify roughly 7% of all filings as hedge fund filings). This difference in sample size is further magnified by our considerably longer sample period.

The above mentioned papers on 13D filings typically find a value increasing impact of

activists.⁶ These papers are able to better understand questions with regards to tactics or trading behavior of activists, which is an advantage of focusing on particular types of activism in selected samples. However, our paper contributes by comparing different types of activists and by giving a complete account of all 13D filings since 1985. Moreover, we are not aware of any paper that shows an increase of abnormal returns with respect to the ownership stake of the activist or the complexity of the filing (measured by the length of the filing).

3 Data description of activist filings

The universe of Schedule 13D filings offers a natural starting point for a study on shareholder activism in the US. The SEC requires reports of Schedule 13D filings if shareholders intend to actively influence the management of a firm, and if they own more than 5% of equity in the target. Unfortunately, there is no existing ready-made database that makes 13D filings easily accessible. As a result, one challenging part of our analysis is the actual data collection effort. We use a battery of data sources in the construction of our database.

Fortunately, we are able to use the Thomson Research database as the fundament for our analysis. Thomson Research provides a complete list of all 13D filings starting in October 1985. In particular, it reports the name of a filer, the name and CUSIP of the target company, and the announcement date (AD).⁷ Thankfully, the database is extremely accurate allowing us to give a complete picture of when a firm was facing an activist investor. Unfortunately, the Thomson Research database only contains very few data items. In addition to the ones previously mentioned, it indicates whether the filing is an initial filing (13D/I) or an amendment (13D/A), and also provides the number of pages in the filing. For more information, in particular the ownership stake of the activist, the Schedule 13D trigger day (TD),⁸ or the motivation behind the filing, we have to rely on other sources.

We then extend our database in two main steps. First, we merge the Thomson Research database with all Schedule 13D filings from SEC EDGAR. The Thomson Research database

⁶An exception is Greenwood and Schor (2009) who argue that the value increase only comes from takeover targets, an issue we will also discuss.

⁷The announcement day refers to the day when the information is reported to the SEC and made public through various wire services. In our empirical analysis we may write shortly AD.

⁸The trigger day refers to the day at which an activist investor passes the 5% ownership threshold.

is broader than the SEC EDGAR database as it also includes filings submitted in paper format while the EDGAR database only covers electronic filings.⁹ In fact, every filing from SEC EDGAR is contained in Thomson Research while the converse is not true. From the SEC EDGAR database, we can retrieve the Schedule 13D trigger day. Furthermore, the Thomson Research database only contains one filer name per filing while in practice many 13D filings are filed by a group of activist investors. The SEC EDGAR database also allows us to retrieve a list of all investor names comprising a group according to a Schedule 13D filing. Second, for the period prior to the advent of the SEC EDGAR database, we rely on Lexis-Nexis Academic and SEC News Digest. Both data services stopped providing data of 13D filings after the rise of EDGAR. These alternative data sources enable us to retrieve trigger days and complete lists of filer names for the entire sample period.

To populate our filings with ownership information, we make use of the Spectrum 5 database taken from SEC disclosure CDs. We collected data from all SEC disclosure CDs from 1988 until mid 2006. Unfortunately, SEC disclosure CDs were no longer produced after June 2006. Therefore, our ownership information is not available for the last 6 years of our sample. The ownership information in Spectrum 5 is of high quality, but in a format which is hard to understand/detect at first sight. The ownership information corrects for double-counting cross-holdings within a filing (so a similar bias occurring in Proxy statements as pointed out by Dlugosz, Fahlenbrach, Gompers, and Metrick (2006) does not occur). However, the database does not take option holdings into account. While option holdings are incorporated in calculating the 5% threshold of ownership (as long as the option is exercisable within the next 60 days), it is not included in the ownership information in compact disclosure.

On the positive side, we manage to build a complete list of all Schedule 13D filings with corresponding announcement days. We also have high quality data with regards to trigger days, ownership, and a list of filer names. In order to classify the filers into different shareholder categories, we are forced to use name matching procedures. We match the list of filer names with a) the Thomson Institutional investor database and b) the Thomson Insider trade database. This allows us to classify filers as financial institutions or as corporate insiders. Furthermore, we are able to use a list of hedge funds kindly provided to us

⁹In the latest years of our sample both databases coincide. However, it took some time until electronic reporting via SEC EDGAR was broadly disseminated after its 1994 initiation. Thomson also covers filings made on paper which, prior to 2002, were approximately 10% of all initial filings while SEC edgar misses these filings prior to 2002. The largest part of these filings not covered by SEC edgar is concerned with foreign issuers since filings concerning securities of foreign issuers only became mandatory in November 2002 (<http://www.sec.gov/rules/final/33-8099.htm#schedules>).

by Agarwal et al. (2012), and Agarwal et al. (2013) that allows us to classify different institutional investors as hedge funds. As a result, we have a comprehensive sample of hedge fund activists with roughly 3000 firms that are being acquired by a hedge funds.

Unfortunately, we currently are unable to classify the events by the activist intentions as they are stated in the Schedule 13D. Brav, Jiang, Partnoy, and Thomas (2008) and Klein and Zur (2009), convincingly show that the stated goal of the investment is important for the analysis so we hope to overcome this shortfall in a future version of the paper. As of now, we have not found a way to classify the 194,000 filings. Unfortunately, manually determining the purpose of transaction by reading the filing is not an option due to the high number of filings we would have to consider.¹⁰

Given the free text structure of 13D filings, it is difficult to retrieve any additional pieces of information from these filings. On the one hand, the unstructured nature of 13D filings makes fairly simple data items often impossible to understand. For example, for ownership information the filings require to list cross-holdings, any type of contract, etc. and the information is not easy to understand and even more difficult to code. On the other hand, we are simply looking at massive amounts of (unstructured) data. In total, all filings in our database sum up to 4,481,771 pages, which are impossible to read. Therefore, the only hope is to have some of it analyzed with computer codes, a process we only partly started.

Apart from information on 13D filings, we use standard databases: the CRSP database for stock returns and trade volumes, and Compustat for accounting information. Additionally, we retrieve M&A information from the SDC Platinum database.

4 Time-series evidence on investor activism

In Figure 1, we plot the number of initial 13D filings (dotted line) and the number of all 13D filings (solid line) per month. The main lesson to be learned from this graph is that the total number of filings is very large with up to 1,000 filings per month. Given that the full spectrum of approximately 200,000 filings leads to abnormal returns of roughly 4% around the announcement day, we hypothesize that further analyzing the aggregate of these filings will yield interesting insights for our understanding of the aggregate market

¹⁰Another important part of the analysis in Brav, Jiang, Partnoy, and Thomas (2008) and Klein and Zur (2009) that we currently cannot undertake is the impact of activist filings on CEO turnover and CEO compensation.

as a whole. While there is substantial month-to-month variation, we only find very limited evidence of investor activism waves over longer time periods. Moreover, the number of 13D filings does not seem to be increasing on an absolute number. The fraction of initial filings with respect to all filings is remarkably stable over time.

Further, to shed light on the question as to whether there are any waves in investor activism, we adjust the number of 13D filings by the number of publicly traded companies. In the upper left graph in Figure 2 we divide the number of all 13D filings in any given year by the number of all firms in the CRSP universe from that particular year. Here, we see a clear downward trend over time. While there were more filings than firms per year at the beginning of our sample, this fraction reduces to 70% at the end of our sample. A similar picture emerges when we only account for one filing per firm and year (the lower left graph). There, we see that in the earlier part of our sample, roughly 35% to 40% of all firms were facing *at least* one 13D filing in a given year. This fraction goes down to 25% at the end of our sample. Instead of considering all filings, we can also look just at initial filings. In the upper right graph of Figure 2, we see that in the earlier part of our sample, the fraction of all initial filings divided by all firms was about 35%-40% in our sample and that this fraction reduces to below 20% in the end of our sample. If we restrict attention to unique initial filings per year, we see that on average above 20% of all firms see a new 13D filing each year at the beginning of our sample and that this decreases roughly by half towards the end of our sample.

On an extensive margin, we see a fairly substantial decrease in shareholder activism if we put the number of 13D filings in relation to the number of listed companies. There is very little evidence for any activism waves, rather it seems to be surprisingly stable over time. The only piece of evidence for an activism wave was maybe in the late 1990's, where we see a spike in initial 13D filings. This lack of cyclicity of 13D filings contrasts with the cyclicity of hedge fund activism found by Brav, Jiang, Partnoy, and Thomas (2008) and Brav, Jiang, and Kim (2010)¹¹, and Burkart and Dasgupta (2014). Why the full sample of 13D filings is subject to less cyclicity than hedge fund activism is not yet clear to us, but certainly worth a closer look going forward.

Similar conclusions stand with regards to the time-series of ownership stakes held by activist investors. Figure 6 shows that the mean ownership stake for initial 13D filings remains constant over time at about 16% (median 9%). There is only a slight increase over

¹¹Please find their updated tables and figures: http://faculty.fuqua.duke.edu/~brav/HFactivism_SEPTEMBER_2013.pdf

the years 1997-1999 peaking at 20%. The spike reverses back to the early levels after 2001. We find that this increase is more pronounced for the dollar value of ownership stakes. It is conceivable that both findings are related to the dot-com bubble. Unfortunately, we do not yet have reliable ownership data for the time period after 2005 because all databases we draw ownership information from ceased to be published in the later period.

5 Institutional details and abnormal returns

Blockholdings of more than 5% of beneficial ownership in a publicly traded security are regulated by Section 13D of the Securities Exchange Act of 1934.¹² Further filing requirements are stated in the Code of Federal Regulations (CFR).¹³ In particular, Title 17 of the CFR, Chapter II, Part 240 §240.13d-1 through §240.13d-102 deals with additional regulation concerning 13D and 13G filings. Therein, the regulator allows a 5% blockholder to report a short-form 13G filing if he holds the shares "*in the ordinary course of his business and not with the purpose nor with the effect of changing or influencing the control of the issuer*". Apart from more detailed mandatory reporting items, the regulation of 13D filings differs from the regulation of 13G filings in two aspects. Most important, the time frame in which an activist blockholder has to report a 13D filing is much shorter and does not allow exceptions for qualified institutional investors. The 13D filing is due within 10 days after the activist's ownership stake passes the 5% threshold. In 2011, however, the New York based law firm Wachtell, Lipton, Rosen & Katz submitted a petition to the SEC requesting to shorten the filing period to two days. They argue that "*the ten-day reporting lag ... facilitates market manipulation and abusive tactics*" by aggressive investors. This proposal is currently under revision by the SEC and some of our results will speak to its potential effectiveness. The second aspect relates to the fact that the SEC imposes a trading ban on blockholders switching from a 13G filing to a 13D filing, which lasts from the day a 13D filing becomes mandatory until 10 days after submission. Wachtell, Lipton, Rosen & Katz's petition requests a general implementation of so-called cooling-off periods for all 13D filers.

We report now a set of event study results that depict the aggregate stock price impact of initial 13D filings. Of particular interest is the timing when the information of an activist campaign gets incorporated into stock prices. Sorting an event study around

¹²A copy of the Securities and Exchange Act of 1934 may be downloaded under the following link: <https://www.sec.gov/about/laws/sea34.pdf>

¹³accessible at www.ecfr.gov/

the announcement day will be helpful in judging whether or not the market is positively surprised by the publication of the filing. Sorting an event study around the trigger day instead allows us to assess the market impact of trades of activist investors. To the extent that the announcement occurs on a day after the trigger day (and no other relevant information is published on the trigger day), the impact contributes to the the trades of 13D filers. One problem with a separation of trigger day and announcement day is that they happen within a short time frame and the information ascertained overlaps. In the most extreme case, trigger day and announcement day are the same day and it will be impossible to differentiate between the two. Our following analysis provides several perspectives to offer a clearer picture.

We begin in Figure 3 with a visualization of the effect around the announcement day.¹⁴ This figure provides two pieces of information. First, the solid line plots the average abnormal buy-and-hold return of target companies. Throughout the paper, abnormal buy-and-hold returns on day t refer to the difference in buy-and-hold returns (buy at event time -20 and hold until day t) between the company's stock and the value-weighted CRSP market index. For example, the level of the abnormal buy-and-hold return on day 0 (in this case the announcement day) tells us the accumulated difference in returns between our average event firm and the value-weighted CRSP market index from day -20 until day 0. Second, the bars plot the abnormal trading volume in the target company. The abnormal trading volume on day t is the trading volume on day t divided by the average trading volume in the same stock over the event time period -50 until -20 .

Figure 3 reveals various patterns. First off, initial 13D filings are not only frequent but economically important events. The abnormal buy-and-hold return over the entire 40-day window amounts on average to almost 7% over our full sample of roughly 57,000 initial 13D filings. These substantial abnormal returns occur almost entirely in a 10-day time period prior to the announcement day. The average abnormal trading volume peaks 6 trading days before the announcement of a 13D filing at 2.5 the times regular volume. It is not much smaller on adjacent trading days. Lastly, abnormal returns and abnormal trading volumes on the announcement day itself tend to be relatively small as compared to aggregate effects. This implies that the market anticipates in a fairly precise manner the filing of a 13D activist campaign. Presumably, the market may learn this through the increased trading volume and the abnormal return. What came as a surprise to us is the fact

¹⁴A similar figure has been presented in the literature before. One early example (missing the trade volume information) is in Holderness and Sheehan (1985). More recent examples include Brav, Jiang, Partnoy, and Thomas (2008) and Brav, Bebchuk, Jackson, and Jiang (Forthcoming).

that both the pattern and the magnitude of the effect documented in the entire spectrum of filings is comparable with Figure 1 in Brav, Jiang, Partnoy, and Thomas (2008), even though they solely focus on a sample of activist hedge funds.¹⁵ Motivated by this similarity, we will investigate in Section 6 how hedge funds differ from other activist investors when they report a 13D filing.

Figure 3 reveals that both returns and trading volumes sharply increase approximately ten days before the announcement day. This timing is related to the regulation which allows 13D investors to wait up to 10 days with their filing. There are two plausible explanations for this reported pattern. First, activist investors may pass the 5% threshold and then secretly acquire more shares in the following 10 days until they finally report a Schedule 13D with the SEC. This behavior is at the core of the petition that seeks to reduce the time to file for a 13D filing.¹⁶ Alternatively, it is possible that activist investors only buy shares on the trigger day but smooth out the filing day, i.e. some file early (the day after the trigger day) while others wait longer and file 10 days after the trigger day. One way to gauge which of the two explanations is more plausible is to compare the findings with an event study of the trigger day.

Figure 4 reports the same variables as shown in Figure 3 sorted by the trigger day, i.e. day 0 refers this time to the day the activist investor surpasses the 5% ownership threshold. This approach delivers much sharper results than those reported in Figure 3. Both abnormal trading volume and abnormal returns spike on the trigger day. The average trading volume on the trigger day is 4.5 times the regular volume and quickly reverts within 2 days. The largest fraction of abnormal returns are materialized before the end of the day following the trigger day. Regarding the trade volume, our results are again in line with Brav, Bebchuk, Jackson, and Jiang (Forthcoming) who report a similar pattern for the abnormal trade volume and abnormal returns.

