ACTIVIST SHAREHOLDERS AND THE DURATION OF SUPERVISORY BOARD MEMBERSHIP: EVIDENCE FOR THE GERMAN AUFSICHTSRAT

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Abstract

We study the fixed term nature of the German supervisory board appointment hypothesizing that the timing of the upcoming election has an impact on the credibility of effort by activist investors. More credible approaches should consequently be associated with higher wealth effects. An average abnormal return that is up to 6.9 percent higher can be observed when potential activists consider the timing of the next supervisory board election. Capital markets apparently perceive an activist effort within one to two years prior to the election as being most credible. Quite contrary to intuition it seems that high cash positions on targets' balance sheets have a negative impact on the post-announcement wealth effects.

Keywords: Shareholders, Activism, Supervisory Board, Germany

1. INTRODUCTION

With respect to the specific institutional setting of the German corporate governance system a number of studies focuses on ownership concentration (Franks and Mayer, 2001), large blockholders (Becht and Boehmer, 2003) and founding-family ownership (Andres, 2008) and emphasizing the importance and influence of German banks ((Franks and Mayer, 1998), (Köke, 2004), (Heiss and Köke, 2004)). The influence of banks, however, has decreased in the past two decades ((Vitols, 2005), (Dittmann, Maug and Schneider, 2010)). Hackethal, Schmidt and Tyrell (2005) argue that the breakdown of the traditional bank-based system may lead to a control vacuum as a result of a growing lack of bank monitoring.

More recent work documents the increased activity of international investors such as hedge funds and private equity funds ((Achleitner, Betzer and Gider, 2010), (Bessler, Drobetz and Holler, 2010), (Drerup, 2010), (Achleitner, Andres, Betzer and Weir, 2011), (Mietzner, Schweizer and Tyrell, 2011), (Rauch and Umber, 2012), (Drees, Mietzner and Schiereck, 2011)). The environment for activist shareholders in Germany is much more attractive now than it was ten to fifteen years ago ((Schaefer, 2007), (Goergen et al., 2008) Fabritius et al., 2015), resulting in increased investor activity. The purpose of this study, however, is not to come up with the latest and most comprehensive analysis of activist minority shareholders and abnormal returns in Germany. It is rather to explore whether some important elements of the German corporate governance framework may have gone unnoticed in empirical research so far.

Prior event studies on shareholder activism in Germany do not investigate the credibility of shareholder activism and its dependence on the timing of the supervisory board elections. Most studies apply models used in U.S. studies even though U.S. corporations do not have a supervisory board. This study relates the activist efforts to the timing of the next supervisory board election. With the election moving closer, abnormal returns tied to the announcement of activist stakes should be higher. Correspondingly, the frequency of activist events increases.

Paragraph II provides a literature overview, paragraph III gives an explanation of the process of sample construction and the methodology applied. Paragraph IV presents the empirical evidence and gives an interpretation of these findings. Paragraph V concludes with a summary and outlook.

2. LITERATURE BACKGROUND AND RESEARCH HYPOTHESES

The modern corporation is characterised by the separation of ownership and control. While stewardship theory (Donaldson and Davis, 1991) depicts the manager as a "steward" of the company serving in the firm's best interest, agency theory (Jensen and Meckling, 1976) predicts that managers, who are not sole owners of the firm, will engage in activities that do not maximize the value of the firm. Jensen and Meckling define the concept of agency costs. Agency costs can arise from such things as perquisites (Yermack, 2006), entrenched boards (Bebchuk and Cohen, 2005) or entrenching investments (Shleifer and Vishny, 1989).

The empirical evidence on shareholder activism in its many varieties is vast. Karpoff (2001) and Gillan and Starks (2007) provide surveys of empirical findings, mainly for the United States. The most recent studies of shareholder activism by hedge funds and other entrepreneurial shareholder activists find significant, positive abnormal stock returns associated with the disclosure of an activist stake ((Brav, Jiang, Partnoy and Thomas, 2008), (Klein and Zur, 2009), (Greenwood and Schor, 2009)).

However, Filatotchev and Dotsenko (2015) show that the effectiveness of shareholder activism in the UK varies significantly among different groups of activists. In Germany, the most active investors both in terms of frequency and depths of activism are hedge funds, along with Hermes Focus, manager of, inter alia, the British Telecom's pension fund (see Becht, Franks, Mayer and Rossi (2010b) for a clinical study of Hermes' activities in the UK). Larger and more institutional asset management firms, individuals and private equity investors taking minority stakes do also occasionally engage in minority shareholder activism in Germany.

The attendance rate at annual shareholder meetings of German corporations has been relatively low for the past decade. According to the German stock corporation act there is no quorum requirement. Articles of incorporation (Satzung) can fix a minimum requirement, but most German corporations abstain from it. Additionally, bylaws (Geschaeftsordnung) set out by the supervisory board have a negligible meaning for shareholders of German corporations. Almost any change to the corporate governance architecture of a corporation only becomes effective through an amendment of the articles of incorporation, for which shareholders have to vote upon at the annual meeting (section 179 AktG). Management and supervisory board do not have the power to make amendments without consulting the annual meeting. This legal framework favours shareholder activism.

