

MARKET REACTIONS ON SHAREHOLDER ACTIVISM THROUGH OPEN LETTERS

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Abstract

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To position themselves in the competitive landscape of fund collection, activist investors have to generate public awareness for their actions and differentiate themselves from other investors. Thereby, the activist investor Petrus Advisers predominantly uses the instrument of open letters in daily newspapers. By its concentration on this single instrument, Petrus Advisers allows us to analyze shareholder activism not only from an overall investor's case study perspective but also with a focus on a single tool of activism. We examine market reactions caused by these open letters on the target companies' share prices with a regional focus on Continental Europe. The analysis of 42 open letters shows that only initial publications addressed directly to the management board of the target companies induce positive market reactions. In addition, less profitable firms and companies with a larger number of employees generate greater positive stock price reactions. Based on the results, open letters might not be the most favorable single instrument for activist investors in Europe.

Keywords: Shareholder Activism, Petrus Advisers, Open Letters, Market Reactions, Single Instrument, Governance

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1. INTRODUCTION

In September 2017, the investment firm *Petrus Advisers* (PA) published an open letter to the major German bank *Commerzbank AG*. In its letter, PA sharply criticizes the management of the exchange-listed online subsidiary *comdirect bank AG* by e.g., describing the management board as having no smart ideas, highlighting the insufficient growth and innovation speed, and emphasizing the inefficient cost and IT structure. Obviously, the aim of the letter was to raise pressure on the executive board in order to increase the value of the shares held in *comdirect bank AG*. Six months later, PA published a second letter with similar content. After the release of the second letter, *Commerzbank AG* started a squeeze-out for *comdirect bank AG*'s

outstanding shares while PA increased their shares from 5.7% to 7.5% in *comdirect bank AG*. PA recommended all minority shareholders to reject *Commerzbank AG*'s bid as the offered price would not reflect the fair value of *comdirect bank AG*¹. To complete the squeeze-out in 2020, *Commerzbank AG* offered PA a share price of almost one third above the initial offered price and thus paid a high premium.

As illustrated by this example, shareholder activism seems to be a rewarding approach more relevant than ever since its first appearance in the United States (US) around the 1980s (Hilldrup, 2012). In 2019, a record of 147 activist investors launched new campaigns, including 43 new investors without

¹ <https://petrusadvisers.com/de/>

any previous shareholder activism history. In total, 187 companies were globally targeted by activist investors in 209 campaigns in 2019. 23% of these campaigns have been launched against European companies². Germany, Austria, and Switzerland, the focus area of PA, are home to 31 target companies, which account for approximately 23% of European activism (Activist Insight & Schulte Roth & Zabel, 2018; Black, 2017). Due to activist investors looking for deep markets to invest considerable capital, campaigns in the major continental stock markets rose 56% compared to 2017/18³. PA is one of the most prolific European activists, competing with global players. Along with the growing number of competing activists, it becomes more difficult for each investor to create public awareness of their actions and to distinguish themselves from other investors in order to position themselves in the competitive landscape of fund collection. PA is betting on a public strategy by primarily using the instrument of open letters in daily newspapers.

Since shareholder activism originated in the US, the majority of research is centred on US-based shareholder activism and mostly analyses success factors of activist investors in their respective environment (Ryan & Schneider, 2002; Walsh & Kosnik, 1993). However, activism in Europe differs from the US in terms of e.g., corporate governance structures. Shareholder activism in Europe and especially the approach of activist investor PA, which is based on public presence predominantly in form of open letters, is to some degree innovative as evidence for this region and the method is limited (Bessler, Drobetz, & Holler, 2008; Drerup, 2014; Mietzner, Schweizer, & Tyrell, 2011; Mietzner & Schweizer, 2014; Schaefer & Hertrich, 2013; Weber & Zimmermann, 2013). Recent literature mainly focuses on investment activities in Anglo-Saxon institutional settings and analyses of single activist investors or characteristics of target companies.

The strategy of PA allows us to analyse the success of the letters in isolation as an instrument of shareholder activism in Continental Europe. The focus on open letters and the regional focus on Continental Europe is innovative and allows us to analyse our major research question: *Does shareholder activism at an instrumental level with an emphasis on a single tool of activism have significant share price effects?* The results offer insights into the general effectiveness of open letters with regards to their peculiarities and the impact of them on target companies' share prices. The empirical evidence indicates that open letters only have a significant influence on the stock returns if they are addressed directly to the management board of the target companies and are initial publications. Based on these findings, it is unlikely that open letters will become a dominant tool to increase the value of a company for short-term revenues in Continental Europe.