Neither Figure 3 nor Figure 4 allows us to genuinely isolate the impact of the trigger day and the announcement day. Therefore, we construct a third event graph, in which we collapse the trading days in the interim period between TD and AD. To avoid overlapping

¹⁵In an attempt to make the graphs in our paper comparable with one another, we choose to have a fairly large scale for the trade volume (ranging up to 7). One disadvantage of this is that the trade volume may appear to be of less magnitude than found in the earlier literature but this is only due to the scaling difference.

¹⁶In particular, the implementation of a general cooling-off period would render this trading activity illegal. However, the current regulation is only concerned with beneficial ownership. One fairly straightforward way to overcome this regulation would be to trade in cash settled options (as these derivatives are not contained in beneficial ownership because the definition is based on voting rights).

effects and to guarantee non-missing observations in an event time, we consider only filings with at least 3 interim trading days. The result is shown in Figure 5. This graph is now sorted by both, TD and AD. In the interim period, we label the day after the trigger day a and the day before the announcement day c . The entire period between a and c is collapsed into a single observation that we label b . Thereby we define the abnormal return on day b as the cumulative buy and hold return over the respective period.¹⁷ The abnormal trading volume on that day is instead defined as the average trading volume in the interim period.

Separating trigger day and announcement day in one figure now allows us to isolate effects that take place on the announcement day and trigger day respectively. As seen in Figure 5, most of the abnormal return occurs on the trigger day and on the day following. The interim days, aggregated under the event day label b , lead cumulatively to roughly 1% abnormal returns. In contrast, the announcement day and the two days before and after the announcement day see very small abnormal trade volume and abnormal returns. This indicates that the crucial time period for an analysis of activist filings is the trigger day, rather than the announcement day.

We also look at time-series evidence of abnormal returns and abnormal trade volumes. In contrast to the count of 13D filings, the level of abnormal returns does not undergo systematic trends. This is depicted in Figure 7. However, there is substantial year-to-year variation in abnormal returns, whereas the abnormal trading volume on the trigger day turns out to be surprisingly stable over time at 4.5 times the regular level.

6 Cross-sectional differences of abnormal returns and trade volume

We are now investigating cross-sectional dimensions of abnormal returns and abnormal trading volume as indicated in the previous section. In particular, we test whether these two measures differ across 13D filings reported by different activist types. We distinguish between hedge funds, financial institutions, insiders, and 10% blockholders together with unidentified filings. Summary statistics of abnormal returns and abnormal trade volumes can be found in Table 1, both in aggregate and separately for each filer type. From the summary statistics table we see that financial institutions' filings are associated with the lowest $BHAR(-20; +20)$ returns of under 5% while filings from the other groups lead to roughly 6-7% abnormal returns. This is also graphically illustrated in Figure 9, where

¹⁷An alternative would be to use the average buy and hold return for the intermediate time period.

we plot the mean of abnormal returns and abnormal trading volume for the different filer groups in event time. Apart from splitting the sample, the construction of the figure is identical to Figure 3 and sorted by the announcement day.

Figure 9 does not convey meaningful differences between any group with the exception that abnormal returns are smaller for financial institutions and that abnormal trading volumes are smaller for insiders. The smaller abnormal return around filings from financial institutions is consistent with the views expressed in Black (1998), and Gillan and Starks (2007). The result that abnormal returns around 13D filings of financial institutions are relatively smaller is very robust, showing up in any regression specification we present later. Comparing the hedge fund graph in Figure 9 with insider and 10% holder filings in the same figure, or with the full sample of initial 13D filings in Figure 3, it becomes apparent that abnormal returns around hedge fund filings are not so different. In contrast, the abnormal trade volume on the trigger day of a hedge fund filing seems to be higher.

In particular, the missing difference in abnormal returns between hedge funds and other 13D filers came as a surprise to us. Our methodology of adjusting target stock returns by simply subtracting the value-weighted market return is the same as in Klein and Zur (2009). Klein and Zur (2009) find convincing evidence that activist campaigns led by hedge funds are significantly different from activist campaigns led by other activist investors. We find no evidence for such a difference with the previously mentioned exception for financial institutions. There are, however, distinct differences between our sample and the one studied by Klein and Zur (2009). Klein and Zur (2009) analyze events from a shorter time period. Their sample is initially based on filings from January 2003 to December 2005. The second difference is based on the selection process. While Klein and Zur (2009) limit attention to those 13D filers that explicitly state details of their intended campaigns, we do not make any selection at this point and consider all 13D filings. In the end, Klein and Zur (2009) have a fairly balanced sample of 151 hedge fund events and 154 non-hedge fund events. Our sample, on the other hand, comprises of 3,265 hedge fund events and roughly 44,596 non-hedge fund events.

All discussed figures simply plot averages of cumulative abnormal returns and abnormal trading volume. Table 3 reports cross-sectional regression results that allow statistical inference as well as multivariate controlling for company and filer characteristics. In all model specifications of Table 3 our dependent variable is the abnormal-buy-and-hold return $BHAR_{-20/+20}$ over the 40-day event window around the announcement day. This

corresponds to the very last point depicted in the solid line of Figure 3. We always cluster standard errors at the 3-digit SIC industry level of the target company. Note that regression coefficients of our most basic specification in column (1) do not have to lead to identical point estimates as reported in our summary statistics table because the dummy variables indicating the filer type are not mutually exclusive, i.e. the same filing may occur in different filer groups.

The specification in column (1) only includes the set of three dummy variables that indicates whether the filing has been reported by a hedge fund, a financial institution, or a corporate insider. As in all our regressions, the base group comprises of all 13D filings submitted by 10% blockholders and unidentified activists. We see that stock prices of companies targeted by financial institutions increase by 1.6% less than for our base group, which is also statistically significant at the 1% level. Neither hedge fund filings nor insider filings are associated with significantly different returns. In column (2), we add the log market capitalization and percentage ownership stake held by the activist as control variables, as well as monthly time-fixed effects. Point estimates for our filer type dummies are surprisingly stable while we are able to reduce standard errors on the insider dummy. The coefficient for the ownership stake of the activist is statistically significant and positively correlated with abnormal returns. At this point, we are unable to differentiate whether this is a plain liquidity provision/upward slopping supply of stocks explanation or whether activists acquire more stocks in firms where the impact on the share price is more pronounced. Finally, column (3) adds accounting measures to the regression model. All accounting variables are pre-determined and measured as of the fiscal year-end prior to a 13D filing. It again does not change our point estimates for the filer type dummies much. The impact of ownership remains significant and unchanged. Most of the accounting measures do not seem to impact abnormal returns with the exception of dividend yields and Tobin's Q.

One possible difference between hedge funds and other activist investors could be their attitude and involvement with respect to takeover activities of the target company. Greenwood and Schor (2009) take, indeed, a more skeptical view on the effects of investor activism and highlight the relative importance of takeovers. Focusing on a sample of hedge fund activism, they find that most of the abnormal return around 13D filings occurs in relation to takeovers. We provide statistics on the frequency of general delistings or mergers in Table 4 for each filer group separately. Panel A counts delistings within one month after the announcement of a 13D filing, while Panel B and Panel C look at the longer horizons of

12 months and 18 months respectively. We see that the target stock for 7.6% of all hedge fund filings gets delisted within one month after a filing, most of them due to mergers. This compares to 2.7% for the full sample of 13D filings and 1.4% for insider filings. Looking at longer horizons, these numbers increase obviously, but a difference of similar magnitude between hedge fund filings and other filings continues to exist. Our result suggests that hedge funds particularly target companies involved in (controversial) merger processes, and this strategy is not used to the same extent by other activist investors. Therefore, we continue with adding control variables to our cross-sectional regression of $BHAR_{-20/+20}$ that capture information of merger activities. Table 3 column (4) includes a dummy variable for companies merging within 3 months after the announcement of a 13D filing and a dummy variable for companies merging after 3 months but within a year. This does not affect point estimates of the filer type indicators in a meaningful way. However, companies that merge within 3 months have an almost 2% higher abnormal return, whereas companies merging thereafter have smaller abnormal returns of almost 3.5%.

Lastly, we combine all previously discussed right-hand side variables in one specification presented in column (5) of Table 3. We add the log of the page numbers contained in a filing on top. The idea is that it could serve as a proxy for the effort provided by the activist since active blockholders with detailed plans will submit longer filings describing their strategies. The dummy variable for financial institutions remains statistically significant, whereas the other filer type indicators are not. The activist's ownership stake and the number of pages in a filing are highly significant and positively correlated with abnormal returns. Other important cross-sectional determinants are mergers, dividend yields, and Tobin's Q.

Table 3 suggests that abnormal returns of hedge fund filings over the 40-day period are not significantly different in any specification. This finding is consistent with the interpretation that the identity of an active blockholder is less relevant. What counts is the fact that the investor (be it a hedge fund, an insider, or any other investor) has accumulated a large ownership stake with the intent to actively influence the firm's policy. Some institutional advantages of hedge funds which are convincingly described in Brav, Jiang, Partnoy, and Thomas (2008) may carry over to the group of insiders or other wealthy individuals. In particular, the fact that individuals are not subject to major regulations. To further strengthen the importance of activist blockholders, we compare the announcement effect of 13D filings on stock prices with the announcement effect of 13G filings. We estimate a difference for each day in our 40-day event window by running separate cross-sectional regressions of abnormal buy-and-hold returns on a dummy variable indicating a 13D filing

and month-fixed effects. These point estimates are plotted in Figure 12.¹⁸ The differential effect is of similar magnitude as the simple average abnormal return already reported in Figure 3. This suggests that 13G filings of passive blockholders are not accompanied with a similar price response. Similar conclusions hold for the abnormal trading volume. There are no major differences with respect to the one reported in Figure 3.

Instead of looking at returns and trading volume on the announcement day, we can shift the focus to the trigger day. We repeat the construction of Figures 4 and 5 for each filer type separately. In Figure 9 we plot abnormal returns and abnormal trade volume around the trigger day. We see a large spike in trade volume on the trigger day for all filer groups. This is consistent with the interpretation that indeed all filers tend to purchase securities on the trigger day. Moreover, for hedge funds and financial institutions the sharp increase in trading volume only occurs on the trigger day itself, while it is more spread out for insiders and other filers. In particular the day after the trigger day still shows abnormal activity in trade volume for the latter groups. Figure 10 follows the approach of Figure 5, where we only consider initial filings with more than 3 trading days between trigger day and announcement day in order to provide a clear separation of the two effects. Longer interim periods are collapsed into one event time observation. This graph basically confirms the findings reported for the trigger day. Stocks with filings from hedge funds or financial institutions have the largest spike in trading volume on the trigger day of more than 6 times the regular volume. While the trade volume reverts particularly quickly for hedge fund filings, the abnormal trade volume for insider filings and other blockholders stays equally high on the day after the trigger day.

Figure 11 provides a graphical representation of differential effects between hedge fund filings and all other 13D filings in event time. The top panel highlights differences in cumulative abnormal returns and the bottom panel differences in relative trade volume. Each point in the graph represents a point estimate from a cross-sectional regression of the respective measure on a dummy variable indicating whether the filing has been reported by a hedge fund. This regression is independently executed for the 40 trading days surrounding the trigger day. The top panel shows that companies targeted by hedge funds generate larger abnormal returns over the 20 days preceding the trigger day. Smaller returns on the trigger day and particularly the day after, however, reverse the pattern and lead to

¹⁸Regulation 13D allows qualified institutional investors to report a 13G filing at the end of a calendar year and not when the 5% ownership block is acquired. These filings must be submitted within the first 45 days of the new year. To maintain a fair comparison between 13D and 13G filings, we exclude all 13G filings filed in January or February when we construct Figure 12.

marginally smaller cumulative returns, which get again balanced over the subsequent 20 days. This corresponds to the findings for the abnormal trade volume. While we report significantly larger abnormal trade volume on the trigger day of hedge fund filings, it is significantly smaller on subsequent trading days. The findings are in line with the interpretation that hedge funds are less active compared to other activist blockholders in trading target securities after the trigger day. This may be either a voluntary decision or a simple outcome of Regulation 13D if hedge funds were more likely to report 13G filings before.

To develop a better understanding of how effects play out in event time, we run separate cross-sectional regressions for every relevant day as reported in Table 5. The dependent variable is the excess return over the CRSP value-weighted market index on the trigger day in column (1), the day after the trigger day in column (2), the day before the announcement day in column (3), and the announcement day in column (4) respectively. In order to keep the sample across different columns of the table comparable, we select only filings with at least two trading days between trigger day and announcement day. The regression specification in columns (1)-(4) contains no further control variables over and above the filer type dummies. Columns (5)-(8) include month-fixed effects plus additional control variables. Abnormal returns on the trigger day are for all filer groups 2-3 times the size compared to the announcement day. Hedge funds, for example, have a 1% abnormal return on the trigger day and a 0.6% abnormal return on the announcement return. There are no meaningful cross-sectional differences on the announcement day or the day before. On the trigger day, however, and particularly the day after the trigger day, we find that hedge funds and financial institutions have significantly smaller returns than our base group.

A similar set of cross-sectional regressions for the abnormal trading volume is reported in Table 6. As seen in previous figures, the trading volume loads heavily on the trigger day. We find that hedge funds and financial institutions have the highest abnormal trading volume on the trigger day of roughly 6.5 times regular volume. This is 1.4 times larger compared to our base group and the difference is statistically significant. On the day after the trigger day, in contrast, this pattern reverses and we document significantly smaller abnormal trading volume for the two groups. The trading volume of insider filings is significantly smaller over all relevant days. This gives us confidence that the aggregate trading volume in a stock provides a proxy for individual trading patterns of the activist blockholder.

7 Expected impact of the new regulation

Wachtell, Lipton, Rosen, and Katz (2011) propose to tighten Regulation 13D by shortening the given filing window from 10 to 2 days and by introducing a universal cooling-off period that does not allow 13D filers to trade in equity securities of the target company before the announcement of a filing. The motivation for tighter regulation is based on the idea that activist investors have substantial private information after the trigger day and may use it to the detriment of dispersed shareholders. This may be plausible since abnormal returns around 13D filings amount to almost 7% in a 40-day period surrounding the announcement. According to the petition, hedge funds are particularly savvy in making use of the entire 10-day filing window. Our previous discussion of Table 5 and Table 6 contain partial answers to this discussion. We will now provide a direct assessment of cumulative abnormal returns in the secret phase, i.e. the period between trigger day and announcement day, that also takes the proposed 2-day filing window into account. In a second step, we study cross-sectional determinants of the time to file a Schedule 13D.

To investigate the economic importance of asymmetric information in this setting, we look once more at the sample of all initial 13D filings with at least two trading days between the trigger day and the announcement day. We then run cross-sectional regressions of abnormal buy-and-hold returns during the secret phase. Column (1), for example, reports the regression output for buy-and-hold returns starting at day $TD + 1$ (the day following the trigger day) holding the security until the announcement day (labeled $BHAR_{TD+1}$). This amounts to 3.5% for our benchmark group. It is useful to compare this with the abnormal buy-and-hold return over the entire 40-day period for exactly the same set of filings as reported in column (7). In other words, almost half of the abnormal returns occur during the secret phase for our baseline group. It appears that this effect is smaller for hedge funds and financial institutions. Model specifications in columns (3) and (5) use the same dependent variable with additional control variables.