Any investor holding 5 percent of voting rights or EUR 500,000 of the share capital has the right to put items on an annual meeting's agenda (section 122 sub-section 2 AktG). Any shareholder resolution receiving a positive vote is binding in nature (Cziraki, Renneboog and Szilagyi, 2010). This is not the case in the U.S. If a supervisory board election is to take place, any shareholder has the right to submit nominations for the supervisory board election (section 127 AktG, full proxy access). Full proxy access is another supportive feature for minority shareholder activism in Germany.

The management board and the chief executive officer are appointed by the supervisory board (section 84 AktG). Section 105 AktG prohibits a member of the management board of a German stock corporation from being a member of the supervisory board of the very same corporation. Members of the supervisory board must be non-executive, independent, outside directors or at most "gray" directors, that is having business relationships with the company (Bebchuk, Coates IV and Subramanian, 2002).

A well-known and widely discussed characteristic of German corporate governance is mandatory co-determination on the supervisory board of most, but not all, larger German corporations ((Gorton and Schmid, 2004), (Fauver and Fuerst, 2006)). Labour representatives of either the workforce or labour unions fill board seats: in companies with more than 500 employees, one third of board seats, and in companies with more than 2,000 employees, half of the board seats. The latter situation is also called full parity, full co-determination or quasi-parity co-determination. In the event of a tie of votes between labour representatives and shareholder representatives the chairman of the board has the power to decide on the respective issue (section 29 law of co-determination). On fully co-determined supervisory boards the chairman will be nominated by the shareholders (section 27 law of co-determination) while the labour representatives nominate the deputy chairman.

The members of the supervisory board usually share the same term of office. The maximum term of office of the members of the supervisory board is five years (section 102 AktG). Reappointment is permissible as well as usual (Hopt, 1997). But since the term of office of the members of the board of directors of a U.S. corporation is one year for an unstaggered board, the next election is always "right ahead" – not so in Germany. The average term of office of members of the supervisory board in the cross-section of 253 events is 4.83 years, close to the maximum term of five years. Since the supervisory board is the pivotal authority in German corporate governance, gaining a seat on the supervisory board substantially increases the likelihood of success of any activist effort and therefore its credibility. Post-announcement abnormal returns should as a result be higher when the supervisory board election moves closer as the likelihood of success increases. Given the existence of agency costs and the active approach of monitoring by new activist shareholders Hypothesis 1 claims:

H1: *There is a significant, positive abnormal stock-price effect associated with the announcement of an activist minority stake.*

With respect to the fixed-term nature of the German supervisory board's appointment Hypothesis 2 claims:

H2: *Capital markets will perceive an activist effort by a minority shareholder within a time frame that is closer to the new supervisory board election as being more credible. Post-announcement abnormal returns are therefore higher for the respective observations.*

The timing of the potential activist efforts will also be discussed in a separate analysis at the beginning of the results section. We hypothesize that serious monitoring efforts should be linked to the supervisory board election. Accordingly, there should be a relationship between timing of investment and next election.

3. DATA AND METHODOLOGY

There is no central database that stores the names of activist shareholders or activist events in Germany. We therefore form a list of potentially activist shareholders by gathering information from various sources including journal articles (for example Becht, Franks and Grant (2010a)) and by searching Bloomberg News and the Lexis Nexis database for articles on shareholder activism. For minority stakes below 10 percent an investor needs not to disclose any of his intentions. For stakes between 5 and 10 percent there is no equivalent to the U.S. SEC 13D filing from which conclusions about the investor's approach could be drawn.

Using the names from our list we search five possible sources for mandatory filings of significant

shareholdings by potential shareholder activists below the 30 percent threshold and that were not followed by a takeover of the very same investor. The five sources are BZ Pro, dgap.de, target websites, target annual reports and the financial markets authority Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin). The BaFin database only lists current shareholdings. Hence, we recur to historic copies of the database. BZ Pro, hosted by the newspaper Boersen-Zeitung, and dgap.de are electronic archives of mandatory disclosures. The five sources are complementary. It is possible to check almost every single company's announcements. Some companies have a minor free float thereby reducing the number of possible targets. We also look for announcements of activism only mentioned in the news to collect information about stakes below the 5 and 3 percent threshold, respectively. The threshold was lowered in 2007 from 5 percent to 3 percent. As Becht et al. (2010a) report this kind of process of data collection is quite straightforward and without convincing alternative. It yields a preliminary sample of 368 observations.

From the preliminary sample we exclude inter alia 31 cases of potential merger arbitrage (disclosure of stake after the announcement of a takeover bid by a third party), 30 events that occur within 282 trading days of the target's IPO (which would result in statistical issues), 20 debt-to-equity swaps (financial distress of target), ten cases where no event date could be found (in all ten cases the stakes were non-hostile, between 3 and 5 percent in size and acquired before and sold after January 2007), and eight observations of investments in non-voting preference shares (these eight events were collected from newspapers). The final sample consists of 253 potentially activist minority stakes in 140 target firms between January 1999 and May 2011, consistent with the number of events in the studies of shareholder activism in Germany by Bessler et al. (2010) and Drerup (2010).

We group each observation into one of four activity levels. Level 1 observations based on regulatory filings, Level 2 stands for regulatory filing and in addition mentioning in the news but without criticism, prerequisite for Level 3 is open criticism concerning the target's corporate governance and Level 4 means that there was actually a change on the supervisory board that can be attributed to the activist. Table 1 describes the sample.