The study proceeds as follows. In Section 2, we introduce the activist investor PA and its open letter strategy followed by an overview of existing literature in Section 3. Then we derive hypotheses

and analyse them with the research methodology presented in Section 4. In the following Section 5, we present the results of the event study and multivariate analysis. In Section 6, we give an outlook and summarize the results.

2. THE ACTIVIST INVESTOR PETRUS ADVISERS

Activist investors were first observed in North America in the 1980s. They entered the continental European financial markets in the mid-1990s (Croci, 2004, 2007).

Petrus Advisers is a London-based investment firm that was founded by Klaus Umek and Johannes Meran in 2009. Its investment focus is on European companies, more precisely in German-speaking and Eastern European countries. According to its website, PA is committed to a responsible investment approach and strives to act in friendly cooperation with all stakeholders of the target companies, including its respective management teams, board members, institutional investors, and private shareholders⁴.

According to PA, they manage 350 million euros and are interested in investments above 20 million euros (Reimer, 2017). PA is regulated by the Financial Conduct Authority in London and manages the Petrus Advisers Special Situations Fund as well as the Special Situation UCITS Fund. At a Universal-Investment promotion event in early 2018, PA explained their activist approach. The first step is to identify potential target companies. This is done through various channels such as their extensive network of contacts. PA focuses on undervalued companies and decides on this basis on the attractiveness of investment in the selected company. Subsequently, a due diligence assessment is carried out. PA interviews industry experts, meets management and assesses whether shareholders have similar views on the current status of the company in order to initiate possible activist cooperation. If an investment decision is made, PA buys up to 9.5% of its own portfolio. Its portfolio is divided into core positions, which are usually held for two to three years, and smaller trading positions, which are held for three to six months. The core positions are the investments that are subject to activist engagement. Most of the companies exposed to activist demands from PA come from the real estate sector (Universal-Investment, 2018).

PA uses open letters as an activist tool. Letters are made available to a broad public in the form of advertisements or newspaper articles. In addition, the letters are made available on its own website. PA does not use public letters as an isolated single action. If the target company does not follow the demands, then a follow-up letter is published in order to increase the pressure.

3. LITERATURE OVERVIEW AND HYPOTHESES DEVELOPMENT

Agency conflicts and the settlement of these conflicts are the main driving forces behind shareholder activism (Jensen, 1986; Gillan & Starks, 1998; Jensen & Meckling, 1976; Bassen, Schiereck, &

² Data was collected for campaigns conducted at companies with market capitalization greater than 500\$ million at time of campaign announcement (FactSet, 2019).

³ <https://www.factset.com/news>

⁴ <https://petrusadvisers.com/de/>

Schüler, 2019). One of the first studies dealing with activist investors analyses the positive influence of six raiders⁵ on shareholders' wealth (Holderness & Sheehan, 1985).

Multiple studies analyse primarily target firm characteristics. They identify underperformance in terms of low return on assets (ROA) and return on equity (ROE) as central factors for an activist approach (Bethel, Liebeskind, & Opler, 1998; Drerup, 2014; Gillan & Starks, 1998; Bassen et al., 2019; Del Guercio, Seery, & Woidtke, 2008; Ertimur, Ferri, & Muslu, 2010). In contrast to that, several studies find that hedge fund activism focuses primarily on target companies with a high level of ROA and ROE (Boyson & Mooradian, 2011; Boyson, Gantchev, & Shivdasani, 2017; Brav, Jiang, Partnoy, & Thomas, 2008; Brav, Jiang, & Kim, 2010; Clifford, 2008; Klein & Zur, 2009, 2011). In line with these findings, the profitability of a company is negatively correlated with financial activism and positively correlated with social activism (Judge, Gaur, & Muller-Kahle, 2010). Considering the size of the target, e.g., in terms of market capitalization or book value of assets, several publications come to mixed results depending on the form of shareholder activism. Studies covering shareholder activism in form of shareholder proposals find that these targets are associated with a larger size (Renneboog & Szilagyi, 2011; Cai & Walkling, 2011; Ertimur et al., 2010; Ertimur, Ferri, & Stubben, 2010), while studies investigating hedge fund activism contradict these findings (Boyson et al., 2017; Boyson & Mooradian, 2011; Klein & Zur, 2009, 2011). In further regard, target companies tend to have relatively low growth rates whereas, in terms of leverage, the picture is less clear even though a slight tendency towards higher leverage is observable (Brav et al., 2008, 2010; Boyson & Mooradian, 2011; Zhu, 2013). On the contrary, some studies report that activist investors target often profitable and financially strong firms with above-average liquidity (Boyson & Mooradian, 2007; Klein & Zur, 2009, 2011; Bassen et al., 2019; Boyson et al., 2017; Matsusaka, Ozbas, & Yi, 2015; Norli, Ostergaard, & Schindele, 2015; Gantchev & Jotikasthira, 2018).