The proposed regulation intends to leave 13D filers with a full day to submit their filing. To capture the improved information efficiency of this regulation, it is more effective to look at abnormal buy-and-hold returns starting *two* days after the trigger day, holding the security until the announcement day (labeled $BHAR_{TD+2}$). In this case, we see that cumulative abnormal returns are substantially smaller compared to the ones for the entire 40-day window surrounding the filing. It amounts to roughly 1/10 for our benchmark group (0.9% vs. 8.7%). There is, furthermore, no significant difference across filer types if we

consider abnormal returns during the secret phase starting two days after the trigger day. Interestingly, for the group of filings we are considering in Table 6, hedge funds actually see smaller overall abnormal returns than the baseline group. Results remain qualitatively very similar if we add our standard set of control variables and time fixed effects. Despite remaining insignificant, point estimates for our filer type variables change substantially if we add additional controls.

Looking at abnormal returns during the secret phase may help us understand one potential benefit of the reform, namely a reduction in the informational advantage of activist investors over this period. Our results indicate that the informational advantage during this time period is fairly small as mirrored in small abnormal returns. On the other hand, the tightened regulation may come at a cost. Noteworthy is that in this case the required acceleration in reporting legally firm 13D filings may undermine the general quality of filings and increase potential litigation threats. Therefore, we examine in our next step determinants of the reporting time.

As mentioned already several times throughout the paper, the regulator gives activist blockholders 10 days to report their Schedule 13D. Nevertheless, a meaningful fraction of filings are turned in late. We are now interested in two questions. Which filings are submitted late and what determines the time it takes activists to report their filing. To determine whether a filing is late, it is important to note that the 10-day period is based on calendar days. If the tenth day is on a non-trading day, a Sunday for example, the time to file is extended accordingly and a Monday filing would not be considered late. Taking this slight complication into account, we can look at the extent of late filings across different filer types. These summary statistics are presented in Table 2. It reveals that hedge funds are the group of activists with the smallest fraction of late filings. While hedge fund filings are submitted in more than 85% of all cases on time, insider filings are most often late more than 27% of the time.

Table 8 reports similar results in a regression framework. In columns (1) and (2) we include all filings for which we observe a trigger and filing date. The dependent variable is the number of calendar days it took to submit the filing. Specifications in columns (3) and (4) use the same variable, but restrict the sample to on-time filings only. In contrast, columns (5) and (6) again look at all filings, but use a dummy variable as dependent variable that indicates late filings.

The results reveal some consistent patterns. First, hedge funds file more quickly than

any other filer type (similar to the findings in Brav, Bebchuk, Jackson, and Jiang (Forthcoming)). This is true whether one looks at the days it took to file or whether one is interested in the extent of late filing. Moreover, the number of pages displays an interesting pattern. While they do not play a meaningful role for determining the time it takes to file when looking at all filings, the picture changes when looking at on-time filings. Subsequently, the number of pages of a filing significantly predict the time it takes to file. This suggests that activists choose to file towards the end of the allowed time window if the amount of information to be incorporated in a filing is substantial - needing many pages to lay it out. In contrast, late filings (after the 10-day window) tend to be short, possibly because late filings contain less relevant information.

Our results indicate that the costs of tightened regulation may be quite substantial. It would be much more costly for filers to produce the relatively complex filings on time with a very short turn around time. This is more relevant for complex filings and therefore, the new regulation will mainly affect filers engaging in more complex activities. As a result, this will either make investor activism more costly or it will lead to very uninformative "off-the-shelf" filings. Neither of these two consequences are positive. At the same time, we see that abnormal returns are fairly small during the quiet period and there seems to be relatively little abuse of the 10-day filing period.

8 Targeting and real effects

In this last result section we place a greater emphasis on characteristics of target companies. We look first at the targeting decision of activist investors by running a set of predictive regressions for submissions of 13D filings. In the second step labeled real effects, we document the change of important firm characteristics before and after 13D filings.

Targeting: Table 9 reports results of monthly panel regressions. For every firm month, we generate a dummy which equals one if an activist event happens. In column (1), the activist event is an initial 13D filing. In column (2), the activist event is a 13D amendment, column (3) considers Hedge Fund initial filings, column (4) initial filings from financial institutions, column (5) looks at initial filings by insiders and column (6) looks at amendments of 13D filings.

Since our dependent variable is a dummy that is equal to zero most of the time, regressions have a very low R-squared. Nevertheless, independent variables of interest are

both significant and meaningful. Firms with more cash, higher leverage, and low book-to-market value are more likely to see a 13D filing. These findings reaffirm the interpretation that activist investors often target less efficiently managed companies. Surprisingly, the coefficient of market capitalization is less robust. Smaller firms are more likely to face an activist investor, while hedge funds and financial institutions seem to target larger firms.

Looking at coefficients from the last 6 monthly returns, we observe consistent momentum in activist strategies. Again, with the exception of hedge funds and financial institutions, stock returns from every month within the past six months help predict the occurrence of activists. Higher returns result in more frequent activist campaigns. In contrast, activism by hedge funds and financial institutions is associated with weaker momentum patterns. For hedge fund filings, only returns from the last month prior to a 13D filing carry information about a campaign. Lastly, in column (6), we add a dummy indicating if a company had an initial 13D filing within the previous month. This coefficient is statistically significant because many 13D amendments follow an initial 13D filing.

Real effects: Next, we discuss real effects following investor activism. These results are laid out in Table 10. We analyze a panel of all Compustat firms excluding the financial firms as commonly done in the literature. Our focus is on four variables of interest: cash (defined as $Cash/Assets \times 100$), payout-policy ($(Dividends + Repurchases)/Assets \times 100$), leverage, and profitability(Return on sales).

Our independent variables of interest are a set of dummies which measure the distance between an observation and an activist event. The dummy variable $t - 2$ ($t - 1$) equals one should there be an activist event in two (one) years time. The variable *after 13D* indicates the first accounting information after a 13D filing. Variables $t + 1$ ($t + 2$) equals one if there was an activist event one year ago (two or more years ago). We also define these dummies separately for each filer type. The first column in each table examines all activist events, whereas columns *HF*, *FIN*, *INS*, and *OTH* solely refer to activist events by hedge funds, financial institutions, insiders, and others respectively. Our approach employs matching firms according to industry, size, and book-to-market values. We implement this by adding $year \times SIC2 \times size/book-to-market$ match fixed-effects to our regressions instead of demeaning dependent variables for reasons discussed in Gormley and Matsa (2014).

Looking at cash holdings in the upper left table, we see similar patterns across filer types. Activists target firms with large cash holdings as noted in our predictive regressions in Table 9. Activists entries inevitably lead to immediate reductions in cash holdings.

Quantitatively, cash holdings in the year prior to the filing were on average 0.804% higher than the typical cash holding of a firm from the same *year* \times *SIC2* \times *size/book-to-market* bin. This effect amounts to 4% of the sample average cash holding which equals 18.6%. The significantly higher cash holding reverts to a lower but statistically insignificant level in the year of an activist event. It further decreases to statistically significant levels in the years afterwards. Two+ years after an activist event, the cash holding is -2.918% lower than a matched firm. This effect is sizable as it accounts for roughly 15% of the sample mean. A similar pattern materializes in the payout policy. Activists target firms with relatively low payouts. This pattern reverts leading to significantly higher payouts two or more years after an activist event.

The impact on leverage is less clear. Similar to our results of our predictive regressions described in Table 9, we find that activists target highly levered firms. In the year before the activist event, target firms already have a higher level of leverage than comparable matched firms. While leverage increases even more in the sample with all activist, we do not see a similar increase for hedge fund targets following $t + 1$.

The picture for profitability is more mixed (see lower right table). In terms of targeting, our results indicate that activists approach less profitable firms (this targeting effect is not present for hedge fund activists, financials, or insiders though). Our profitability measure is at its lowest value in the year of the activist event or the year following the activist event. However, two or more years after the activist event the coefficient switches signs becoming positive and statistically significant. This supports the claim that activists enforce controversial restructuring creating positive effects only after some time.

Overall, we see a substantial (immediate) impact of investor activism on the financial policy of target firms. We also find a positive long-term impact of activists on profitability while the short-term impact of activists on profitability is not positive. This indicates that activists' strategies affect (at least) profitability and corporate finance policies of target firms.

9 Conclusions

This paper gives a broad account of shareholder activism in the US. We study the complete sample of 13D filings between 1985 and 2012. Such filings are only required if an investor has an ownership stake larger than 5% and intends to actively influence the management

of the target company. These two qualifiers are closely in line with the trade-off modeled in Principal-Agent Theory, i.e. concentrated ownership stakes vs. individual effort provision, and they should be for that reason important determinants of the activist's impact. Our sample suggests that these events are more frequent than documented in the literature. We identify on average 800 13D filings per month, of which about 200 are initial filings. These events are also economically meaningful as the cumulative abnormal return in a 40-day window amounts to 7% for initial filings and 4% for all filings.

Our cross-sectional results are consistent with the Principal-Agent Theory. We estimate that cumulative abnormal returns around the announcement increase with the activist's ownership stake and with our proxies for effort provision. The same is true if the target company concurrently engages in merger and acquisition activities. On the other hand, we find that the activist's type is of less importance to the success. We sort thereby 13D filings into 4 activist categories: hedge funds, financial institutions, insiders (officers and directors), and other 10% holders plus unidentified filers. While the literature convincingly shows a large price impact of hedge fund filings, we demonstrate that this is not different from filings reported by corporate insiders or other active blockholders. Only financial institutions stand apart by showing significantly smaller returns.

The SEC reviews at the moment a tightening of Regulation 13D. In particular two aspects are controversially discussed: shortening the reporting period for 13D filings from 10 to 2 days, and introducing a general "cooling-off period" for all 13D filers. Our event study results indicate that shortening the filing window may not improve market efficiency by much as stock prices incorporate information of activist events quickly. The bigger part of the price increase takes, on average, place before or on the trigger day. Proponents of the new regulation blame particularly hedge funds of exploiting their private information during this filing period. If anything, abnormal returns of hedge fund filings are smaller over the secret period. With respect to the timeliness of initial filings, hedge funds report more often on time. Also the effectiveness of a general cooling-off period may be questioned. Event study evidence of trading volume in target stocks is already much in line with it. Abnormal trading volume clearly spikes on the trigger day. However, future research on individual trading accounts needs to settle this issue. We would like to close on the note that additional regulation will most likely come with a cost, which is currently not well understood. This could be an interesting future research agenda.

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Appendix: List of Variables

Variable Name	Description	Database
Hedgefund	Dummy variable indicating whether a 13D filing has been reported by a hedge fund	Agarwal (2011, 2013)
Financial	Dummy variable indicating whether a 13D filing has been reported by a financial institution	Thomson Financial
Insider	Dummy variable indicating whether a 13D filing has been reported by a corporate insider (officer or director)	Thomson Insider
ln(# Pages)	Logarithm of the page numbers in a 13D filing	Thomson Research List
Trigger day	Date when all requirements for a Schedule 13D are fulfilled and such a filing becomes mandatory	EDGAR, SEC News, Lexis-Nexis
Announcement day	Date of reporting a 13D filing	Thomson Research List
Days to file	Number of days between the trigger day and the announcement day of a 13D filing	see above
Late filing	Dummy variable whether filing has been submitted after 10-day filing window	see above
ln(Market cap)	Logarithm of market capitalization	CRSP
Ownership	Percentage of security class in the target company held by filer as reported in the 13D filing	Comp. Disclosure, News Digest, Lexis-Nexis
Dividend yield	Defined as common dividends over market value of equity	Compustat
Q	Defined as total assets plus difference between market and book value of equity over total assets	Compustat
Leverage	Defined as total liabilities over total liabilities plus the book value of equity	Compustat
Return on assets	Defined as EBITDA over lagged total assets	Compustat
Cash holdings	Defined as cash and short-term investments over total assets	Compustat
Cash flow	Defined as net income plus depreciation/amortization over lagged total assets	Compustat
Merged in 3M	Dummy variable indicating whether the company merged within the following 3 months after a 13D filing	SDC Platinum
3M<Merged<12M	Dummy variable indicating whether the company merged 3 to 12 months after the 13D filing	SDC Platinum
Aret _t	Return of target company in excess of value-weighted CRSP market return at day <i>t</i>	CRSP
Avol _t	Trading volume in target stock over the stock's mean trading volume 50 to 20 trading days prior to the event	CRSP
BHAR _{-20,+20}	Abnormal buy-and-hold return in excess of the value-weighted CRSP market return over a 40-day window surrounding the announcement of a 13D filing	CRSP
BHAR _{TD+1}	Abnormal buy-and-hold return buying the security the day after the trigger day and holding it until the announcement day	CRSP
BHAR _{TD+2}	Abnormal buy-and-hold return buying the security two days after the trigger day and holding it until the announcement day	CRSP

Figures

Figure 1: Time-series of 13D filings

This figure plots the total number of 13D filings per month in our sample that starts in October 1985 and ends in June 2012. The reported month is defined by the announcement date of each Schedule 13D filing with the SEC. The dashed line restricts the sample to a time-series of initial 13D filings over the same period. An initial 13D filing is required to be filed within 10 days after an activist ownership stake has passed the threshold of 5% for the first time or a passive ownership stake of more than 5% has turned active. The difference between the two lines is represented by amended 13D filings. An amendment to a Schedule 13D needs to be written if the ownership stake varies by more than 1%, the purpose of holding a 5% ownership stake changes, or other major revisions to the filing occur. The data source is Thomson Research List.

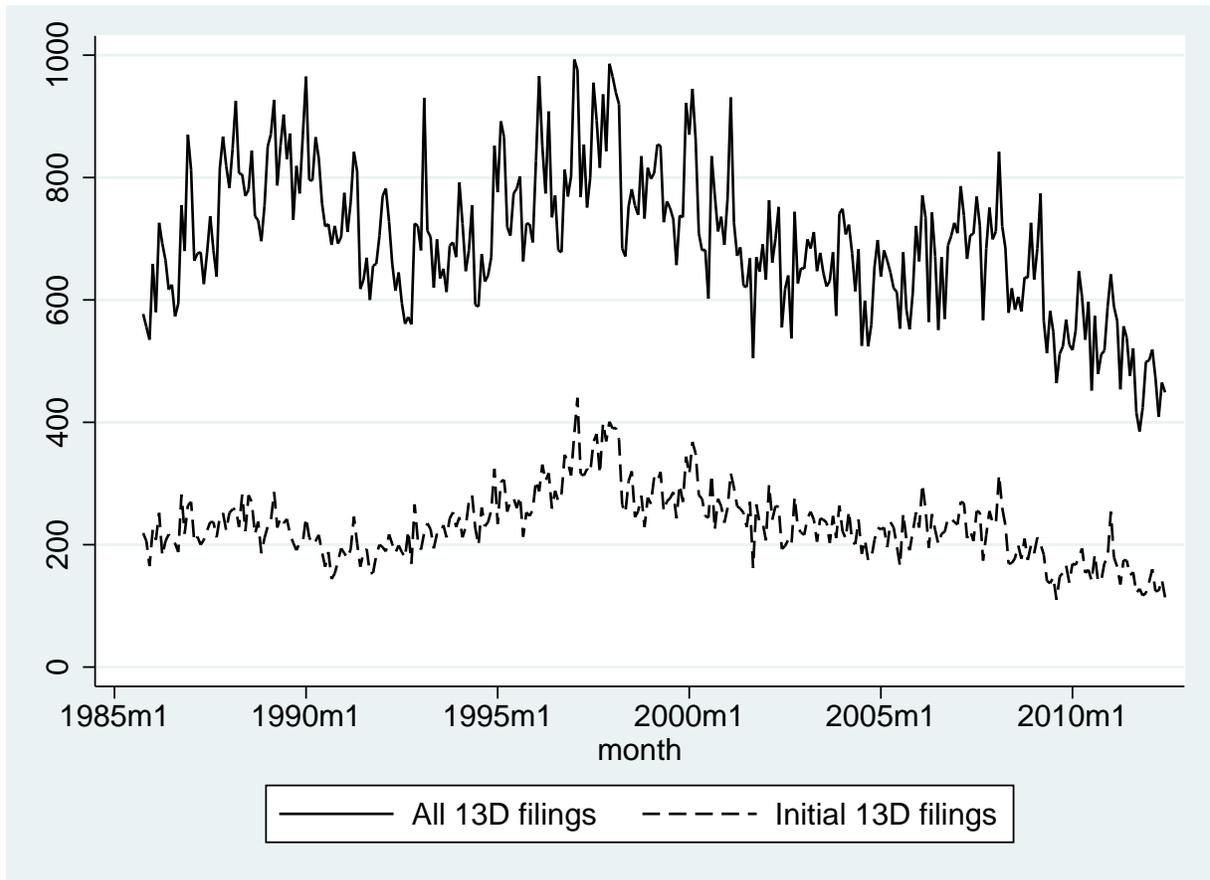


Figure 2: Time-series of 13D filings per firm

In this figure we adjust the annual number of 13D filings, as reported in Figure 1, by the number of firms listed in the CRSP universe for the same year. The upper left panel shows the time-series of total number of 13D filings divided by the number of CRSP firms. In the lower left panel we only count one 13D filing per CRSP firm and year. The upper right panel plots the total number of initial 13D filings divided by the number of CRSP firms. In the lower right panel we again take only unique initial 13D filings per CRSP firm and year into account.