Table 1. Sample Description

Activity Level	Mean initial %-stake	Mean initial EURm commitment	Median initial %-stake	Median initial EURm commitment	Maximum initial %-stake	N
1	5.0	27.8	3.4	12.7	23.6	108
2	6.2	100.8	5.1	22.4	25.1	84
3	4.9	222.5	3.3	32.0	28.3	41
4	12.2	164.5	10.4	15.0	29.8	20
Full sample	5.9	94.4	4.9	17.2	29.8	253

Activity Level 1: regulatory filing, Activity Level 2 regulatory filing and newspaper mentioning but no criticism, Activity Level 3: criticism by activist shareholder directed towards target management which is mentioned in the news, Activity Level 4: change on supervisory board attributable to activist shareholder. For 7 observations below regulatory thresholds no %-stake size was available. The %-stake sizes for these observations were proxied by the average of possible sizes. EURm commitment is the value of the activist stake in EUR millions proxied by %-size of initial stake times the market capitalisation at the end of the quarter preceding the investment. N is the number of observations.

The grouping into four levels allows for a more differentiated analysis and it is still possible to consider hostile (Level 3 and 4) and non-hostile (Level 1 and 2) events separately. Even though we do not fully rely on media coverage, there may still be a bias towards larger companies in this sample (as can be seen from the mean and median EURm commitment figures on Activity Levels 2 and 3). Market capitalisation as an explanatory variable is for this reason not included in the analysis. Hostile in the sense of this study means increasingly active or confrontational. It is not meant in the sense of the event resulting in a hostile takeover of the target firm. Overall, the selected approach is the best possible match to Brav et al. (2008) and Becht et al. (2010a). With respect to the possibility of observing regulatory disclosures below the 5 percent threshold it may even be an improvement to Brav et al.'s approach.

Less than 25 percent of all events are hostile (61 observations). 20 actual changes on the supervisory board of 17 target firms were initiated by 15 different minority activist shareholders. The changes on the supervisory board may come a few weeks after the investment (Euromicron / Sapinda), a few months after the investment (Demag Cranes / Cevian Capital) or in some cases several years after the investment (Infineon Technologies / Hermes). The event date is always the date of the disclosure of the stake, even though the change on the supervisory board occurs at a later point in time.

The event study approach applied to measure abnormal returns is the same as in Achleitner et al. (2011) using the market model to calculate expected returns with the broad, value-weighted C-DAX performance index of approximately 600 German firms as a proxy for the market portfolio.

The event date is defined as the date of disclosure of the regulatory filing or, in case of a newspaper article, the date of publishing. Whenever we find two different dates the earlier date is picked. It took some time to assign the proper event dates as corrections of earlier regulatory filings happen to occur quite often.

4.RESULTS

4.1 Timing of Activist Efforts

Apparently, activist shareholders use a timing strategy with respect to the next supervisory board election. The average term of office of the

supervisory board across the full sample is 4.8 years. This is close to the maximum possible term of office of five years. This is stipulated by section 102 sub-section 1 Aktiengesetz (AktG), the German stock corporation act. New elections to the supervisory board are held just once in five annual meetings for all board members in the case of a five-year term.

When comparing the date of the investment with the remaining term of office of all the supervisory board members, we observe some systematic patterns. The frequency of activist stake-building increases when the next supervisory board election is moving closer. Table 2 provides a corresponding overview. Theoretically, it is possible to influence the firm's management or the firm's strategy without the involvement of the supervisory board. Moreover, members of the supervisory board can step down before their term of office expires. This opens up the possibility for activist shareholders to promote the appointment of certain candidates. Nevertheless, the results shown in Table 2 underline the relevance of the supervisory board election timing in German corporate governance.

Table 2. Timing of Activist Investments

Time remaining until next supervisory board election:	Number of observations (full sample)	Number of observations (robust)
5 years	35	31
4 years	45	31
3 years	38	28
2 years	61	44
1 years	74	55

Number of observations is the number of investments during the respective time frame prior to the next ordinary supervisory board election. Number of observations (robust) excludes the following observations: (i) the term of office of the supervisory board is less than five years (23 observations), (ii) the supervisory board is staggered and more than just one election is necessary to replace all members (33 observations), (iii) the observation is based on a newspaper article and as a result the actual timing of the investment cannot be clearly determined (21 observations).

4.2 Announcement Effects

Table 3 reports the average announcement effect on the share price of shareholder activist targets for the four activity levels across different event windows. The cumulative abnormal return on Activity Level 1 is below 1% across all event windows. Once the capital market has knowledge of the potential activist investor's disclosure of a regulatory filing (Activity Level 1), a news article reporting on the very same disclosure (Activity Level 2) does not convey any new information to the capital market. When shareholder activists take a hostile approach (Activity Level 3 and 4) cumulative average abnormal returns are larger. The mean cumulative abnormal return when combining Activity Level 3 and 4 is 4.38% in the [0; +5]-event window and it reaches 7.30% in the [-20; +20]-event window.