Various large-scale US and European studies indicate significant effects of shareholder activism on returns considered from a short-term perspective (less than or equal to one year) or from a long-term perspective (from one to five years) (Akhigbe, Madura, & Tucker, 1997; Becht, Franks, & Grant, 2010; Becht, Franks, Grant, & Wagner, 2017; Becht, Franks, Grant, & Wagner, 2019; Bessler et al., 2008; Boyson & Mooradian, 2007; Brav et al., 2010; Clifford, 2008; Klein & Zur, 2009; Mietzner & Schweizer, 2014; Bassen et al., 2019; Renneboog & Szilagyi, 2011; Boyson et al., 2017; Cuñat, Gine, & Guadalupe, 2012; Thomas & Cotter, 2007; Bebchuk, Brav, & Jiang, 2015; Krishnan, Partnoy, & Thomas, 2016). There is evidence over the long term for significantly positive returns (Gillan & Starks, 2007; Ryan & Schneider, 2002; Boyson et al., 2017; Greenwood & Schor, 2009), but also for negative long-term buy-and-hold abnormal returns or market neutral returns (Karpoff, 2001; Drerup, 2014; Mietzner & Schweizer, 2014). Therefore, apart from the fact that the preferred target characteristics remain unclear, the

value-enhancing effects of shareholder activism are also vague. One reason for conflicting results on value-enhancing effects could be that activist investors pursue different objectives and strategies or weigh objectives unequally. The analysis of a sample containing activist investors with different objectives, such as improving financial ratios or social and environmental performance, or weighting the objectives differently, shows ambiguous results (Pozen, 1994; Sullivan & Mackenzie, 2008; Goranova & Ryan, 2014; McNulty & Nordberg, 2016; Bassen et al., 2019; Bebchuk et al., 2015; Gantchev, Gredil, & Jotikasthira, 2019; Gantchev & Jotikasthira, 2018).

To control for some heterogeneity, some studies focus on one single activist investor. Bassen et al. (2019) analyse the investment success of the US activist investor Guy Wyser-Pratte and show that the investment activities of the activist investor increase the short- and long-term shareholder value when Wyser-Pratte targets poor performing companies (Bassen et al., 2019). Venkiteswaran, Iyer, and Rao (2010) analyse the investment activities of the activist investor Carl Icahn. Icahn's target companies consist of companies from a notable range of sectors. The targets indicated by Icahn vary according to the sectors of the target companies and more of them seemed to be rather over- than underleveraged. However, a considerable minority had pay-out rates too low and more money than necessary. Again, the results of the analysis show a significantly positive response of the share price to the announcement that Icahn holds a stake in the target company (Venkiteswaran et al., 2010).

To enhance the existing literature that mainly focuses on investment activities in Anglo-Saxon institutional settings and analyses single activist investors or characteristics of target companies, we decided to focus on the method used by the activist investor PA who mainly operates in Continental Europe. The focus on this single instrument and the regional focus on Continental Europe is innovative and allows us for the first time to analyse shareholder activism at an instrumental level with an emphasis on a single tool of activism. The open letter method used by PA has not been studied yet. Therefore, we first analyse whether this method leads to positive abnormal stock returns.

H1: Publications of open letters from Petrus Advisers have a positive impact on the market value of the target company.

We assume that follow-up publications mostly concern companies that reject the accusations in their response, which in turn, partially reverses the positive effects of the initial publication. Further publications would then also have a positive effect on the value of these companies.

H2: Follow-up publications of open letters by Petrus Advisers have a positive influence on the market value of the target company.