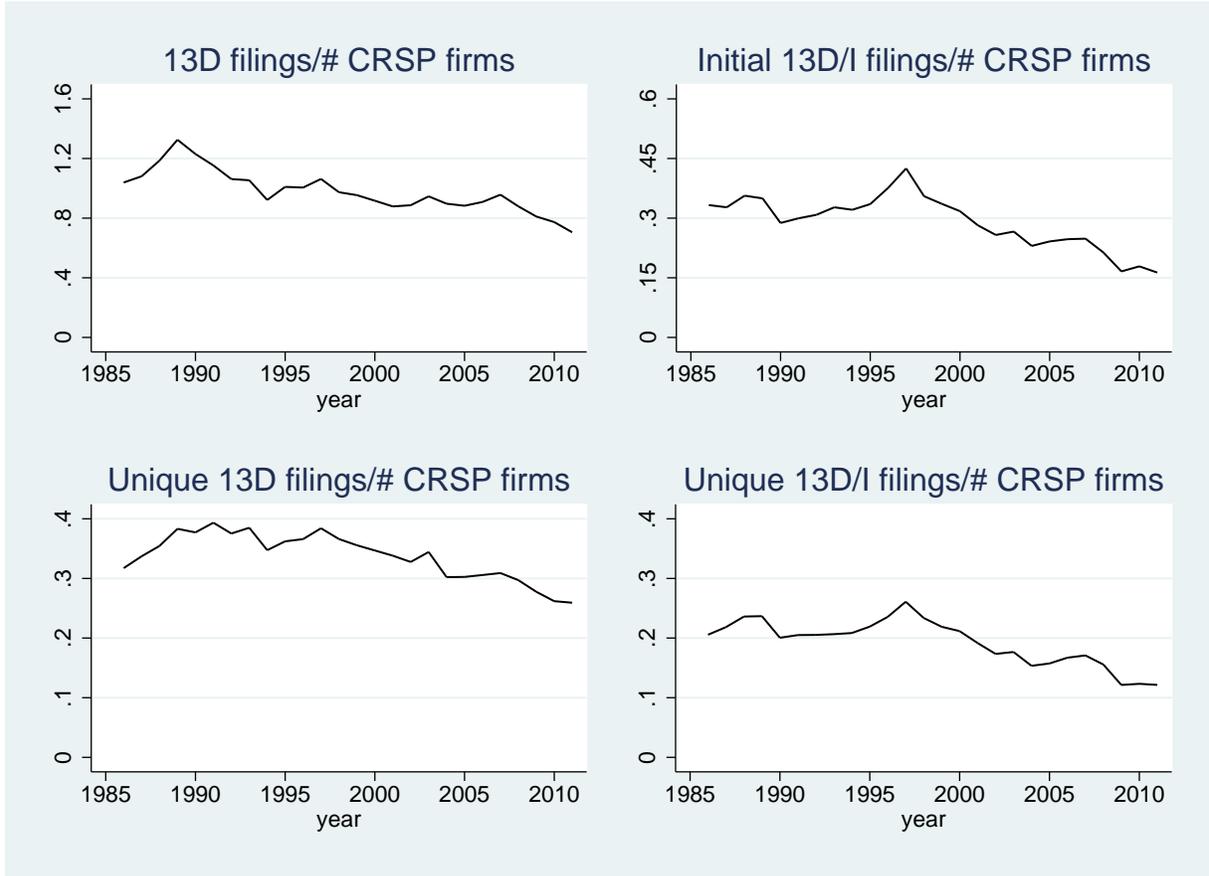


Figure 3: Abnormal returns around the announcement of initial 13D filings

This figure illustrates abnormal returns and trade volumes for stocks in a time frame -20/+20 trading days around the announcement of an initial 13D filing with the SEC. The black line represents the average buy-and-hold return of the company in excess of the CRSP value-weighted index buy-and-hold return. The navy-colored bars correspond to the average abnormal trade volume, which is defined as the realized trade volume in a stock divided by its own average -50 to -20 days prior to the event. The sample contains all initial 13D filings between October 1985 and June 2012. Filing dates are collected from Thomson Research List, whereas return and trade volume data are taken from CRSP.

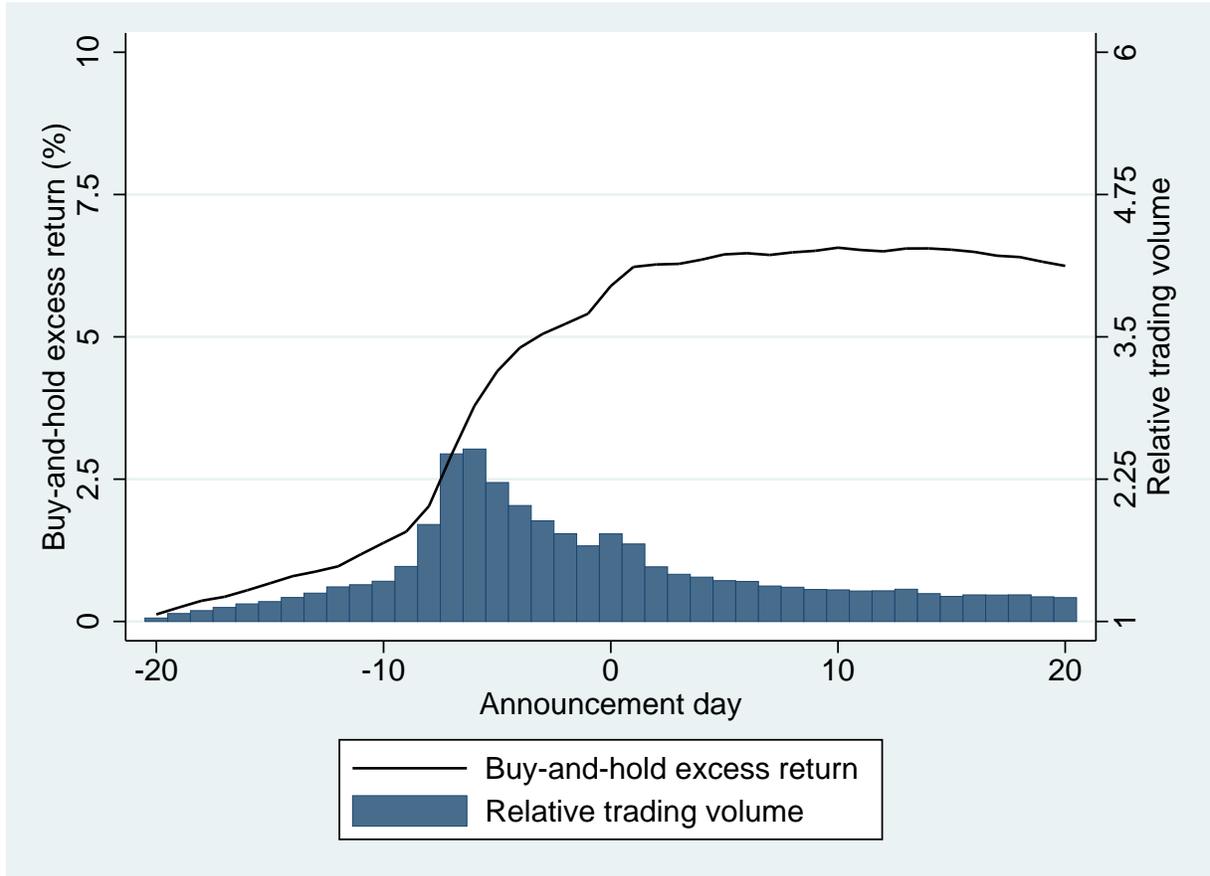


Figure 4: Abnormal returns of building an activist ownership stake larger 5%

Figure 4 shows abnormal returns and trade volumes of stocks -20/+20 trading days around initial 13D filings. In contrast to Figure 3, events are this time sorted by the day when an activist ownership stake passes the 5% threshold, thereby triggering the initial 13D filing within 10 days. The black line represents, again, the average buy-and-hold return of the company in excess of the CRSP value-weighted index buy-and-hold return. The navy-colored bars correspond to the average abnormal trade volume, which is defined as the realized trade volume in a stock divided by its own average -50 to -20 days prior to the event. The sample includes all initial 13D filings with observed trigger days over the period October 1985 until June 2012. Trigger dates are not reported in Thomson Research List, and they are therefore taken from SEC News Digest, Lexis-Nexis academic, Compact Disclosure, or EDGAR. Return and trade volume data are taken from CRSP.

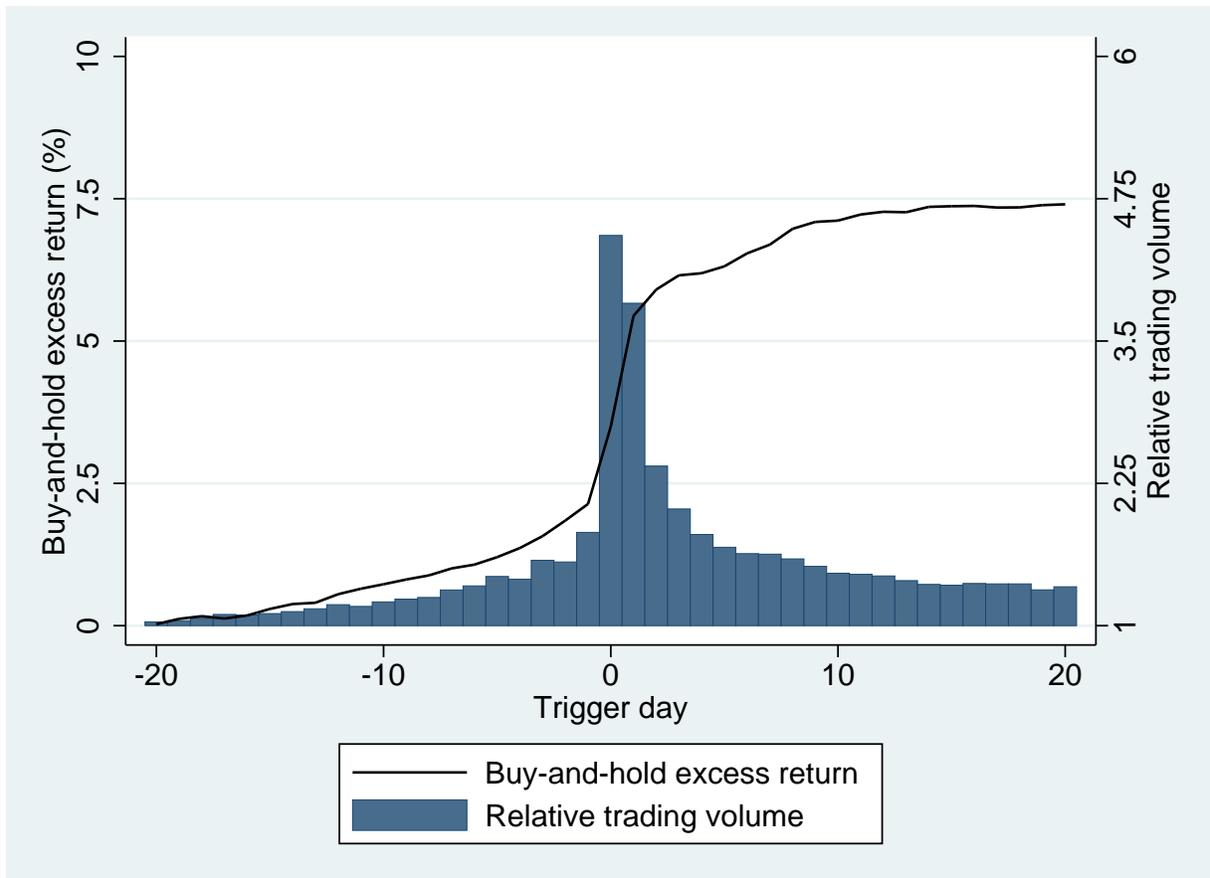


Figure 5: Event study with collapsed interim period

The following figure illustrates abnormal returns and trade volumes of stocks -20/+20 trading days around initial 13D filings. This event graph is sorted by two dates, the trigger day of an initial 13D filing (TD) and the day of its announcement with the SEC (AD). We exclude all filings that have fewer than 3 trading days between TD and AD. A sort around two dates is obtained by collapsing the interim period into 3 event-time units. The *label a* refers to the trading day after passing the 5% ownership threshold and the *label b* tags a data point that aggregates all information between *a* and *c*. Irrespective of the number of days that are in between, we simply accumulate abnormal returns and abnormal trade volumes for the period. The average buy-and-hold return of the company in excess of the CRSP value-weighted index buy-and-hold return is represented by the red dots. The navy-colored bars correspond to the average abnormal trade volume, which is defined as the realized trade volume in a stock divided by its own average -50 to -20 days prior to the event. The sample contains all initial 13D filings between October 1985 and June 2012. Announcement dates are taken from Thomson Research List, whereas trigger dates are from SEC News Digest, Lexis-Nexis academic, Compact Disclosure, or EDGAR. CRSP return and trade volume data are used.

