Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law

IMB Institute of Management Berlin

Impact of Investor Presentations on Share Prices

Evidence from DAX 30 Companies from 2010-2012

Authors: Christopher Breu, Avo Schönbohm, Markus Löcher
Editors: Carsten Baumgarth | Gert Bruche | Christoph Dörrenbächer | Friedrich Nagel

Working Paper No. 88
12/2015
Series Editor: Head of IMB Institute of Management Berlin

RESEARCH PAPER

Impact of Investor Presentations on Share Prices

-

Evidence from DAX 30 Companies from 2010-2012

Christopher Breu

Avo Schönbohm

Markus Löcher

Paper No. 88, Date: 12/2015

Working Papers of the
Institute of Management Berlin at the
Berlin School of Economics and Law (HWR Berlin)
Badensche Str. 50-51, D-10825 Berlin

Editors:
Carsten Baumgarth
Gert Bruche
Christoph Dörrenbächer
Friedrich Nagel

ISSN 1869-8115

Biographic Note

Christopher Breu works as a Junior Controller for KPMG AG Wirtschaftsprüfungsgesellschaft in Berlin. Before joining KPMG in 2014, he earned his master's degree in Accounting and Controlling at the Berlin School of Economics and Law (HWR Berlin). He received his bachelor's degree in Business Administration at the University of Applied Sciences (HTW Berlin) in Berlin. christopher-breu@gmail.com

Christopher Breu arbeitet als Junior Controller für die KPMG AG Wirtschaftsprüfungsgesellschaft in Berlin. Bevor er sich 2014 KPMG anschloss, absolvierte er sein Masterstudium in Accounting und Controlling an der Hochschule für Wirtschaft und Recht in Berlin (HWR Berlin). Seinen Bachelorabschluss machte er in Betriebswirtschaftslehre an der Hochschule für Technik und Wirtschaft in Berlin (HTW Berlin). christopherbreu@gmail.com

Avo Schönbohm is professor of Management and Management Accounting at the Berlin School of Economics and Law (HWR Berlin) since 2010. His field of research encompasses various aspects of performance management, enterprise gamification (serious games) and negotiation techniques. He worked as an Internal Audit Manager and Vice President of Strategic Planning in various companies. avo.schoenbohm@hwr-berlin.de

Avo Schönbohm ist seit 2010 Professor für Allgemeine Betriebswirtschaftslehre und Controlling an der Hochschule für Wirtschaft und Recht Berlin. Sein Forschungsgebiet umfasst unterschiedliche Aspekte von Leistungssteuerungssystemen, unternehmensrelevanter Gamification (serious games) und Verhandlungsführung. Er arbeitete in verschiedenen Unternehmen u.a. als Leiter der strategischen Planung und als Prüfungsleiter in der internen Revision. avo.schoenbohm@hwr-berlin.de

Markus Löcher is professor of Mathematics and Statistics at the Berlin School of Economics and Law Berlin since 2011. His research interests include machine learning, spatial statistics, data visualization and sequential learning. Prior to joining the HWR Berlin he worked as a principal and lead scientist at various data analytics companies in the United States. markus.loecher@hwr-berlin.de

Markus Löcher ist seit 2011 Professor für Mathematik und Statistik an der HWR Berlin. Seine Forschungsinteressen umfassen maschinelles Lernen, räumliche Statistik, Datenvisualisierung sowie sequentielles Lernen. Langjährige Industrieerfahrung sammelte er als Principal- und Lead-Wissenschaftler in großen und kleinen IT Firmen in den USA. markus.loecher@hwr-berlin.de

Abstract

The purpose of this article is to explore the market reactions and determinants to 180 investor presentations by the German DAX 30 companies illustrating half-year and year-end results from 2010 to 2012. Therefore, an event study is conducted. In line with previous studies, the article finds significantly Abnormal Returns (ARs). For 57 of 180 presentations, the most significant presentation impact is realized directly on the presentation dates, with a similar distribution of half-year and year-end presentations. Nearly two thirds refer to significantly positive ARs, which is in line with the general DAX performance in the examined three years period. Pre-market or delayed market reactions do not exist. Furthermore, Operating Cash Flow (OCF), as a possible market reaction determinant is tested. The change of OCF shows a significant medium correlation. The article indicates that investor presentations are informative events, where the preparation and the surroundings play a minor role.