We further examine whether indirect letters achieve the same effect as direct letters. More than half of the indirect letters were written to warn against a hostile takeover. These publications make no new demands or suggestions for improvement and thus do not have the same focus as direct publications.

H3: Indirect publications do not have the same positive impact on company value as direct publications.

⁵ Carl Icahn, Irwin Jacobs, Carl Lindner, David Murdock, Victor Posner, and Charles Bluhdom

4. DATA COLLECTION AND METHODOLOGY

The data sample includes all 15 companies that were targets of public activist claims by PA. The time period starts with the first open letter in November 2014 and ends with the publication in February 2019. The event dates examined are the days when the open letters were first available to the public. A total of 44 letters were published by PA, ten of them followed by counter-publications from the executive team of the target companies. We removed two open letters due to confounding events, leaving a sample size of 42 published letters. These 42

letters are further divided into the two subsamples of indirect and direct letters. Direct letters address, i.e., the CEO or CFO, directly. In contrast, indirect letters address shareholders or the public with an intention to buy, sell, or keep invested. Further, the total sample is grouped into initial and follow-up publications. Given the industry focus of PA, another sub-sample classification is differentiating between target companies from the real estate industry and outside of it. Table 1 gives an overview of the companies targeted by PA and the characteristics of the respective publications of open letters.

Table 1. Companies targeted by PA between 2014 and 2019 and characteristics of the respective open letters

Company name	Direct:Indirect	Counter publications	Initial publications	Industry
Wienerberger AG	5:0	4	April 19, 2018	Building Materials
Moneta Money Bank, a.s.	4:0	1	January 1, 2018	Financial Institution
Comdirect Bank AG	2:0	0	September 12, 2017	Financial Institution
Immofinanz AG	2:2	0	March 14, 2017	Real Estate Industry
CA Immobilien Anlagen AG	3:1	0	November 27, 2017	Real Estate Industry
Conwert Immobilien Invest SE	4:2	2	January 6, 2015	Real Estate Industry
S IMMO AG	1:0	0	March 8, 2016	Real Estate Industry
Wacker Neuson SE	3:0	0	October 20, 2015	Construction Equipment
Braas Monier Building Group S.A.	2:2	0	October 19, 2016	Building Materials
Flughafen Wien AG	0:2	0	November 21, 2014	Airport Operator
KWG kommunale Wohnen GmbH (AG until 2017)	1:1	0	April 11, 2016	Real Estate Industry
Semapa - Sociedade de Investimento e Gestão, SGPS, S.A.	1:0	1	July 17, 2015	Conglomerate
STADA Arzneimittel AG	1:0	1	June 2, 2016	Pharmacy
Ophir Energy	4:0	1	December 18, 2017	Oil & Gas Industry
Unipetrol	1:0	0	August 24, 2018	Oil & Gas Industry

To analyse the immediate stock market reactions following the publication of open letters by PA, we conduct event studies focussing on five different event windows. We use an estimation window for the event study of 250 days in order to ensure the greatest possible informative value and to compensate for seasonal fluctuations (Peterson, 1989).

Abnormal returns $AR_{i,t}$ are calculated as the difference between the actual return $R_{i,t}$ and normal return $E(R_{i,t})$ of a company i at time t :

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

where

$AR_{i,t}$: Abnormal return of company share i at time t ;

$R_{i,t}$: The actual return of company share i at time t ;

$E(R_{i,t})$: Normal (expected) return of company share i at time t .

Statistical and economic models can be used to calculate normal returns. One of those is the market model, which is an improvement of the constant mean return model as it reduces the variance of abnormal returns (MacKinlay, 1997). The market model relates the returns of a security i R_{it} to the market returns R_{mt} :

$$R_{it} = \alpha_i + \beta_i * R_{mt} + u_{i,t} \quad (2)$$

where α_i measures the unsystematic return and shows excess returns of a stock over the market. The beta-factor β_i depends on the market volatility and represents the systematic risk. The error term u_{it} captures random errors. Further, an OLS estimator is used to estimate the parameters α_i and β_i by minimizing the sum of all distances of all data

points to the market-model line. Market fluctuations are reflected by the Datastream Market Index for the respective countries of the target companies. Index and price data for the fifteen examined companies are obtained via the Thomson Reuters database.