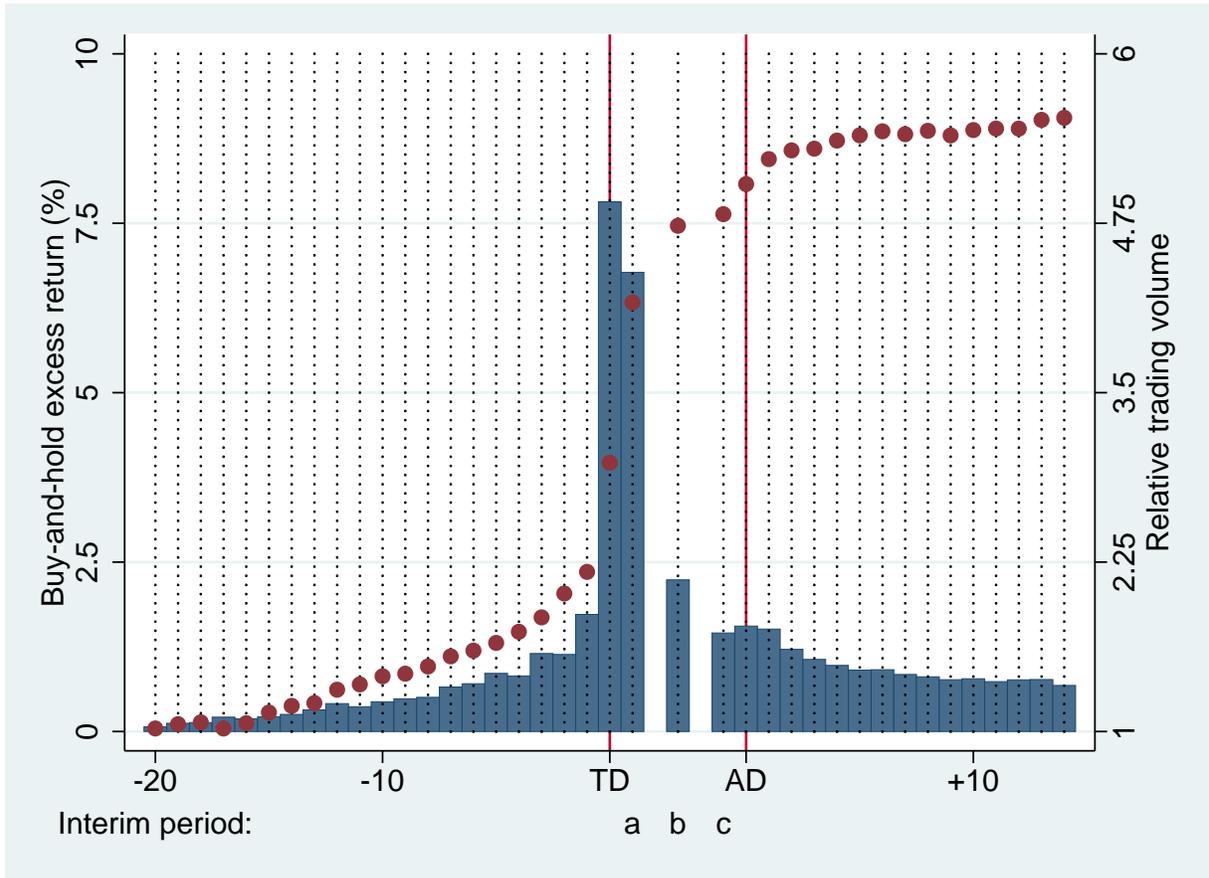


Figure 6: Time-series of activist ownership stakes

This figure plots the time-series of ownership stakes reported by activist shareholders in initial 13D filings. The top panel simply shows the percentage of shares owned by the activist as reported in the filing. The bottom panel reports the dollar value of the stake, which is constructed by multiplying the ownership percentage with CRSP shares outstanding and CRSP prices. The solid line refers to the mean and the dashed line to the median in each year. The graph only reports statistics for the years 1985-2005 because all databases reporting a processed version of this item were discontinued.

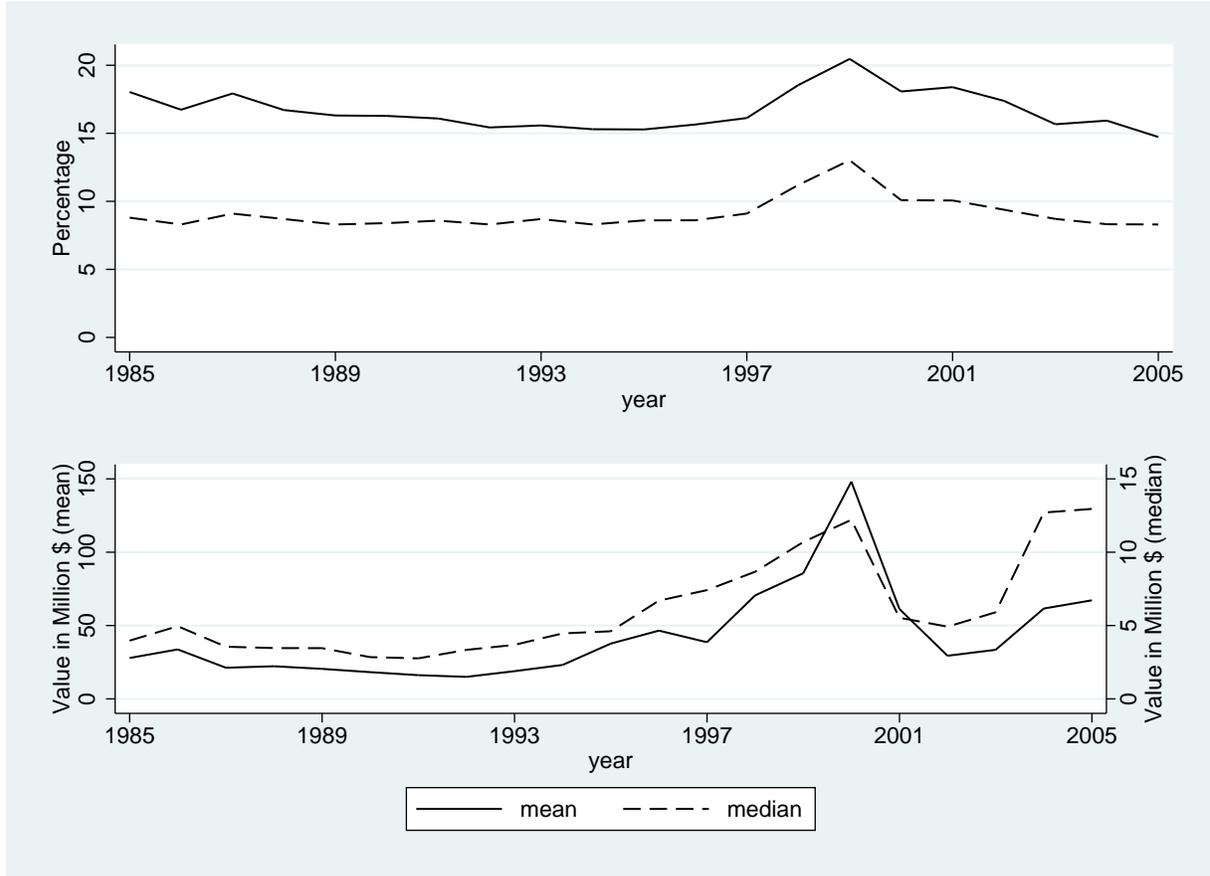


Figure 7: Time-series of abnormal returns and trading volumes

This figure shows time-series evidence of the effect of 13D filings on stock prices and trade volume. The black solid line is the mean abnormal buy-and-hold return ($BHAR_{-/+20}$) around the announcement of a Schedule 13D by year. The gray dashed line represents the mean abnormal trading volume on the trigger day by year. The sample consists of all initial Schedule 13D filings between October 1985 and June 2012.

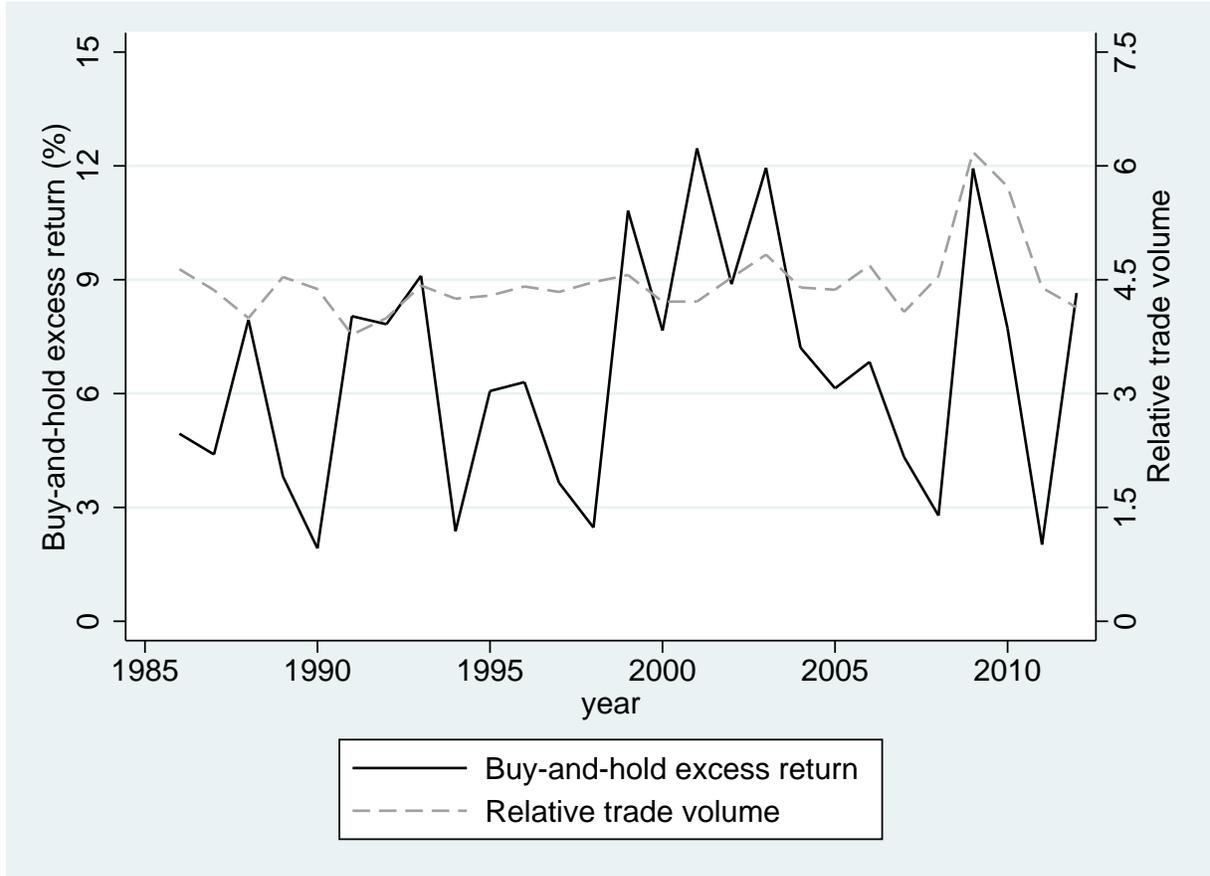


Figure 8: Abnormal announcement returns of different 13D filers

Figure 8 plots abnormal returns and trade volume around initial 13D filings. We classify 13D filers into 4 groups: hedge funds, financial institutions, insiders, and other. Hedge funds are all institutions identified in Agarwal (2012, 2013), Financials are all other filers in the Thomson Financial database, Insiders are all filers reported as management or board members in the Thomson Insider database. The setup of the figure follows precisely the one of Figure 3 except that each graph is printed separately for every filer type. The black line represents the average buy-and-hold return of the company in excess of the CRSP value-weighted index buy-and-hold return. The navy-colored bars correspond to the average abnormal trade volume, which is defined as the realized trade volume in a stock divided by its own average -50 to -20 days prior to the event. The sample contains all initial 13D filings between October 1985 and June 2012.

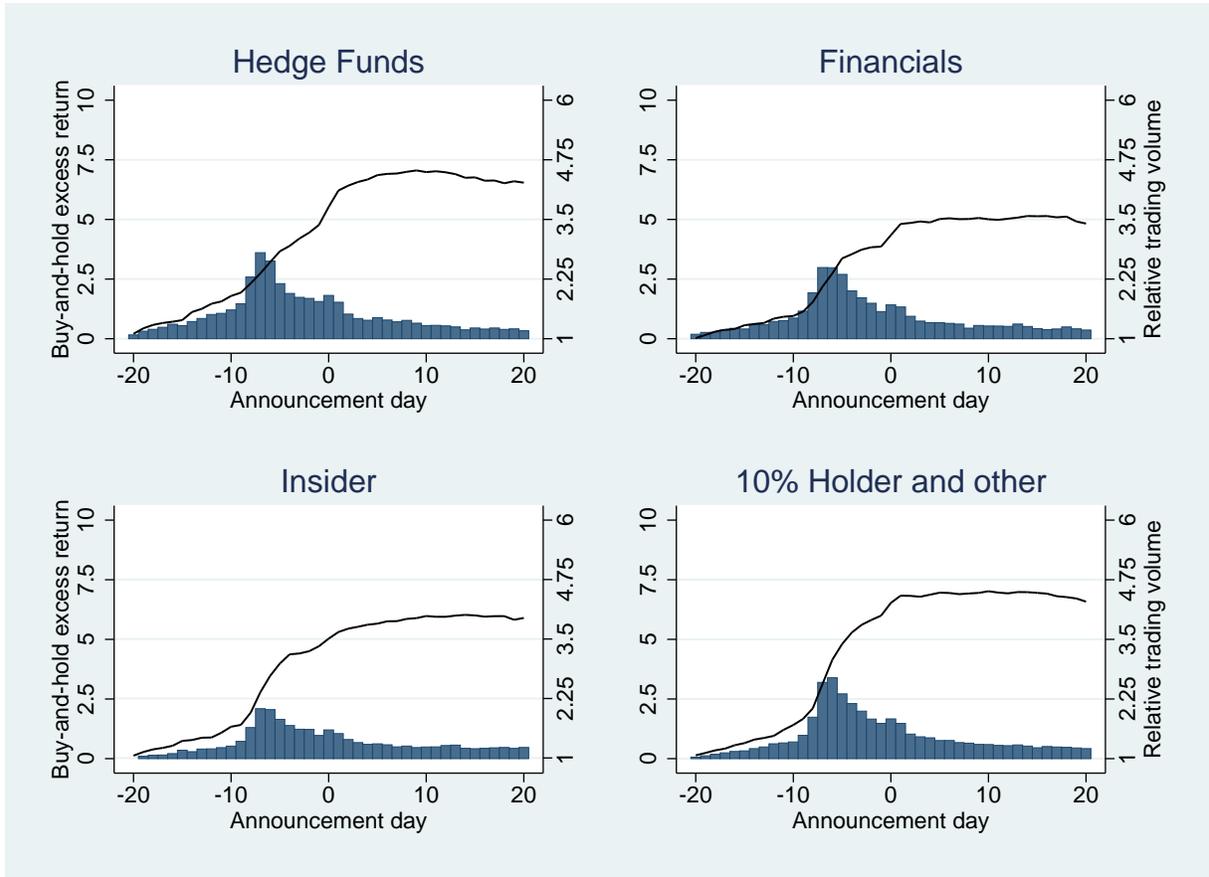


Figure 9: Trigger day effects by 13D filer types

This figure depicts trigger day effects on stock prices and trading volumes. The setup of the figure follows precisely the structure of Figure 4 except that each graph is printed separately for every filer type. We classify 13D filers into 4 groups: hedge funds, financial institutions, insiders, and other. Hedge funds are all institutions identified in Agarwal (2012, 2013), Financials are all other filers in the Thomson Financial database, Insiders are all filers reported as management or board members in the Thomson Insider database. The black line represents the average buy-and-hold return of the company in excess of the CRSP value-weighted index buy-and-hold return. The navy-colored bars correspond to the average abnormal trade volume, which is defined as the realized trade volume in a stock divided by its own average -50 to -20 days prior to the event. The sample contains all initial 13D filings with an observed trigger day between October 1985 and June 2012.