Zusammenfassung

Das Ziel dieses Artikels ist es, die Marktreaktionen und deren Einflussgrößen von 180 Investoren-Präsentationen der deutschen DAX-30 Unternehmen zu untersuchen. Im Speziellen werden Präsentationen von Halbjahres- und Jahresabschlussergebnissen zwischen 2010 und 2012 zur Analyse herangezogen. Hierfür wird das Verfahren der Ereignisstudien angewandt. Übereinstimmend mit früheren Studien können signifikante, abnormale Renditen (ARs) nachgewiesen werden. Bei 57 von 180 Präsentationen wird der größte signifikante Einfluss auf den Aktienkurs direkt am Tag der Präsentation festgestellt, mit einer ähnlichen Verteilung zwischen Halbjahres- und Jahresendpräsentationen. Ungefähr zwei Drittel beziehen sich auf signifikant positive ARs. Dies spiegelt auch die allgemeine Entwicklung des DAX innerhalb des Untersuchungszeitraumes wieder. Verfrühte oder verspätete Marktreaktionen existieren nicht. Darüber hinaus wird der operative Cash Flow (OCF) als mögliche Einflussgröße getestet. Die Änderung des OCF weist eine signifikante mittlere Korrelation auf. Insgesamt bestätigt der Artikel Investoren-Präsentationen als informative Veranstaltungen, wobei die Präsentationsgestaltung sowie -umgebung eine untergeordnete Rolle spielen.

Table of Contents

1 Introduction

Over the last years, companies had to face intensive competition in financial markets. As a result, the significance of investor relations (IR) has been increased (Piwinger 2009). To build confidence, companies mandatorily and voluntarily provide information to the market. The latter is a trade-off between transparency and freedom of activity (Bassen et al. 2010). With press releases, corporate websites and investor presentations, companies try to enable market participants to make more accurate earnings forecasts and investment decisions (Nielsen/ Bukh 2011). In accordance with currently available studies, it has only been rudimentarily investigated whether these instruments are informative and lead to market reactions. Whereas many studies have dealt with the impact of impersonal events on share prices, only a few have concentrated on the impact of personal events, such as investor presentations. By definition, investor presentations are voluntary and personal measures of primarily listed companies to inform market participants about their activities, earnings and strategies (Rose 2003). As they occur in a physical location and offer the opportunity for a face-to-face interaction, they are an interesting field to study (Ferguson/Scott 2011). Therefore, the focus of this article is on the impact of investor presentations on share prices.

While market reactions to earnings announcements and/or investor presentations have been proven and confirmed for US, Danish or Australian companies, no study could be found in regards to German companies. Thus, in this article an analysis of German DAX-30 companies is conducted. The article adds to the literature by evaluating the validity of MacKinlay's (1997) and Dörner's (2005) results for German companies. Measured by returns, the article reveals whether investor presentations of earnings announcements are informative. For potential investors, it provides evidence on the best time to invest. For the management, it shows whether companies are able to talk up the price before the event or whether they must anticipate a delayed market reaction. In this regard, the following research question is answered:

How do investor presentations of DAX 30 companies impact share prices?

To answer the research question, the article explores the presentations of companies' half-year (HY) and year-end (YE) results. YE presentations are suitable to investigate as they comprise all seasonal effects and allow for a fundamental company evaluation. HY presentations are also suitable for further investigation as they can provide an evaluation of initial performance. Against the background of earlier studies, a 3-years period, lasting from 2010 to 2012 and including 180 presentations, is found appropriate. Inspired by previous event studies and strongly corresponding to Goerke's (2009) statements, the commonly applied event study method is conducted to achieve meaningful results.

This study is divided into four major parts. First, the article outlines the basis of the analytical framework, which is further divided into three sub-chapters. Identifying previous studies offers a better classification of the topic. Based on empirical research, two hypotheses are developed to operationalise the research question. The given information requirements of investors improve the evaluation of the presentation content. Furthermore, the ability to interpret the results of this study is promoted by the given basics of slide presentations.

Second, the article explains the event study method and its technical terms. Moreover, it explains the data collected and provides a detailed overview of the research settings, in particular identifying the calculations and statistical procedures.

Third, the article describes the results for all data sets and continues with the evaluation of the conducted statistical tests to answer the research question. The tests are applied to different time frames around the presentation dates in order to cover potential pre-market or delayed market reactions. The third part ends with a chapter on limitations.

Last, the conclusion summarises the results and gives a critical review. Furthermore, the article provides approaches for future research.