When comparing Activity Level 3 and 4 abnormal returns are higher on Level 4 reaching 11.28% in the [0; +10]-event window. This result can be interpreted in a way that the anticipation of changes on the supervisory board (Activity Level 4) leads to higher abnormal returns. Obtaining a board seat increases the probability of success of the activist effort. The difference in abnormal returns between Activity Levels 3 and 4, however, could in part also be explained through size effects, as firms on Level 4 are on average smaller (see Table 4 for subsample firm size). The size of the activist's initial stake seems to have an impact on abnormal returns, as the average initial stake on Level 4 is more than twice as high as on Level 3. This is consistent with the theory.

The results are robust when excluding target companies whose shares have an estimation window trading average of below 50,000 shares per day on German stock exchanges. In cases of low stock market liquidity abnormal returns can partly originate from stock illiquidity. In 92 cases potential shareholder activists acquire a stake in a firm where another potential activist is already invested. This can lead to full or partial overlap of estimation windows with event windows of earlier observations thereby causing a potential bias in expected returns. When excluding the respective observations from the sample cumulative abnormal returns are slightly higher than reported in Table 3 across all activity levels.

In order to facilitate further interpretation of the abnormal returns on Activity Level 1 and 2 an event study is conducted on 119 minority investments of non-activist institutional asset management firms including BlackRock, Fidelity Investments, Fidelity Management and Research, Schroder Investment Management, The Capital Group and Threadneedle. Results are shown in Table 4.

When large, non-activist asset management firms disclose the acquisition of a stake an abnormal return in the [0; +1]-event window of approximately 0.7% can be observed. The magnitude of these abnormal returns is very similar to that of potentially activist events that are non-hostile (Activity Levels 1 and 2). This finding supports theories beyond agency theory. Superior stock picking ability may be the reason for the abnormal returns observed on Activity Level 1 and 2.

Table 3. Announcement Effects on Different Activity Levels

	Cumulative Abnormal Return		t-Test	Boehmer Test	Wilcoxon Signed Rank Test
Event window	Mean	Median	t-value	z-score	z-score
Panel A: Activity Level 1 (108 observations)					
[-20;+20]	-0.18%	-1.39%	-0.10	-0.05	-0.37
[0;+0]	0.62%	0.14%	1.89*	1.80*	-1.33
[0;+1]	0.66%	0.28%	1.69*	1.32	-1.42
[0;+5]	0.65%	0.57%	0.94	0.71	-1.20
[0;+10]	0.42%	-0.62%	0.44	0.22	-0.07
Panel B: Activity Level 2 (84 observations)					
[-20;+20]	0.81%	2.70%	0.34	0.20	-1.29
[0;+0]	0.56%	0.12%	1.54	1.86*	-1.50
[0;+1]	0.37%	0.17%	0.81	1.30	-1.09
[0;+5]	-0.55%	-0.11%	-0.61	-0.40	-0.21
[0;+10]	-0.86%	-0.70%	-0.84	-0.68	-0.68
Panel C: Activity Level 3 (41 observations)					
[-20;+20]	4.36%	3.39%	1.88*	1.83*	-1.73*
[0;+0]	1.85%	0.86%	2.47**	2.87***	-2.44**
[0;+1]	2.28%	0.91%	2.71***	2.94***	-2.43**
[0;+5]	2.15%	0.75%	1.89*	2.00**	-1.39
[0;+10]	2.65%	1.87%	2.03**	2.17**	-1.67*
Panel D: Activity Level 4 (20 observations)					
[-20;+20]	10.13%	8.24%	1.74*	1.96**	-2.50**
[0;+0]	1.51%	0.37%	1.83*	2.08**	-2.20**
[0;+1]	4.31%	2.92%	2.81**	2.88***	-3.14***
[0;+5]	8.94%	3.28%	1.63	1.68*	-2.84***
[0;+10]	11.28%	5.82%	1.98*	2.04**	-2.99***

*Activity Level is described in Table I. Cumulative Abnormal Return is the sum of daily abnormal returns across the respective Event Window. Expected returns were calculated with the market model over the estimation period [t-282; t-30] with the C-DAX as market portfolio and the event date t=0. Boehmer Test as proposed in Boehmer, Musumeci and Poulsen (1991) is a modification of the traditional T-Test, which is robust towards event-induced variance. Wilcoxon Signed Rank Test is a non-parametric test (Wilcoxon, 1945) for difference-in-medians with the z-score being the standardised Wilcoxon test statistic. Share price data is from Thomson Datastream. ***, **, and * indicate statistical significance at the 1%-, 5%-, and 10%-levels, respectively.*

Table 4. Announcement Effects of Non-Activist Investments

	Cumulative Abnormal Return		t-Test	Boehmer Test	Wilcoxon Signed Rank Test
Event window	Mean	Median	t-value	z-score	z-score
[-20;+20]	-2.37%	0.11%	-1.711*	-1.564	-1.649*
[0;+0]	0.34%	-0.08%	1.313	1.309	-0.345
[0;+1]	0.71%	0.12%	2.389**	2.351**	-1.655*
[0;+5]	0.64%	0.01%	1.148	1.173	-0.339
[0;+10]	0.46%	-0.23%	0.604	0.424	-0.231

*This table shows the announcement effects on the share price of German target corporations when non-activist institutional asset management firms disclose a stake. The number of observations is 119. For explanations of methodology and test statistics see Table 3. Distribution of event dates across the observation period, characteristics of target firms and %-size of acquired stakes resemble those of the potential activist sample. **, and * indicate statistical significance at the 5%-, and 10%-levels, respectively.*

Overall, the results support Hypothesis 1 with respect to the hostile stakes (Activity Level 3 and 4). The results are also in line with the findings by Drees et al. (2011) who document positive, significant abnormal returns of up to 12 percent for activist blocks in Germany.