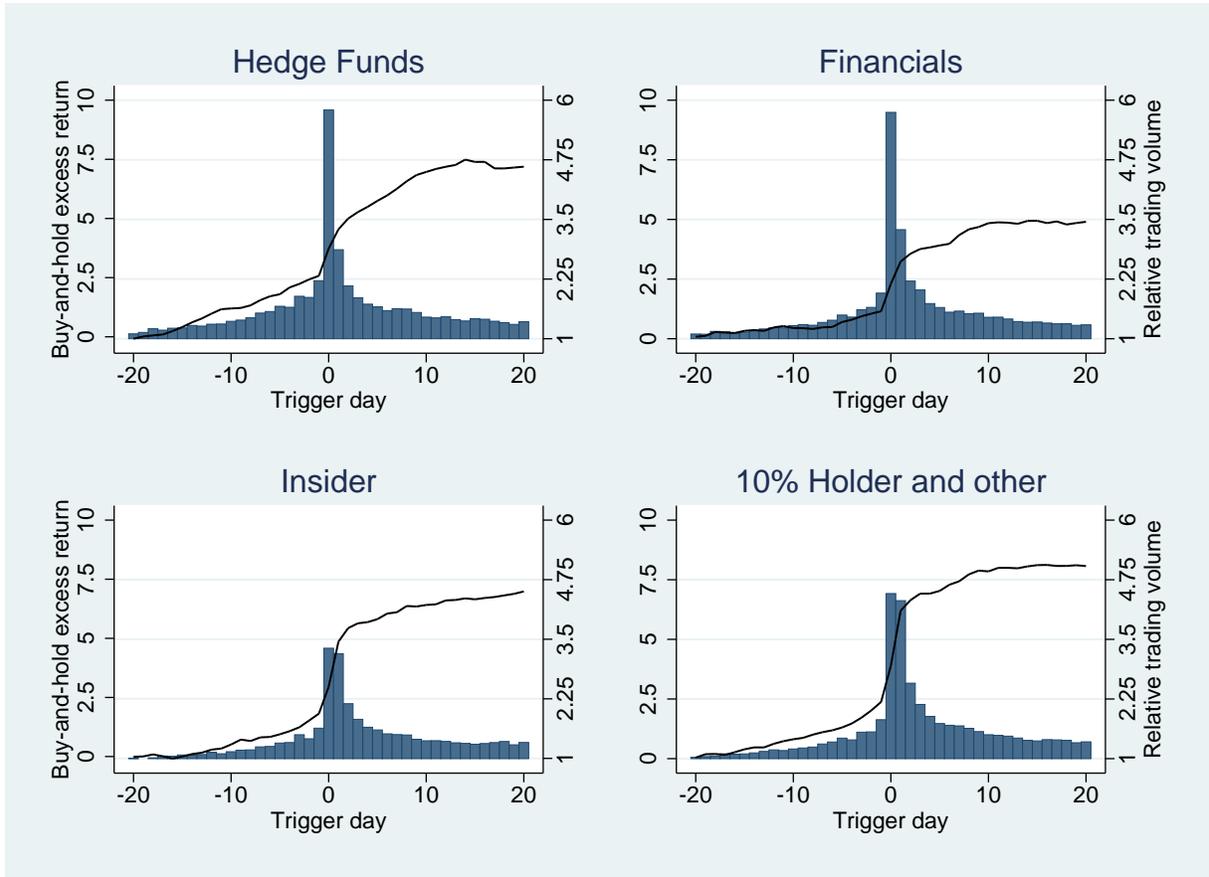


Figure 10: Collapsed interim graph by 13D filer types

The following figure replicates the approach of Figure 5 splitting the sample into different 13D filers. We classify 13D filers into 4 groups: hedge funds, financial institutions, insiders, and other. We exclude all filings that have fewer than 3 trading days between TD and AD. A sort around two dates is obtained by collapsing the interim period into 3 event-time units. The *label a* refers to the trading day after passing the 5% ownership threshold and the *label c* refers to the trading day prior to its announcement. Irrespective of the number of days that are in between, we simply accumulate abnormal returns and report the mean trading volume for the interim period. The average buy-and-hold return of the company in excess of the CRSP value-weighted index buy-and-hold return is represented by the red dots. The navy-colored bars correspond to the average abnormal trade volume, which is defined as the realized trade volume in a stock divided by its own average -50 to -20 days prior to the event. The sample contains initial 13D filings between October 1985 and June 2012.

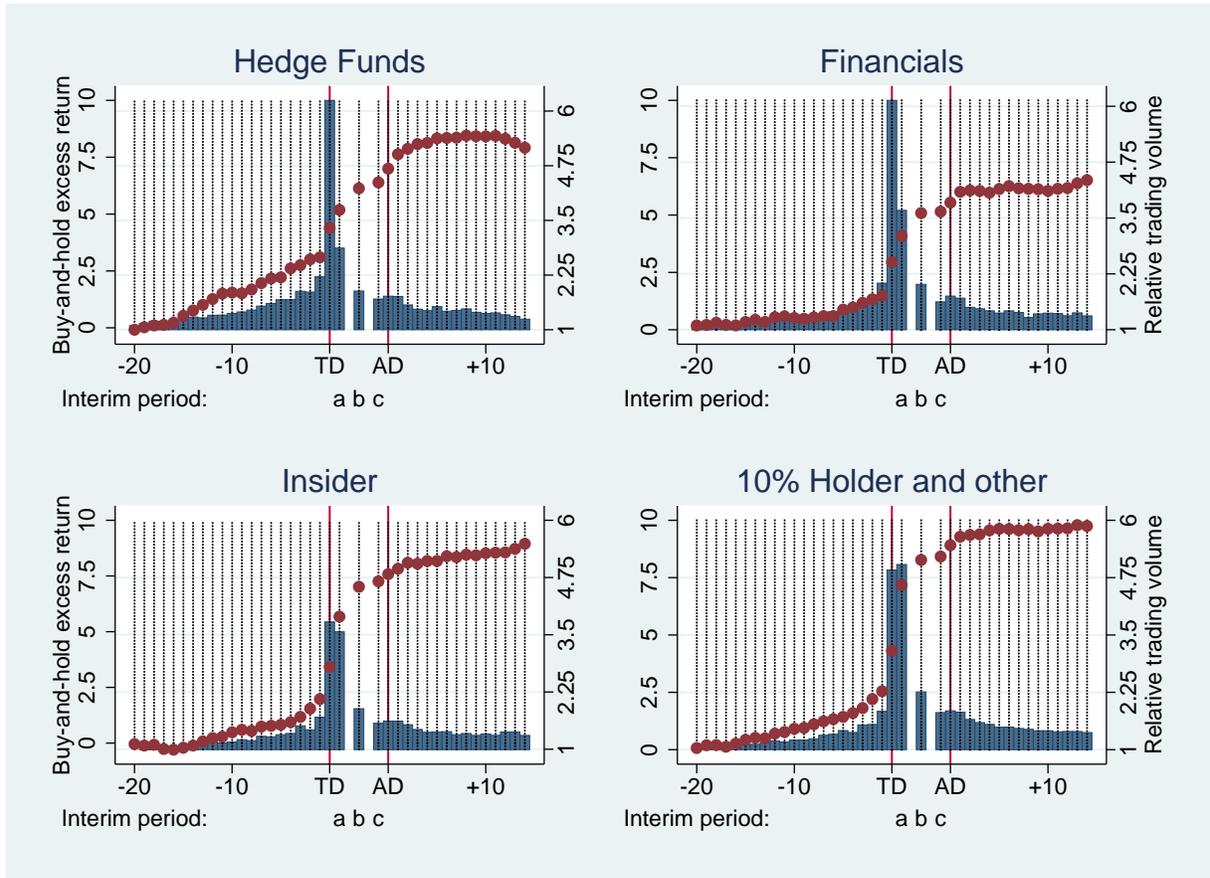


Figure 11: Differential effect of hedge fund activists

This figure highlights differential effects of hedge funds in comparison to all other 13D filings in our sample. The top panel focuses on differences in buy-and-hold returns starting 20 trading days before the trigger day. The solid line reports the regression coefficient obtained from a regression of buy-and-hold excess returns on a dummy variable for hedge fund filings including month fixed-effects. This regression is independently executed for each trading day shown in the graph. Standard errors are clustered at the 3-digit SIC code. The dashed lines represent 95% confidence bounds. The bottom panel plots regression coefficients of the same regression model except that we use the abnormal trade volume as dependent variable. Abnormal trade volume is defined as the realized trade volume of an event stock divided by its own average -50 to -20 days prior to the trigger day.

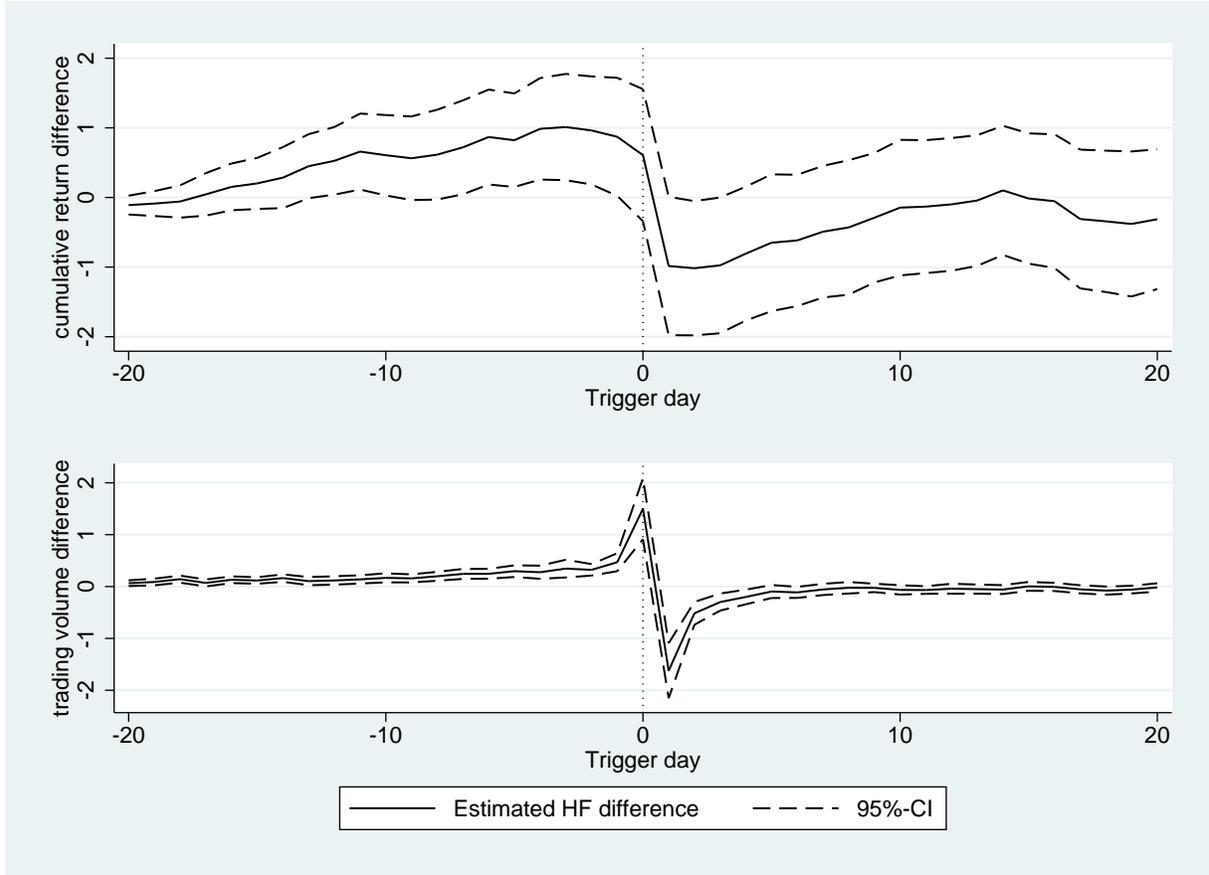


Figure 12: Differential effect between 13D and 13G filings

This figure highlights differences between 13D and 13G filings around the time period $-/+20$ days around the announcement of a filing. For each event day we run a separate cross-sectional regression of the dependent variable on a dummy indicating a 13D filing as well as month-fixed effects. Standard errors are clustered at the 3-digit SIC code. The solid line represents the point estimate for abnormal buy-and-hold returns in excess of the value-weighted CRSP market. The dashed graph shows similar point estimates for abnormal trading volume, which is defined by the ratio of trade volume over mean trade volume during the period -50 to -20 . The area between the dotted lines indicates 95% confidence bounds.

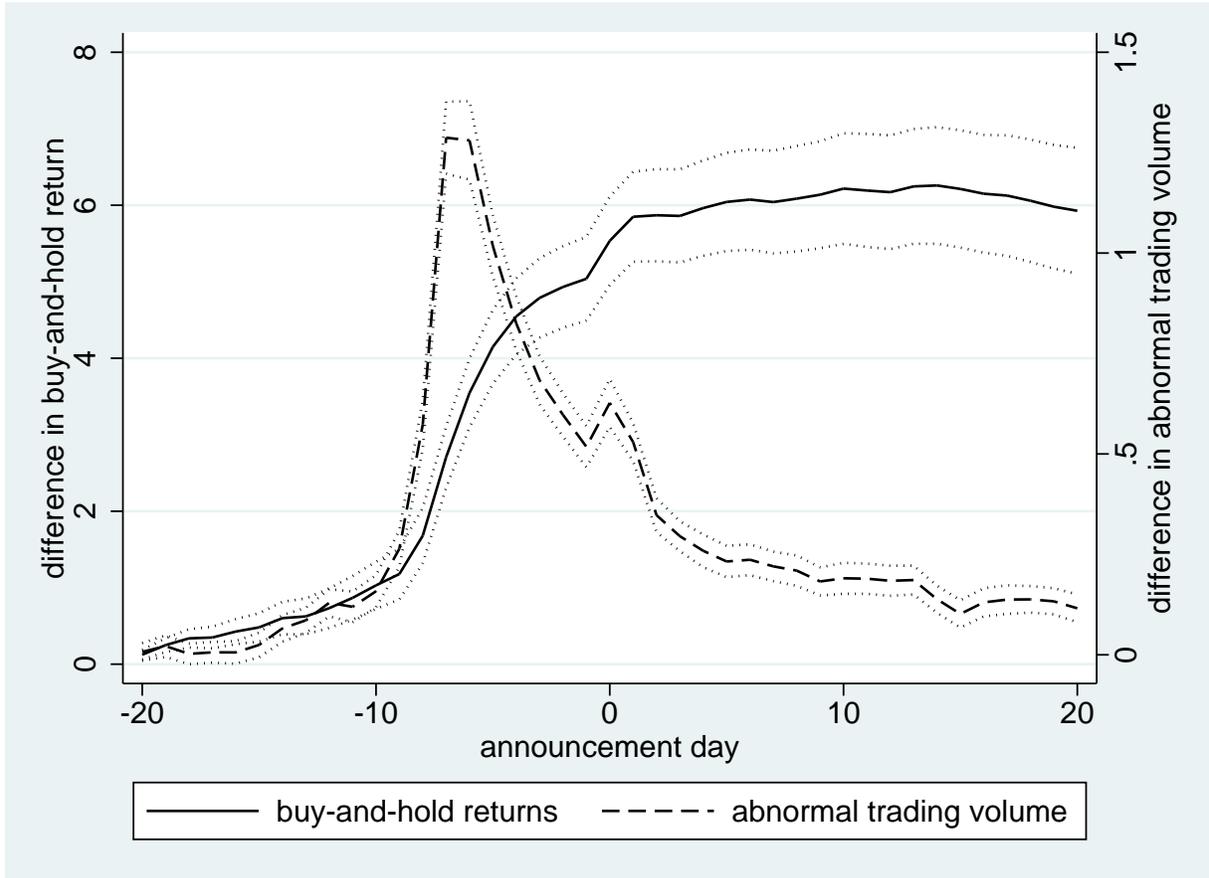


Table 1: Summary statistics of returns and trade volume

This table lists descriptive statistics of excess returns and abnormal trade volume for stocks in our sample of initial 13D filings. Returns in Panel A are in excess of the value-weighted CRSP index return and reported in percent. Trade volume in Panel B is in excess of the stock's own mean trade volume 50 to 20 trading days prior to the event. All measures are winsorized at the 1% level. The subscript TD refers to the trigger day, when the activist shareholder passes the 5% ownership threshold. In contrast, AD refers to the day of the announcement with the SEC. The line BHAR_{-20,+20} covers buy-and-hold excess returns from 20 trading days prior to announcement until 20 days thereafter. The first block *All 13D/I* simply includes all initial 13D filings in our sample. The subsequent blocks separately report statistics for 4 types of activist shareholders: hedge funds, financial institutions, insiders, and 10% holder or other. Hedge funds are all institutions identified in Agarwal (2012, 2013), Financials are all remaining filers that can be matched with the Thomson Financial database, Insiders are all filers reported as management or board members in the Thomson Insider database.