Additional to the market-model, we apply the statistical Carhart four-factor model, which is an extension of the Fama French three-factor model. Fama and French (1993) argue that a portfolio built to replicate risk factors associated with size and value improve essentially the explanatory power of the CAPM market beta. Hereby is size captured by market equity and value by the book-to-market ratio. Carhart (1997) introduces a four-factor model that improves the average pricing errors of the CAPM and the three-factor-model. He adds the momentum factor and proposes to estimate the following model:

$$R_{it} = \alpha_i + \beta_{i1} * Mkt_t + \beta_{i2} * SMB_t + \beta_{i3} * HML_t + \beta_{i4} * WML_t + u_{i,t} \quad (3)$$

where Mkt_t is the market return in excess of risk-free rates in period t . The size factor is captured by SMB_t (Small Minus Big), which is the difference between the returns on portfolios of small-cap and big-cap stocks. HML_t (High Minus Low) captures the difference between returns on portfolios of stocks with a high book-to-market ratio and portfolios of stocks with a low book-to-market ratio (Fama & French, 2012). The momentum factor WML_t (Winner Minus Losers) captures the difference between the returns on portfolios with winner stocks and portfolios with loser stocks of the last 12 months. As market indices, we use the Datastream market indices of the respective countries of the target

companies. The index data and stock price information of the examined companies are obtained from the Thomson Reuters database. Data for the factors SMB_t , HML_t , and WML_t is provided by the Fama and French data library.

Based on either the standard market model or the Carhart four-factor model, we further calculate the cumulative abnormal returns (CAR):

$$CAR = \sum_{t=T_1}^{T_2} AR_{i,t} \quad (4)$$

as well as the mean cumulative abnormal returns (CAAR):

$$CAAR_{i,T_1-T_2} = \frac{1}{N} \sum_{t=T_1}^{T_2} CAR_{i,t} \quad (5)$$

Another measure is the median, which is determined by sorting the values into order and selecting the mean value for odd numbers or the average of the two mean values for even numbers.

For small samples, the median is not as susceptible to upward and downward outliers as, for example, the mean.

5. RESULTS

Table 2 summarizes the event study results for the complete data sample. Our analysis reveals only weak statistical significance for the seven-day event window. In contrast to other forms of shareholder activism, the publication of open letters by PA does not lead to any overall significant stock price reactions. $H1$ is not supported.

To test $H2$, we divided the total sample into the subsamples of initial publications and follow-up publications. The results in Table 3 show that for two event windows ([0:1], [-3:3]) the subsample of initial publications shows significantly positive abnormal returns. We, therefore, conclude that follow-up publications do not positively affect the market value of target companies in the same way as the first publications. The divergences between the two samples remain insignificant.

Table 2. Share price reactions to publications of open letters by PA ($n = 42$)

Event Window	CAR		t-Test	Boehmer Test	Corrado Rank Sum Test
	Mean [%]	Median [%]	t-value	z-score	t-value
<i>Panel A: Publication of open letters by Petrus Advisers (n = 42, Market model)</i>					
[-5:5]	0.03	0.30	0.04	0.06	0.39
[0:0]	0.08	0.22	0.32	0.24	0.62
[0:1]	0.39	0.31	1.03	0.67	1.21
[-1:1]	0.47	0.15	1.13	0.83	1.24
[-3:3]	0.87	0.27	1.56	1.30	0.82
<i>Panel B: Publication of open letters by Petrus Advisers (n = 42, Carhart four-factor model)</i>					
[-5:5]	0.10	-0.02	0.16	0.20	0.53
[0:0]	0.15	0.18	0.63	0.52	0.77
[0:1]	0.44	0.26	1.21	0.83	1.27
[-1:1]	0.54	0.26	1.31	1.00	1.40
[-3:3]	1.03	0.51	1.84*	1.59	1.00

Notes: Share price reactions of the target companies as a result of the publications of open letters for different time windows. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level respectively.