In cases where potential shareholder activists remain passive (Activity Level 1 and 2) significant positive abnormal returns can be observed. However, the results do not suffice to support Hypothesis 1 in the sense that these abnormal returns generate from the potential reduction of agency costs at the target firm by the activist shareholder given the results presented in Table 4 (non-activist fund sample).

4.3 NewBET Analysis

The information on the term of office of the supervisory board members is not available from the articles of incorporation alone. The same is the case for various other sources such as the annual report. Studying the agendas and voting outcomes of target company annual meetings solves this problem. We define NewBET as the New Supervisory Board Election Timing. NewBET can take on the values of 5, 4, 3, 2, and 1. Each value represents a time frame. NewBET 5, for example, applies to event dates within a time frame of more than four years and up to (the statutory maximum of) five years until the next

supervisory board election. Another way to read the NewBET measure is taking it as the number of annual meetings until the next supervisory board election. NewBET 4 in this case means it will take four annual meetings for the supervisory board to come up for election. Capital markets at the time of the announcement of the activist stake will know that it will take this certain number of annual meetings for the supervisory board to come up for election. The NewBET analysis is presented in Table 5.

The frequency of potentially activist events almost gradually increases from 35 events five annual meetings ahead of the supervisory board election (NewBET 5) to 74 events right ahead (NewBET 1) of the election as can be seen in Panel E. A comparison with the sub-samples in Panel F (excluding overlaps in estimation windows) and Panel G (hostile events only) confirms these findings. We apply a robustness check and exclude all events where the term of office of the supervisory board is less than five years (23 observations), all events where the target's supervisory board is staggered (33 observations) and all observations below regulatory thresholds (21 observations). There may be a more news on shareholder activism when the annual meeting is moving closer. The results remain the same. As a second robustness check we investigate the NewBET values for the sample of 119 investments by non-activist institutional asset management firms (see Table 4 above). The NewBET distribution of these 119 events appears to be random. The modal value, that is, the highest value, is NewBET 3. These findings suggest that some activist shareholders apparently apply a timing strategy when engaging in activism, while non-activist shareholders do not time their investments.

Noteworthy at this point to mention, that the supervisory boards do not seem to be staggered for purposes of takeover defence. It rather looks like new members who fill vacancies are sometimes appointed for a maximum possible term of five years and not just for the remainder of the fixed term.

Table 5. Announcement Effects and NewBET

	Cumulative Abnormal Return		t-Test	Boehmer Test	Wilcoxon Signed Rank Test
Event window	Mean	Median	t-value	z-score	z-score
Panel E: Full sample (253 observations)					
NewBET 5 (35 observations)					
[0;+0]	0.67%	0.13%	1.07	1.24	-0.59
[0;+5]	0.32%	0.74%	0.24	0.25	-0.97
NewBET 4 (45 observations)					
[0;+0]	0.93%	0.37%	2.65**	2.85***	-2.20**
[0;+5]	1.06%	0.76%	1.19	1.09	-1.01
NewBET 3 (38 observations)					
[0;+0]	0.48%	0.16%	1.14	1.08	-0.98
[0;+5]	-1.74%	0.23%	-1.11	-1.12	-0.17
NewBET 2 (61 observations)					
[0;+0]	1.47%	0.76%	2.74***	3.06***	-2.96***
[0;+5]	3.71%	0.75%	1.86*	1.95*	-2.04**
NewBET 1 (74 observations)					
[0;+0]	0.63%	-0.04%	1.27	1.35	-0.69
[0;+5]	0.97%	0.12%	1.12	1.15	-0.55
Panel F: Full sample excluding overlaps in estimation windows (177 observations)					
NewBET 5 (24 observations)					
[0;+0]	0.26%	-0.69%	0.32	0.40	-0.77
[0;+5]	-0.74%	0.53%	-0.40	-0.41	-0.17
NewBET 4 (33 observations)					
[0;+0]	0.98%	0.61%	2.28**	2.59***	-2.08**
[0;+5]	0.61%	0.32%	0.71	0.75	-0.49
NewBET 3 (29 observations)					
[0;+0]	0.79%	0.74%	1.51	1.42	-1.46
[0;+5]	-1.63%	0.70%	-0.86	-0.86	-0.29
NewBET 2 (45 observations)					
[0;+0]	1.73%	0.78%	2.43**	2.59***	-2.56**
[0;+5]	5.29%	1.58%	2.01*	2.08**	-2.50**
NewBET 1 (46 observations)					
[0;+0]	0.87%	0.04%	1.22	1.08	-0.30
[0;+5]	1.32%	-0.55%	1.10	0.81	-0.03
Panel G: Hostile events, [0;+5]-event window (61 observations)					
NewBET 5 (9 obs.)	0.83%	-0.65%			
NewBET 4 (7 obs.)	1.82%	1.06%			
NewBET 3 (7 obs.)	1.01%	2.63%			
NewBET 2 (18 obs.)	10.76%	3.92%	1.72*	1.80*	-2.51**
NewBET 1 (20 obs.)	2.31%	0.70%	1.55	1.46	-1.12