	<i>All 13D/I</i>			<i>Hedge Funds</i>			<i>Financials</i>			<i>Insider</i>			<i>10% Holder & Other</i>		
	mean	sd	count	mean	sd	count	mean	sd	count	mean	sd	count	mean	sd	count
<i>Panel A: Excess returns around 13D/I filings</i>															
BHAR _{-20,+20}	6.32	30.90	44814	7.29	26.61	3111	4.95	26.61	4748	5.87	31.31	10446	6.61	31.84	26965
aret _{TD}	1.18	7.18	37594	0.87	6.1	2987	1.02	6.49	4117	1.00	6.92	9190	1.33	7.55	21729
aret _{TD+1}	1.72	8.57	38045	0.73	4.99	3021	0.82	6.02	4183	1.64	8.45	9365	2.05	9.34	21921
aret _{AD-1}	0.15	4.65	47669	0.35	3.92	3260	0.05	3.88	4999	0.18	4.82	11410	0.14	4.77	28500
aret _{AD}	0.43	4.97	47720	0.75	4.25	3265	0.49	4.03	5005	0.3	5.1	11430	0.45	5.14	28523
aret _{AD+1}	0.30	4.84	47705	0.69	3.95	3261	0.43	4.15	5006	0.24	5.06	11429	0.26	4.95	28512
<i>Panel B: Relative trade volume around 13D/I filings</i>															
avol _{TD}	4.43	10.78	36250	5.79	12.60	2918	5.74	12.37	3982	3.31	9.05	8704	4.46	10.79	21057
avol _{TD+1}	3.83	9.86	36103	2.87	7.14	2904	3.29	8.15	3969	3.20	8.72	8674	4.31	10.80	20965
avol _{AD-1}	1.66	3.03	45192	1.78	3.05	3125	1.57	2.69	4765	1.47	2.83	10525	1.74	3.15	27234
avol _{AD}	1.77	3.24	45186	1.91	3.22	3126	1.71	3.02	4766	1.59	3.05	10524	1.83	3.33	27227
avol _{AD+1}	1.68	2.98	45143	1.76	2.9	3122	1.67	2.77	4763	1.51	2.83	10519	1.74	3.07	27196

Table 2: Other summary statistics

This table follows precisely the structure of Table 1 and lists summary statistics of other important variables. Panel A focuses on the time gap between the trigger day of a 13D filing and the corresponding submission of a Schedule 13D with the SEC. *Days-to-file* refers to the number of days that are in-between. *Early filings*, *On-time filings*, and *Late filings* are dummy variables indicating the status of the filing. Panel B reports information taken from 13D filings. *Ownership* captures the fraction of shares owned by the filer on the announcement day of the filing. *# pages* lists the number of pages of the 13D filing. Panel C summarizes control variables taken from Compustat. The accounting information predates 13D filing dates. These variables are defined as follows: *Dividend yield* as common dividends over market value of equity, *Q* as total assets plus difference between market and book value of equity over total assets, *Leverage* as total liabilities over total assets, *Return on Assets* as EBITDA over lagged total assets, *Cash holdings* as Cash and short-term investments over total assets, and *Cash flow* as net income plus depreciation/amortization over lagged total assets.

	<i>All 13D/I</i>			<i>Hedge Funds</i>			<i>Financials</i>			<i>Insider</i>			<i>10% Holder & Other</i>		
	mean	sd	count	mean	sd	count	mean	sd	count	mean	sd	count	mean	sd	count
<i>Panel A: time to file</i>															
Days-to-file	10.00	5.47	39478	8.57	4.56	3189	10.23	5.64	4024	10.33	5.75	9487	10.08	5.52	16128
Early filings	0.41	0.49	39478	0.49	0.50	3189	0.43	0.50	4024	0.38	0.49	9487	0.41	0.49	16128
On-time filings	0.35	0.48	39478	0.38	0.49	3189	0.31	0.46	4024	0.35	0.48	9487	0.34	0.47	16128
Late filings	0.24	0.43	39478	0.13	0.34	3189	0.26	0.44	4024	0.27	0.44	9487	0.25	0.43	16128
<i>Panel B: 13D filing information</i>															
Ownership	17.19	18.56	29015	9.56	10.00	1430	11.77	12.97	3352	19.69	18.99	7856	14.79	17.53	11754
# Pages	30.13	56.04	57280	21.81	28.63	3603	29.77	51.46	5401	25.13	45.49	13951	30.88	58.86	25102
<i>Panel C: Accounting info prior to 13D filing</i>															
Market cap	516.1	4547	47750	728.4	2783	3265	586.3	2453	5009	645.3	8091	11071	429.5	2692	28544
Dividend yield ($\times 100$)	0.94	2.93	34100	0.97	2.78	2677	1.19	2.96	3664	0.94	2.89	8201	0.88	2.96	19666
Q	2.084	2.272	30008	1.921	1.837	2299	1.942	2.053	3200	2.121	2.344	7207	2.117	2.335	17395
Leverage	0.49	0.24	30378	0.49	0.24	2307	0.49	0.24	3204	0.49	0.24	7349	0.49	0.25	17612
Return/Assets ($\times 100$)	1.85	25.91	30212	5.71	22.4	2446	6.46	21.55	3177	2.47	25.31	7194	0.24	27.1	17494
Cash holdings ($\times 100$)	18.55	23.04	34980	19.58	23.76	2724	18.19	22.37	3700	17.58	22.64	8455	18.86	23.21	20211
Cash flow ($\times 100$)	-3.7	28.53	29914	0.76	23.61	2435	1.10	23.91	3072	-2.85	27.4	7150	-5.44	30.11	17355

Table 3: Cross-sectional regressions of buy-and-hold returns

This table reports cross-sectional estimation results. The dependent variable is a stock's buy-and-hold return in excess of the value-weighted CRSP index starting 20 trading days prior to the announcement of an initial 13D filing until 20 trading days thereafter. Buy-and-hold returns are winsorized at the 1% level. The three dummy variables Hedgefund, Financial, and Insider categorize the activist shareholder that is filling the 13D filing. $\ln(\text{Market cap})$ is the equity market capitalization of the target company. *Ownership* refers to the fraction of shares controlled by the activist shareholder group as it is reported in the filing. All remaining variables are based on Compustat and refer to the latest fiscal year prior to the activist campaign. They are defined as follows: *Dividend yield* as common dividends over market value of equity, *Q* as total assets plus difference between market and book value of equity over total assets, *Leverage* as total liabilities over total assets, *Return on Assets* as EBITDA over lagged total assets, *Cash holdings* as Cash and short-term investments over total assets, and *Cash flow* as net income plus depreciation/amortization over lagged total assets. Standard errors are clustered at the 3-digit SIC industry level. The parentheses report t-statistics.

	(1)	(2)	(3)	(4)	(5)
	$BHAR_{-/ +20}$	$BHAR_{-/ +20}$	$BHAR_{-/ +20}$	$BHAR_{-/ +20}$	$BHAR_{-/ +20}$
Hedgefund	0.695 (1.273)	0.688 (0.935)	1.210 (1.276)	0.734 (1.374)	1.111 (1.184)
Financial	-1.638*** (-3.033)	-1.561*** (-2.604)	-1.569** (-2.416)	-1.606*** (-3.016)	-1.433** (-2.233)
Insider	-0.661 (-1.460)	-0.655 (-1.557)	-0.784 (-1.396)	-0.624 (-1.373)	-0.581 (-1.006)
$\ln(\text{Market cap})$		0.594*** (4.261)	0.066 (0.335)		-0.155 (-0.797)
Ownership		0.087*** (6.245)	0.082*** (5.029)		0.064*** (4.109)
Dividend yield			-32.968*** (-3.090)		-31.952*** (-2.988)
Q			0.975*** (6.944)		1.011*** (7.165)
Leverage			2.157 (1.454)		1.869 (1.262)
Return on assets			-3.599 (-1.044)		-3.639 (-1.061)
Cash holdings			0.865 (0.549)		0.582 (0.372)
Cash flow			5.436* (1.781)		5.706* (1.867)
Merged in 3M				1.817** (2.237)	3.431*** (3.490)
3M<Merged<12M				-3.424*** (-5.839)	-1.505* (-1.756)
$\ln(\# \text{ Pages})$					1.154*** (4.310)
Constant	6.597*** (13.753)			6.848*** (12.316)	
Observations	44,787	26,826	17,142	44,787	17,140
R-squared	0.00	0.05	0.06	0.00	0.07
Time FE	No	Month	Month	No	Month
Cluster	SIC3	SIC3	SIC3	SIC3	SIC3

Table 4: Delistings and mergers of 13D target companies

This table reports statistics on the delisting and mergers of target companies after the filing of an initial Schedule 13D. Panel A reports the fraction of firms that get delisted or merged within 1 month after the announcement of the 13D filing. Panels B and C cover the longer time period of 12 and 18 months respectively. First, we compute the variables *Delisted* and *Merger (CRSP)* with the CRSP delisting file. While *Delisted* counts all delisted stocks as reported in CRSP, *Merger (CRSP)* includes only those ones with a merger delisting code in the range of 200 - 299. Alternatively, we identify the fraction of merged companies with SDC Platinum data by taking all completely merged companies of the database into account. This is reported in the variable *Merger (SDC)*. All statistics are reported for the overall sample, as well as for our different group of filers (hedge funds, financial institutions, insiders, and other).

	All 13D filings	Hedge fund filings	Financial filings	Insider filings	Other
<i>Panel A: 1 month after 13D filing</i>					
Still on CRSP	97.3%	92.4%	97.1%	98.6%	97.3%
Delisted	2.7%	7.6%	2.9%	1.4%	2.7%
Merger (CRSP)	1.7%	7.0%	2.2%	0.6%	1.6%
Merger (SDC)	2.9%	6.7%	3.3%	2.1%	2.7%
<i>Panel B: 12 months after 13D filing</i>					
Still on CRSP	82.1%	75.2%	81.6%	88.9%	80.3%
Delisted	17.9%	24.8%	18.4%	11.1%	19.7%
Merger (CRSP)	12.0%	21.2%	15.2%	6.3%	12.8%
Merger (SDC)	14.7%	22.5%	18.3%	9.3%	15.4%
<i>Panel C: 18 months after 13D filing</i>					
Still on CRSP	77.7%	70.4%	76.9%	85.2%	75.7%
Delisted	22.3%	29.6%	23.1%	14.8%	24.3%
Merger (CRSP)	14.1%	24.3%	17.9%	8.0%	14.8%
Merger (SDC)	17.4%	26.3%	21.2%	11.7%	18.1%

Table 5: Cross-sectional return regressions of key dates

This table shows cross-sectional estimation results of abnormal returns. The dependent variable *aret* is a stock's return in excess of the value-weighted CRSP index, winsorized at the 1% level. Subscript *TD* refers to the trigger day when a Schedule 13D filer passes the 5% ownership threshold, whereas *AD* refers to announcement day when the filing is reported to the SEC. *TD+1* and *AD-1* cover respectively abnormal returns on the day after/before. We consider in these regressions only 13D filings that have at least two trading days between trigger day and announcement day. Independent variables follow the definition in Table 3.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>aret_{TD}</i>	<i>aret_{TD+1}</i>	<i>aret_{AD-1}</i>	<i>aret_{AD}</i>	<i>aret_{TD}</i>	<i>aret_{TD+1}</i>	<i>aret_{AD-1}</i>	<i>aret_{AD}</i>
Hedgefund	-0.589*** (-3.739)	-1.814*** (-7.500)	0.135 (1.554)	0.162 (1.286)	-0.593* (-1.865)	-0.976*** (-3.667)	0.128 (0.697)	0.275 (1.395)
Financial	-0.269 (-1.542)	-1.451*** (-5.763)	-0.038 (-0.460)	0.007 (0.076)	-0.539** (-2.125)	-0.779*** (-3.542)	-0.082 (-0.536)	-0.082 (-0.485)
Insider	-0.226* (-1.826)	-0.518** (-2.480)	0.057 (0.731)	-0.123* (-1.662)	-0.207 (-1.064)	-0.313 (-1.456)	0.076 (0.572)	-0.144 (-1.264)
ln(Market cap)					0.069 (0.976)	-0.482*** (-5.873)	-0.063 (-1.583)	-0.168*** (-3.514)
Ownership					0.016*** (3.149)	0.040*** (5.667)	-0.000 (-0.047)	-0.014*** (-5.152)
Dividend yield					-0.236 (-0.661)	-0.527 (-1.130)	-0.449* (-1.723)	0.359 (1.388)
Q					0.894 (1.639)	-1.404** (-2.086)	-0.592 (-1.616)	-0.583 (-1.487)
Leverage					-0.406 (-0.615)	1.013 (1.421)	0.949** (2.332)	0.506 (1.252)
Return on assets					-0.671 (-1.080)	-0.236 (-0.255)	0.940** (2.156)	0.595 (1.407)
Cash holdings					0.913* (1.769)	0.779 (1.326)	0.475* (1.744)	0.118 (0.315)
Cash flow					0.318 (0.575)	0.496 (0.592)	-0.643 (-1.347)	-0.098 (-0.267)
Constant	1.551*** (15.699)	2.481*** (11.261)	0.116*** (2.893)	0.444*** (10.309)				
Observations	25,859	26,161	26,174	26,158	10,604	10,567	10,575	10,574
R-squared	0.00	0.00	0.00	0.00	0.03	0.06	0.04	0.03
Time FE	No	No	No	No	Month	Month	Month	Month
Cluster	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3