Table 3. Share price reactions to initial and follow-up publications

Event Window	CAR		t-Test	Boehmer Test	Corrado Rank Sum Test
	Mean [%]	Median [%]	t-value	z-score	t-value
<i>Panel A: Initial publications (n = 15, Carhart four-factor model)</i>					
[-5:5]	0.20	0.41	0.18	0.22	0.67
[0:0]	0.47	0.46	1.49	1.44	1.27
[0:1]	1.04	0.75	1.80*	1.76*	1.83*
[-1:1]	0.96	0.26	1.42	1.40	1.54
[-3:3]	1.64	1.48	1.78*	1.74*	1.61*
<i>Panel B: Follow-up publications (n = 27, Carhart four-factor model)</i>					
[-5:5]	0.04	-0.71	0.06	0.08	0.19
[0:0]	-0.02	0.01	-0.06	-0.14	0.04
[0:1]	0.12	-0.16	0.25	-0.08	0.27
[-1:1]	0.31	-0.14	0.59	0.31	0.66
[-3:3]	0.69	-0.27	0.98	0.69	0.09
<i>Panel C: Comparison of initial and follow-up publications</i>					
Event Window	CAR		Welch's t-Test	Mann-Whitney U test	
	Δ Mean [%]	Δ Median [%]	t-value	z-score	
[-5:5]	0.16	1.12	0.11	0.67	
[0:0]	0.49	0.45	1.06	0.96	
[0:1]	0.92	0.91	1.24	1.14	
[-1:1]	0.65	0.40	0.75	0.72	
[-3:3]	0.95	1.62	0.81	1.35	

Notes: Share price reactions of target companies as a result of initial and follow-up publications of open letters for different time windows and samples.

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

H3 argues that indirect letters, which mainly warn against a hostile takeover, will not result in the same positive returns as direct publications. The results in Table 4 document that at least for the seven-day event window the subsample of direct

publications shows significantly positive abnormal returns. We interpret this evidence as weak support for H3. A comparison of the two subsamples shows that they also only differ significantly for the seven-day event window.

Table 4. Share price reactions to direct and indirect publications

Event Window	CAR		t-Test	Boehmer Test	Corrado Rank Sum Test
	Mean [%]	Median [%]	t-value	z-score	t-value
<i>Panel A: Direct publications (n = 32, Carhart four-factor model)</i>					
[-5:5]	0.26	0.23	0.35	0.45	0.53
[0:0]	0.12	0.00	0.40	0.22	0.25
[0:1]	0.61	0.26	1.42	1.08	1.04
[-1:1]	0.76	0.31	1.63	1.39	1.49
[-3:3]	1.46	1.13	2.24**	2.00**	1.17
<i>Panel B: Indirect publications (n = 10, Carhart four-factor model)</i>					
[-5:5]	-0.42	-1.21	-0.33	-0.37	0.21
[0:0]	0.27	0.55	0.62	0.75	1.13
[0:1]	-0.09	0.26	-0.12	-0.19	0.86
[-1:1]	-0.15	-0.17	-0.16	-0.22	0.41
[-3:3]	-0.35	-0.85	-0.34	-0.34	0.13
<i>Panel C: Comparison of direct and indirect publications</i>					
Event Window	CAR		Welch's t-Test	Mann-Whitney U test	
	Δ Mean [%]	Δ Median [%]	t-value	z-score	
[-5:5]	0.68	1.44	-0.46	-0.81	
[0:0]	-0.15	0.55	0.28	0.49	
[0:1]	0.70	0.00	-0.83	-0.37	
[-1:1]	0.91	0.48	-0.88	-0.78	
[-3:3]	1.81	1.98	-1.49*	-1.79*	

Notes: Share price reactions of target companies as a result of direct and indirect publications of open letters for different time windows and samples.

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

Beyond the three hypotheses we analysed, Nisar (2007) examines the impact of expertise on the degree of activism and on effectiveness and finds that investors become more active and work more actively with the management board the more they know about the industry. Since PA often invests in real estate companies, a specific amount of expertise can be assumed. Therefore, we analysed a fourth hypothesis in addition to the hypotheses mentioned above:

H4: Publications have a stronger impact on the market value of target companies from the real estate sector.

Differentiating for industries reveals that only the publication of open letters targeting companies outside the real estate sector lead to statistical significant price reactions. In contrast to this, abnormal returns do not significantly differ from zero when publishing open letters that address companies from the real estate sector. Thus, publications do not have a stronger impact on the market value of target companies from the real estate sector.