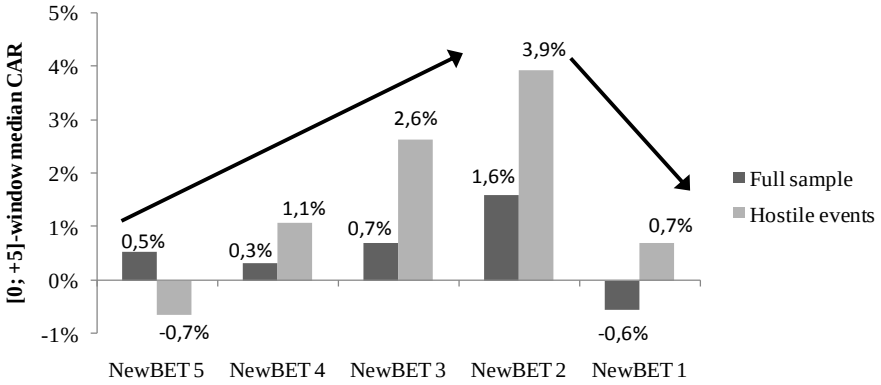
*Example: NewBET 3 means it will take three annual meetings for the new supervisory board to be elected. In the case of 33 observations there was a staggered board; in these cases NewBET 3 means that it will take three annual meetings for more than half of the supervisory board seats filled by shareholders to come up for election. Test statistics for Panel G are partly omitted given the low number of observations. For further explanations see Table III. ***, **, and * indicate statistical significance at the 1%-, 5%-, and 10%-levels, respectively.*

Since the frequency of events increases as the new supervisory board election moves closer there also happen to occur more overlaps in event and estimation windows towards the election. This creates an upward bias in expected returns. Overlapping events are therefore excluded from the analysis to achieve more robust results. The corresponding abnormal returns (CAR) are presented in Panel F.

The cumulative abnormal returns show different values for the five NewBET categories. Across all three panels cumulative abnormal returns are the highest at NewBET 2, that is, for events one to two years prior to the new supervisory board election. The abnormal returns reaches 5.29% in the [0; +5]-event window when observations with overlaps in the estimation windows are excluded.

Figure 1 depicts the relationship between NewBET and CAR using a bar chart. The focus here is on the [0; +5]-event window. The five-day period is long enough to capture the full effect of the announcement. On the other hand it is short enough to exclude post-event effects that are not related to shareholder activism. Such effects might deteriorate the results of the event study. Figure 1 shows the median CAR and not the mean in order to account for outliers.

Figure 1. Relationship Between Timing and CAR



The chart shows the full sample excluding overlaps in estimation windows (Panel F, 177 observations) and hostile events (Panel G, 61 observations).

Table 6 exhibits a difference-in-means test for the mean cumulative abnormal returns observed in the [0; +5]-event window between NewBET 2 category and the four other categories. There is a significant difference between NewBET 2 and NewBET 3 as can be seen in Panel H of as much as 6.92%. Given the presence of outliers we winsorize each of the five distributions at the 5%-level. Panel I displays the results of the difference-in-means test between the winsorised samples. As expected, there is a significant difference between NewBET category 2 and categories 3, 4, and 5 taken separately. This supports Hypothesis 2 to the extent that activist campaigns closer to the new supervisory board election tend to generate higher post-announcement abnormal returns. It does not support Hypothesis 2 in the sense that there is a strict inverse linear relationship between NewBET and abnormal returns. Looking at the median abnormal returns for the five NewBET categories for the hostile events (Figure 1), however, suggests that there is actually a partly linear relationship.

Table 6. Difference-in-Means-Test

NewBET	Mean CAR	Difference in means	t-stat	p-value	N	Mean inital, % stake	Mean EURm market cap
Panel H: Full sampie excluding overlaps in estimation windows (177 observations)							
5	-0.74%	6.04%	1.57	0.12	24	6.9%	1.441
4	0.61%	-4.69%	1.48	0.14	33	6.9%	1.084
3	-1.63%	6.92%	1.91*	0.06	29	7.2%	2.897
2	5.29%	-	-	-	45	5.5%	2.348
1	1.32%	3.97%	1.39	0.17	46	5.7%	3.540
Panel I: Full sampie excluding overlaps in estimation windows (177 observations) with distribution of mean CARs winsorized at the 5-% level							
5	-0.91%	4.42%	2.11**	0.04			
4	0.72%	2.79%	1.77**	0.08			
3	-1.00%	4.51%	2.46**	0.02	---------- unchanged----------		
2	3.51%	-	-	-			
1	1.16%	2.35%	1.46	0.15			

*Mean CARs (cumulative abnormal returns) are displayed for the [0; +5]-event window. Observations with overlaps in estimation and event windows are excluded. Difference in means is the difference between the respective Mean CARs. T-stat and p-value are reported for the respective two-tailed difference-in-means test. N is the number of observations. Panel I shows results for the difference-in-means test when Mean CARs are winsorised at the 5%-level within each NewBET category. Winsorising (Dixon, 1960) changes the highest Mean CARs in a sample to the next smallest and the smallest Mean CARs to the next highest, thereby reducing the influence of spurious outliers without fully excluding them. Mean EURm market cap is the average target market capitalisation at the end of the quarter preceding the investment. **, and * indicate statistical significance at the 5%-, and 10%-levels, respectively.*