Table 6: Cross-sectional trade volume regressions of key dates

This table reports cross-sectional estimation results of abnormal trading volume. The dependent variable *avol* is a stock's daily trading volume in excess of its own mean from TD-50 to TD-20, winsorized at the 1% level. Subscript *TD* refers to the trigger day when a Schedule 13D filer passes the 5% ownership threshold, whereas *AD* refers to announcement day when the filing is reported to the SEC. *TD+1* and *AD-1* cover respectively trading volumes on the day after/before. We consider in these regressions only 13D filings that have at least two trading days between trigger day and announcement day. Independent variables follow the definition in Table 3.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>avol_{TD}</i>	<i>avol_{TD+1}</i>	<i>avol_{AD-1}</i>	<i>avol_{AD}</i>	<i>avol_{TD}</i>	<i>avol_{TD+1}</i>	<i>avol_{AD-1}</i>	<i>avol_{AD}</i>
Hedgefund	1.406*** (3.778)	-2.080*** (-7.771)	-0.088 (-1.351)	-0.063 (-1.094)	1.923*** (3.163)	-2.133*** (-5.360)	-0.172 (-1.442)	-0.011 (-0.088)
Financial	1.309*** (3.868)	-1.251*** (-3.492)	-0.166** (-2.286)	-0.072 (-0.973)	1.414*** (3.627)	-0.774*** (-3.093)	0.005 (0.044)	-0.051 (-0.448)
Insider	-1.201*** (-7.305)	-1.371*** (-5.583)	-0.230*** (-3.940)	-0.222*** (-3.711)	-1.167*** (-5.329)	-0.683*** (-2.710)	-0.301*** (-4.527)	-0.194*** (-2.758)
ln(Market cap)					-0.466*** (-5.217)	0.255*** (3.086)	0.015 (0.729)	0.049** (1.992)
Ownership					-0.025*** (-4.438)	0.053*** (7.251)	0.005*** (2.806)	0.003 (1.531)
Dividend yield					1.371 (1.415)	0.124 (0.218)	0.030 (0.162)	0.369* (1.785)
Q					-2.435*** (-4.353)	0.612 (1.184)	0.238 (1.210)	0.055 (0.331)
Leverage					1.614* (1.815)	-1.332* (-1.719)	-0.124 (-0.553)	0.051 (0.204)
Return on assets					-2.743*** (-2.902)	0.064 (0.085)	-0.114 (-0.472)	-0.197 (-0.794)
Cash holdings					-0.772 (-1.082)	0.624 (0.673)	-0.083 (-0.479)	-0.084 (-0.555)
Cash flow					3.435*** (4.321)	0.992* (1.804)	0.110 (0.474)	0.066 (0.324)
Constant	4.910*** (29.907)	5.019*** (18.561)	1.808*** (47.529)	1.842*** (54.917)				
Observations	24,812	24,716	24,714	24,694	10,591	10,555	10,559	10,558
R-squared	0.00	0.01	0.00	0.00	0.04	0.08	0.04	0.05
Time FE	No	No	No	No	Month	Month	Month	Month
Cluster	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3

Table 7: Cross-section of interim buy-and-hold returns

This table reports cross-sectional regressions of abnormal returns materializing in the interim period between the trigger day and the announcement day. The dependent variable is defined as the target company's buy-and-hold return in excess of the value-weighted CRSP index. $BHAR_{t+1}$ aggregates excess returns starting on the day after the trigger day, while $BHAR_{t+2}$ start even one day later. In column 7, we also add the aggregate effect $BHAR_{-20/+20}$ as discussed in Table 3 as a benchmark specification. The right-hand side variables *Hedge Fund*, *Financial*, and *Insider* are all dummy variables that categorize the filer type of a Schedule 13D. *Ownership* is the activist's ownership stake in percent as reported in the 13D filing. Accounting variables prior to the filing follow the description in Table 2. Standard errors are clustered at the 3-digit SIC code level.

	(1) $BHAR_{TD+1}$	(2) $BHAR_{TD+2}$	(3) $BHAR_{TD+1}$	(4) $BHAR_{TD+2}$	(5) $BHAR_{TD+1}$	(6) $BHAR_{TD+2}$	(7) $BHAR_{-/ +20}$
Hedgefund	-1.889*** (-6.001)	0.117 (0.555)	-2.091*** (-5.807)	0.256 (1.142)	-0.565 (-1.200)	0.566 (1.451)	-0.444 (-0.753)
Financial	-1.767*** (-5.514)	-0.126 (-0.700)	-1.660*** (-4.993)	-0.172 (-0.946)	-0.859** (-2.289)	0.037 (0.112)	-2.727*** (-3.381)
Insider	-0.220 (-0.732)	0.152 (0.697)	-0.351 (-1.257)	0.122 (0.599)	-0.284 (-0.813)	-0.006 (-0.018)	-0.696 (-1.351)
ln(Market cap)					-1.109*** (-7.819)	-0.619*** (-5.888)	
Ownership					0.028*** (2.925)	-0.012 (-1.549)	
Dividend yield					-0.810 (-1.058)	-0.113 (-0.206)	
Q					-3.205*** (-2.829)	-1.739** (-2.214)	
Leverage					2.688** (2.204)	1.667* (1.656)	
Return on assets					1.322 (0.919)	1.645 (1.204)	
Cash holdings					1.587 (1.630)	0.837 (1.220)	
Cash flow					-0.824 (-0.511)	-1.644 (-1.212)	
Constant	3.528*** (13.916)	0.889*** (7.599)					8.728*** (14.160)
Observations	27,279	26,029	27,279	26,029	11,598	11,109	27,279
R-squared	0.00	0.00	0.03	0.03	0.06	0.04	0.00
Time FE	No	No	Month	Month	Month	Month	No
Cluster	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3

Table 8: Time to file a 13D and different filer types

This table reports the output of cross-sectional regressions. The dependent variable *Days to file* used in specifications 1 through 4 is defined as the number of days that lie in between the trigger day of an initial 13D filing and its subsequent submission to the SEC. Regressions in columns 1 and 2 take all initial 13D filings into account, while columns 3 and 4 solely focus on on-time filings. Alternatively, the dependent variable *Late filing* in columns 5 and 6 refers to a dummy variable indicating whether the filing has been submitted after the 10-reporting window and is for that reason delayed. The right-hand side variables *Hedge Fund*, *Financial*, and *Insider* are all dummy variables that identify the filer type reporting the Schedule 13D. $\ln(\# \text{ Pages})$ is the log of the number of pages in the 13D filing, which is provided by Thomson Research List. Model specifications in columns 2, 4, and 6 include additional month time fixed-effects. Standard errors are clustered at the 3-digit SIC code level.

	All filings		On-time filings		All filings	
	(1)	(2)	(3)	(4)	(5)	(6)
	Days to file		Days to file		Late filing	
Hedgefund	-1.404*** (-10.412)	-0.887*** (-6.589)	-0.300** (-2.584)	-0.140 (-1.113)	-0.104*** (-12.694)	-0.067*** (-8.765)
Financial	0.287** (2.240)	0.135 (1.176)	-0.185** (-2.050)	-0.221*** (-2.604)	0.032** (2.466)	0.023** (1.979)
Insider	0.360*** (3.635)	0.257*** (2.736)	0.088 (1.111)	0.018 (0.227)	0.029*** (4.043)	0.023*** (3.432)
$\ln(\# \text{ Pages})$	0.027 (0.540)	-0.084* (-1.907)	0.637*** (17.143)	0.594*** (18.081)	-0.039*** (-13.032)	-0.047*** (-15.857)
Constant	9.859*** (49.252)		6.154*** (42.787)		0.335*** (30.251)	
Observations	34,298	34,298	26,426	26,426	34,298	34,298
R-squared	0.01	0.06	0.04	0.07	0.02	0.06
Time FE	No	Month	No	Month	No	Month
Cluster	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3

Table 9: Predicting regressions of Schedule 13D announcements

This table reports predicting panel regressions of Schedule 13D announcements. The sample consists of a monthly panel of all matched CRSP/Compustat firms. The dependent variable is a dummy variable that indicates whether a firm was subject to a 13D filing in a certain month. 13D/I takes only initial 13D filings into account and 13D/A amendments. In columns 3-6 we further restrict filings to be either reported by hedge funds (HF-13D/I), financial institutions (FIN-13D/I), or insiders (INS-13D/I). Finally, column 7 considers again all 13D/A amendments but controls in addition for lagged initial filings. Other right-hand side variables are *cash holdings*, *leverage*, *Q*, and *market capitalization*, as well as lagged abnormal returns. We include 12 lags of monthly abnormal return, but report only 6 of them to save space. All regressions have month fixed-effects and standard errors are clustered at the 3-digit SIC code level.

	(1)	(2)	(3)	(4)	(5)	(6)
	13D/I	13D/A	HF-13D/I	FIN-13D/I	INS-13D/I	13D/A
Cash	0.005*** (4.962)	0.008*** (2.880)	0.001*** (3.013)	0.001*** (4.487)	-0.001* (-1.848)	0.007** (2.574)
Leverage	0.009*** (6.634)	0.025*** (5.399)	0.001* (1.909)	0.001*** (3.410)	0.003*** (6.895)	0.024*** (5.281)
Q	0.000*** (3.983)	-0.000 (-0.975)	-0.000*** (-2.784)	-0.000*** (-3.373)	0.000*** (6.062)	-0.000 (-1.267)
ln(Market cap)	-0.003*** (-26.978)	-0.003*** (-7.566)	0.000 (1.116)	0.000*** (3.037)	-0.001*** (-21.581)	-0.002*** (-6.598)
Initial 13D (lag ₁)						0.175*** (43.751)
Return (lag ₁)	0.017*** (22.902)	0.023*** (15.691)	0.001*** (5.985)	0.002*** (7.673)	0.005*** (11.018)	0.019*** (13.576)
Return (lag ₂)	0.006*** (8.282)	0.014*** (9.058)	0.000 (1.194)	0.001*** (4.141)	0.002*** (3.388)	0.012*** (7.743)
Return (lag ₃)	0.002*** (3.211)	0.012*** (11.668)	0.000 (0.777)	0.000 (0.571)	0.001*** (2.921)	0.011*** (10.904)
Return (lag ₄)	0.001 (1.475)	0.008*** (7.549)	0.000 (1.030)	-0.000 (-0.676)	0.001** (2.448)	0.007*** (7.240)
Return (lag ₅)	0.001 (1.527)	0.007*** (6.712)	0.000 (1.469)	0.000 (1.421)	0.001** (2.211)	0.007*** (6.581)
Return (lag ₆)	-0.001 (-0.802)	0.004*** (4.055)	-0.000 (-0.202)	-0.000 (-0.896)	0.000 (0.120)	0.004*** (3.778)
Observations	1,545,852	1,545,852	1,545,852	1,545,852	1,545,852	1,545,852
R-squared	0.00	0.00	0.00	0.00	0.00	0.02
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	SIC3	SIC3	SIC3	SIC3	SIC3	SIC3

Table 10: Change in Accounting-based measures

This table documents changes in 4 accounting measures of target companies before and after the announcement of initial 13D filings. The dependent variable in our panel regressions are cash over total assets ($\times 100$), dividends plus repurchases over total assets ($\times 100$), Leverage, and EBITDA over sales as shown in each panel respectively. We regress these measures on a set of dummy variables capturing the year differences with respect to a filing announcement. The dummy $t-1$ tags thereby the latest accounting information of a target company prior to a 13D filing whereas *after 13D* indicates the first fiscal information after a filing. The dummy $t+2$ includes all following years. We estimate the model for different filer types separately by interacting the set of time dummies with our indicator for hedge funds (HF), financial institutions (FIN), insider (INS), 10% blockholder and other (OTH). All regressions include $year \times SIC2 \times size/book\text{-}to\text{-}market\ match$ fixed effects. Standard errors are clustered at the 3-digit SIC code level.

	<i>Cash/Assets</i> $\times 100$					<i>(Dividends + Repurchases)/Assets</i> $\times 100$				
	ALL	HF	FIN	INS	OTH	ALL	HF	FIN	INS	OTH
t-2	1.282*** (4.046)	0.834 (0.897)	1.055* (1.876)	0.553 (1.538)	1.824*** (5.139)	-0.007*** (-3.130)	-0.003 (-0.367)	-0.004 (-0.634)	-0.006* (-1.829)	-0.007** (-2.317)
t-1	0.804*** (3.448)	0.96 (1.105)	1.343** (2.396)	0.029 (0.078)	0.902*** (3.446)	-0.015*** (-6.182)	-0.008 (-1.365)	-0.018*** (-3.452)	-0.020*** (-5.652)	-0.013*** (-4.772)
after 13D	-0.724 (-1.548)	1.237 (1.134)	0.714 (0.854)	-1.842*** (-3.766)	-0.6 (-1.395)	-0.013*** (-4.745)	0.002 (0.241)	-0.007 (-1.176)	-0.009** (-2.190)	-0.016*** (-5.040)
t+1	-1.429*** (-3.171)	0.623 (0.535)	-0.597 (-0.885)	-2.616*** (-6.790)	-1.021** (-2.163)	-0.005* (-1.681)	0.004 (0.459)	-0.002 (-0.354)	-0.007 (-1.426)	-0.008** (-2.238)
t+2	-2.918*** (-5.045)	-1.505 (-1.338)	-2.808*** (-5.049)	-3.596*** (-4.647)	-2.770*** (-4.374)	0.007** (2.153)	0.015* (1.817)	0.019*** (3.168)	0.008 (1.632)	0.006* (1.763)
Observations	147167	147167	147167	147167	147167	84701	84701	84701	84701	84701
R-squared	0.3	0.29	0.3	0.3	0.3	0.21	0.21	0.21	0.21	0.21
	<i>Leverage</i>					<i>Return on sales</i>				
	ALL	HF	FIN	INS	OTH	ALL	HF	FIN	INS	OTH
t-2	-0.006* (-1.964)	0.012** (2.011)	-0.004 (-0.742)	-0.008* (-1.753)	-0.008** (-2.459)	-0.058*** (-2.726)	-0.01 (-0.202)	0.032 (0.78)	0.049 (1.189)	-0.142*** (-4.134)
t-1	0.019*** (7.953)	0.025*** (3.876)	0.012** (2.352)	0.018*** (4.927)	0.020*** (8.09)	-0.086*** (-4.668)	-0.02 (-0.282)	0.001 (0.045)	-0.045 (-1.245)	-0.131*** (-4.251)
after 13D	0.022*** (7.981)	0.026*** (3.94)	0.014** (2.552)	0.021*** (5.673)	0.024*** (7.97)	-0.115*** (-2.625)	-0.164* (-1.714)	-0.112 (-1.367)	-0.107** (-2.292)	-0.113*** (-2.619)
t+1	0.030*** (10.703)	0.032*** (5.367)	0.029*** (5.267)	0.031*** (7.54)	0.029*** (8.809)	-0.069 (-1.572)	-0.182* (-1.833)	-0.077 (-0.990)	-0.05 (-1.091)	-0.075 (-1.448)
t+2	0.029*** (6.294)	0.023*** (3.038)	0.032*** (5.993)	0.021*** (3.367)	0.029*** (6.431)	0.089*** (2.734)	0.061** (1.967)	0.104*** (3.455)	0.112* (1.946)	0.097*** (2.792)
Observations	146950	146950	146950	146950	146950	127955	127955	127955	127955	127955
R-squared	0.2	0.2	0.2	0.2	0.2	0.16	0.16	0.16	0.16	0.16