2. Theoretical Basics

2.1 Prior Research & Hypotheses Development

In literature, a wide range of studies have dealt with the market reactions to different types of events. While Tischer and Hildebrandt (2011) analysed the influence of the publication of reputation rankings of the German 'Manager Magazin' on stock prices, Kley (2004) and Ott (2011) concentrated on the impact of credit-ratings by rating agencies. Bhabra (2008) and Bimberg (2009) observed acquisition programme announcements and their effect on stock prices. Conversely, Philipp (2011) analysed how announcements of cost-cutting programmes impacted share prices of DAX 30 companies from 1999 to 2009. The focus of Homburg, Artz and Seifried (2009) was on the publication of upcoming products. The article *Value of analyst recommendations: International evidence*, written by Jegadeesh and Kim (2006), deals with stock price reactions to analyst recommendations. All of the listed studies have demonstrated impacts on share prices and indicate that share prices are vulnerable to events.

Bridging the gap between the impact of conference presentations and market reactions, Bushee et al. observed 95,105 presentations, sponsored by 849 organisations, that were held in the USA from 1999 to 2007. They measured the effect of conference characteristics, such as sponsorship, location, size, and industry, on stock prices. In general, In general, the larger the number of experts attracted by a conference, the larger will be the stock return. (Bushee, Jung, Miller 2011).

Furthermore, Rose investigated the *Impact of investor meetings/presentations on share prices, insider trading and securities regulation* by using the event study method. He observed listed Danish firms from 1998 to 2003 against the background of EU securities regulations, to find out if they contribute successfully towards efficient stock markets. The article demonstrates the inability of securities regulations to secure efficient stock markets. Since the 120 examined investor meetings/presentations conveyed relevant information, significantly positive ARs were found around these events (Rose 2003).

Ferguson and Scott examined the market reactions to 817 investor presentations by 326 Australian resource firms. Similar to Rose, investor presentations proved to be informative and aided in capital allocation. The positive return was mainly due to good news stories or was simply anticipated by the market. 15 days after the investor presentations, the positive return did not reverse. No significantly positive long-term return was observed (Ferguson/Scott 2011).

In the late 1990s, MacKinlay explained the procedure of the event study method by investigating companies' quarterly earnings announcements and their impact on share prices. In particular, he observed the 30 companies of the Dow Jones Industrial Index from 1989 to 1993, which sums up to a sample of 600 announcements. For every company and quarter, MacKinlay compiled the date of announcement, the actual earnings and a measure of the expected earnings. Furthermore, he categorised the announcement as good news, no news and bad news.[1] During the event period of 41 days[2], the share prices after good news announcements increased, whereas they decreased after bad news. No significant movement was recognised after no news announcements (MacKinlay 1997). These findings are also in line with the study by Gennotte and Truemann (1996).

In his article *Stock market reactions to financial information*, Dörner focused on the response of stock prices to financial announcements in text form. He analysed a Swedish real estate firm from 1991 to 1996 which resulted in a positive correlation among stock prices and the following information categories: net asset value, occupancy rate, cash flow, and capitalisation rate (Dörner 2005).

To conclude, all mentioned studies about earnings announcements and investor presentations resulted in a correlation between stock prices and published financials, regardless of whether or not the information was surely known or anticipated before the actual event. The reporting of good news led to positive ARs, whereas bad news led to negative ones. With reference to the results of these studies, it makes no difference whether the study was held in the 1990s or in the 21st century, in the USA, Australia or Europe, the results are similar. In this regard, one should be able to presuppose that market

[1] If the actual earnings exceeded the expected earnings by more than 2.5 percent, the announcement was categorised as good news. If the actual earnings was more than 2.5 percent less than the expected earnings it was categorised as bad news. The announcement in between the five percent range was categorised as no news.

[2] Starting 20 days before the actual event and ending 20 days after.

reactions would also be noticed when DAX 30 companies present their financial results to market participants. Therefore, it leads to the following two null hypotheses:

H_1: There is no significant market reaction to investor presentations at all.

H_2: There is no significant correlation between the change of Operating Cash Flow and the market reaction to investor presentations.

Before the methodical procedure is explained and the null hypotheses are answered, chapter 2.3 gives a brief theoretical outline about the information requirements of investors. This knowledge is required to define suitable content to be analysed. It also increases the understanding and interpretation of the results.