The results are robust to applying a non-parametric test for unpaired samples, the Wilcoxon Rank Sum test (Wilcoxon, 1945). The median abnormal return in category NewBET 2 is 1.58% and the median abnormal return in the four other categories combined is 0.11%. The z-statistic for testing the null hypothesis that the two medians are equal is 1.97 with a one-tailed p-value of 0.024. The median abnormal return in the categories NewBET 3, 4 and 5 is 0.34% and the z-statistic testing the null hypothesis that the median equals the NewBET 2 median is 1.74 with a one-tailed p-value of 0.083.

Capital markets apparently perceive an activist effort within one to two years prior to the new supervisory board election as being most credible. By definition, minority shareholder activists who want to bring about change need to persuade fellow shareholders. In addition, ample communication may be necessary to convey the right information towards the target's supervisory board and management. Proxy proposals have to be prepared and submitted on time. All these efforts take time. Capital markets on average believe that less than one year is a very limited time frame as it seems. Contrary to intuition the highest post-announcement cumulative abnormal returns can be achieved with a comparably low minority stake. The mean initial percentage stake for NewBET 3, 4, and 5 is close to 7% while in NewBET category1 and 2 it is only 5.5%. Table V and Table VI illustrate that both the highest mean and median abnormal returns were actually achieved at NewBET 2 with the lowest average percentage stake. This further supports Hypothesis 2.

4.4 Determinants of Abnormal Returns

Table 7 presents results of a multivariate regression analysis to detect the drivers of the abnormal returns. The first model explains abnormal returns across the full sample. The second model additionally incorporates the annual meeting attendance rate of the last meeting prior to the event as an explanatory variable. The attendance rate of the annual meeting is expected to be a good proxy variable for lack of shareholder monitoring. Shareholders that do not attend the annual meeting will in most cases not engage in any other monitoring activities. In fact, the average attendance rate increases by 4.2 percent (p-value 0.03) to 54.5% in the first annual meeting after the activist has disclosed his stake suggesting that activist shareholders actively participate in corporate governance. The third model explains the abnormal returns of the 61 hostile events (Activity Level 3 and 4).

The level of hostility of the activist approach, the percentage size of the activist's initial stake, and the timing with respect to the new supervisory board election (NewBET 2) have a significant effect on the post-announcement abnormal return.

Both, attendance rates (Model 2), and the level of co-determination (Model 3) do not have a significant influence on the post-announcement abnormal return. A reason for the non-significance could be the high correlation (r=0.54) between firm size as measured by market capitalisation and the variable full co-determination. There is generally a negative relationship between firm size and abnormal return (r= -0.12 for the full sample and r= -0.27 for Activity Level 3 and 4). Model 1 and 2 were estimated without the variable level of co-determination. Including this variable does not improve goodness of fit.

Even though the multivariate regression applying Model 3 indicates no significance of Cofull and Cothird it is remarkable that despite the correlations described above both have a positive sign.

Quite contrary to intuition a high cash position on the target's balance sheet seems to undermine the credibility of the activist effort. This can be seen from the respective negative coefficient in Model 1, Model 2, and Model 3. This result is in line with the findings of Bessler et al. (2010). It is robust to excluding financial services firms from the regression. Energy and utilities companies are not present in the sample. We interpret this observation in a way that activist investors might be easily satisfied by an extra dividend payment without enforcing monitoring and reducing agency conflicts.

F-statistics for all three models are highly significant. When all insignificant explanatory variables (Wolfpack, Cothird and Cofull) are excluded then R-squared in Model 3 remains on the same level at 39.0%. This means the five remaining control variables have strong explanatory power in this Model. This includes the variable NewBET 2. NewBET 2 is significant at the 5%-level and it also seems to have an economic effect given the comparably high coefficient in absolute terms of 0.041.

The size of the activist's initial stake has a significant positive impact on the magnitude of abnormal returns, too. Larger activist stakes result in higher abnormal returns. This can once more be explained with arguments of credibility of the activist effort.

Including pre-announcement abnormal returns can bias results because for example larger stakes might cause larger pre-announcement stock-price run ups. The result is robust since the regression is based on post-announcement abnormal returns ([0; +1]-event window) and not on abnormal returns surrounding the event (for example [-20; +20]-event window). All results are in line with the findings presented above supporting Hypothesis 1 as well as Hypothesis 2.