Table 5 shows the results for the different models of the multivariate analysis. We choose two

different categories of independent variables. The first category includes the univariate independent variables *addressing*, *real estate sector*, and the *initial publication*. To analyse financial and operating performance of the target companies, we follow existing studies and calculate already applied key performance indicators focusing on market valuation, profitability and leverage, which constitute the second category (Bassen et al., 2019). For three models the financial key figure ROE is statistically significant at the 10% level and for one model at the 5% level. A higher ROE results in a small decline in CARs. The target companies of PA are very different in size with headcounts in the range of 75 to 16596. Market capitalization also differs greatly among individual target companies. The price-to-book variable, which can be used to identify undervalued companies, doesn't have an impact on the abnormal returns. Further, none of the univariate independent variables *addressing*, *real estate sector*, *initial publication* has a statistically significant effect on the dependent variable for any of the analysed models. Overall, the results of the multivariate analysis are similar to those of the univariate analysis.

Table 5. Results of multivariate analysis

CAR [-3,3]	Model 1	t-Test	Model 2	t-Test	Model 3	t-Test	Model 4	t-Test
Intercept	0.0092	0.63	0.0002	0.01	0.0092	1.12	0.0054	0.32
Addressing	-0.0000	-0.00	-	-	-	-	-	-
Real Est. Sec.	-0.0084	-0.71	-	-	-0.0084	-0.75	-0.0087	-0.72
Initial public.	0.0147	1.24	0.0160	1.31	0.0147	1.26	0.0151	1.22
Price-to-book	-	-	0.0005	0.18	-	-	-0.0001	-0.04
ROE	-0.0005	-1.93*	-0.0005	-1.76*	-0.0005	-2.07**	-0.0005	-1.75*
Market cap.	-	-	0.0000	0.39	-	-	0.0000	0.37
F-Test	1.30		1.20		1.79		1.05	
R ²	12.36%		11.46%		12.36%		12.73%	
Adj. R ²	2.89%		1.89%		5.44%		0.61%	

Notes: Table 5 shows effects of different characteristics and key figures of target companies on the CARs for the event window [-3,3]. As independent variables, we use the dummy variables addressing, real estate sector (real est. sec.), initial publication (initial public.), and the financial figures price-to-book ratio (price-to-book), ROE, and market capitalization (market cap.). The sample size for all models is $n = 42$.

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

6. CONCLUSION

To the best of our knowledge, this is the first study to analyse shareholder activism at an instrumental level with an emphasis on a single tool of activism and a regional focus on Continental Europe. In order to distinguish themselves from other activist investors, PA implements a public strategy by primarily using open letters as an instrument of shareholder activism which therefore allows us to analyse the success of the letters in isolation. Overall, the analysis of share price effects caused by the publication of open letters by the activist investor PA, reveals only weak positive statistical significance.

The main results show that initial publications of open letters lead to statistically significant price reactions one day after the publication and for the seven-day event window. Based on this result, the hypothesis that initial publications of open letters by PA have generally a positive impact on the market value of the target company can be supported. The management board of the target companies might not take the demands seriously leading to follow-up publications of an open letter. However, follow-up publications do not lead to any significant short-term positive returns. Furthermore, the analysis shows that indirect letters which mainly warn against a hostile takeover do not have any significant impact on the abnormal returns. On the contrary, the abnormal returns of direct publications were significantly positive for the seven-day event window. This supports the assumption that indirect publications do not have the same positive impact on the market value of a company as direct publications.

Additional analysis shows further that publications of open letters addressing companies from the real estate sector do not have a greater impact on the value of the companies. Companies in the real estate sector might be an attractive target in general and PA might think these companies can best leverage their investment. The know-how thesis of Nisar (2007) thus can be rejected for PA. It is presumed that the focus on a specific sector, e.g., the real estate sector is due to a tendency towards a higher potential of the respective sector in comparison to other sectors.

There are two major limitations in this study that could be addressed in future research. First, especially for the analysis of the subsamples, the sample size is small and might have impacted the identification of significant relationships from the data. Second, the study focuses on PA and their open letters only. Future research could include open letters from other activist investors and thus increase the sample size which might lead to more precise results. Further, in the literature, the susceptibility of individual sectors has not yet been investigated. Considering the increasing number of activist investors in Europe, this would be a possible and relevant extension of the research horizon.

Contrary to expectations, the event study shows that open letters only have a weak significant influence on abnormal returns. The increase of shareholder activism in Europe also increases the relevance of this topic. Based on the analysis it is unlikely that open letters will become a standard dominant tool for activist investors to increase the market value of a company for short-term revenues in Continental Europe.

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