Table 7. Results of Ordinary Least Squares Regression

	Model 1 All events (N=253)	Model 2 AGM attendance rate (N=209)	Model 3 Act. Level 3 & 4 (N=161)
Activest approach			
Activity Level 3 & 4	0.024***	0.016***	
	[3.244]	[2.963]	
Loginitialstake	0.020***	0.023***	0.046***
	[2.781]	2.718]	[3.143]
Wolfpack	-0.011*	-0.006	-0.013
	[-1.905]	[-1.198]	[-0.965]
NewBET2	0.013**	0.011**	0.041**
	[2.422]	[2.286]	[2.421]
Target fundamentals			
Prior 12mperf	-0.007	-0.008**	-0.014*
	[-1.500]	[-2.104]	[-1.939]
RoE	0.004	0.003	0.034**
	[0.725]	[0.571]	[2.094]
CashtoAssets	-0.035**	-0.026**	-0.111***
	[-2.374]	[-2.474]	[-3.765]
Corporate governnance fundamentals			
AGM attendance rate	-	-0.014	-
		[-1.455]	
Cothird	-	-	0.011
			[0.916]
Cofull	-	-	0.022
			[1.665]
R-squared	15.8%	13.5%	43.3%
Adjusted R-squared	13.7%	10.5%	35.8%
F-statistic	3.87***	4.37***	7.59***

*The dependent variable is the [0; +1]-event window cumulative abnormal return. Activity Level 3 & 4, Wolfpack, NewBET 2, Cothird and Cofull are binary variables taking the value of 1 if the attribute is present in the given observation. Loginitialstake is the logarithm of the initial %-stake. Wolfpack is 1 if another activist is already invested at the time of the event. Prior12mperf is the target's share price performance relative to the C-DAX index in the twelve months prior to the event. RoE is the target's return on equity and CashtoAssets is target cash and cash-equivalents divided by total assets in the fiscal year prior to the event. AGM attendance rate is the attendance rate at the annual meeting prior to the event. Attendance rates are available for 209 observations. Cothird and Cofull stand for the level of co-determination on the target's supervisory board with Cothird meaning one third of the board seats are occupied by labour representatives and Cofull meaning half of the seats. Data source is Thomson One Banker for company financial data, Thomson Datastream for share price data and WAI Wirtschaftsanalysen und -informations GmbH for attendance rates and annual meeting agendas. Intercepts are suppressed because of the full span of dummy variables (Brav et al., 2008). T-statistics are shown in brackets and were computed using heteroskedasticity-robust standard errors (White, 1980). ***, **, and * indicate statistical significance at the 1%-, 5%-, and 10%-levels, respectively.*

5. CONCLUSION

For a sample of 253 investments by potential shareholder activists in 140 German publicly listed firms between January 1999 and May 2011 we document abnormal returns which are positive and significant for hostile as well as non-hostile events. However, abnormal returns tend to be higher for hostile events and for events closer to the supervisory board election with the highest returns occurring within one to two years prior to the supervisory board election. All evidence suggests that post-announcement short-term abnormal returns are largely driven by the credibility of the activist effort to bring about change. Capital markets apparently perceive an activist effort within one to two years prior to the election as being most credible. Quite contrary to intuition high cash positions on targets' balance sheets have a negative impact on the post-announcement wealth effects.

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APPENDIX

Appendix 1. Matrix of Pearson Sample Correlation Coefficients

Activity Level (3 and 4)	Log initial stake	Wolfpack	NewBET2	Prior 12m perf.	RoE	Cash to Assets	AGM attendance rate	Cothird	Cofull	CAR01	
1.000	-0.019	0.102	0.071	0.079	0.031	-0.002	-0.091	-0.010	0.126	0.219	Activity Level (3 and 4)
	1.000	-0.019	-0.084	0.079	-0.040	0.042	-0.081	-0.018	-0.311	0.147	Loginitialstake
		1.000	-0.089	-0.146	0.016	0.002	0.052	-0.056	0.075	-0.080	Wolfpack
			1.000	0.126	-0.082	-0.007	-0.019	-0.010	-0.066	0.132	NewBET2
				1.000	0.094	0.050	-0.080	0.092	-0.068	-0.021	Prior 12m perf.
					1.000	0.044	0.039	0.102	-0.085	0.030	RoE
						1.000	-0.006	0.026	-0.148	-0.095	CashtoAssets
							1.000	-0.055	0.046	-0.177	AGM attendance rate
								1.000	-0.326	0.024	Cothird
									1.000	-0.020	Cofull
										1.000	CAR01

CAR01 is the [0; +1]-event window cumulative abnormal return. CAR01 is the dependent variable of the regression analyses. All control variables are explained in Table IV. (Results of Ordinary Least Squares Regression). Perf. stands for performance.

Appendix 2. Change in Annual Meeting Attendance Rates

	Attendance rate before investment	***Attendance rate after investment***	***Difference-in-means test / Wilcoxon Signed Rank Test***
	Full sample (159 observations)		
Mean	50,27	54,45	2,16** (0,032)
Median	52,24	54,55	3,35*** (0,000)
	Activity Level 1 and 2 combined (128 observations)		
Mean	51,37	54,77	1,53 (0,127)
Median	53,16	56,47	2,66*** (0,004)
	Activity Level 3 and 4 combined (31 observations)		
Mean	45,77	53,11	1,99* (0,051)
Median	45,17	50,73	2,03** (0,021)

*Each annual meeting is considered only once. Subsequent annual meetings are considered only if at least one new potential activist shareholder has disclosed a stake. Annual meetings after the takeover of a target firm are not included. Difference-in-means test (Wilcoxon Signed Rank Test) displays t-statistics (z-score), significance level and in brackets the corresponding p-value for the differences in mean or median. *, ** and *** mark statistical significance 10%-, 5%- and 1%-level. Source for attendance rates is the WAI Wirtschaftsanalysen und -informations GmbH (www.hv-info.de) database as well as annual reports and target firm websites.*