2.2 Information Requirements of Investors

One thing that investors have in common is the need to evaluate the economic situation of companies in order to balance the chances and risks of potential investments. The assessment and valuation require a sufficient and trustful communication and information policy (Janik 2002). Typically, the information is aggregated in quarterly and yearly reports. Beside balance sheets, income and cash flow statements, other key ratios have proven to be useful evaluation parameters (Könen 2004). The ratios must be focused on the market participants with respect to scope, depth, frequency, and completeness. At the same time they must be consistent, transparent, and quantifiable (Rapp/Wullenkord 2011, p. 130). Ratios for investors can be subdivided in traditional and modern ratios.
Traditional ratios are past oriented and provide an overview of the capital and asset structure, liquidity and profitability. In order to interpret and compare the ratios, investors require ratios over the course of time and information about the macroeconomic environment. A comparison to similar companies in the industry increases the value of assessments (Könen 2004). Typical financial ratios for investors are: Earnings before Interest and Taxes (EBIT), Return on Investment (RoI), Return on Equity (RoE), Working Capital, Debt-to-Equity-Ratio, Operating Cash Flow (OCF), Cash Flow Margin, Equity Ratio, Stock Yield, Dividend Yield and Price-Earnings Ratio (P/E Ratio). Modern ratios are value-based ratios such as Cash Value Added (CVA) or Weighted Average Cost of Capital (WACC) (Krause/Arora 2008). These ratios focus on the shareholder value and give an insight into the future development of companies. Although future expectations are important for investors, modern ratios are recognised as additional side information, as they are estimated figures and include a high error potential (Horster/Knauer 2012). At the same time it is difficult for investors to understand these complex ratios since they are often not financial experts (PwC 2012).
Especially due to the increased volatility of the market, the information needs of investors have slightly changed. Explanations and ratios about debt, liquidity and default probabilities have become more important, in particular: explanations of transitions to Cash Flows from the income statement, differentiation between growth and maintenance investments (Capex), explanations of transition net debt, maturities of debt, gearing, net debt/EBITDA and interest-cover ratio. From an investor's perspective, management is able to improve the company's position on the capital market by providing the required information. Though, PricewaterhouseCoopers (PwC) established no significant adjustment of information by DAX companies in 2006 and 2010 (PwC 2012).
After providing the investors' information needs, in chapter 2.4 basic information about the structure and settings of slide presentations is given to be able to evaluate the presentation quality and possible correlation to the impact on share prices.

2.3 Requirements of Slide Presentations

The presentation quality is measured by its ability to impact the audience. In this context, it must be stated that this paper focuses on content and visualisation of information. This approach limits the results, however, as skills of presenters (delivery of information) were not considered (Carter 2013). Investor presentations, in particular, have to fulfil the needs of existing and potential investors. They should be focused and consistent in order to create confidence among investors (Kapterev 2011), and they should be structured into three sections. The 'introduction' is the most important part as it outlines

the topic and is used to get the attention of the audience. Within the 'body', the main ideas, results, and solutions are presented. A 'summary and an outlook' (conclusion) is a must-have to ensure that the information was effectively conveyed. Finally, a question and answer session promotes the information transfer and enables presenters to get a feedback (Yalcin/Yalcin 2010). Structural differences may influence the audience and lead to different market reactions.
Since investors have a limited capacity to absorb information, presentations should be only long enough to present the most important information (Möller/Kernchen 2011), which must be easily readable, understandable and should be presented strikingly and pictorially (Gelula 1997).
Data visualisation is one approach to improve the understanding of the audience. For investor presentations it is important to pay attention to correct application of visualisations. Wrongly used, they could lead to misinterpretations and cause adverse reactions. With the application of visualisation, relations are immediately visible and key messagesremain in the audience's consciousness (Kuhlmann 2001). To set the scene, visualisations must affirm something, make a difference and be reduced to the bare essentials (Kapterev 2011).
Showing a time line comparison, a column or line chart is appropriate. These types of diagrams connect historical data and better display changes over time. Typical examples of column and line charts are the development of revenues, costs and earnings over time. Bar charts are preferably used to show a ranking of objects. The ranking should be in an order, starting with the best at the top of the chart. If presenters have to compare a structure to show shares of a whole (e.g. market share), a pie chart is the best option (Garten 2004).
Tables are useful analytical tools especially for financial analysis. They contain a lot of data and require time to comprehend. Because the presentation duration of investor presentations is limited, presenters need to be conscious of this and focus on the key message. Inversely, it is recommendable to delete unnecessary information and highlight key figures (Kapterev 2011).
Photographs should only be used for illustration rather than decoration. Decorative photographs introduce a distraction and accomplish nothing. If the key element of a slide is a photograph, it must be sufficiently large enough (Kapterev 2011).

3 Event Study Method

3.1 Event & Data Collection

To answer the research question, a research method was required which enables the potential relation between companies' share prices (dependent variable) and the characteristics of their investor presentations (independent variables) to be examined. Therefore, the event study method was applied (Goerke 2009). Gerpott (2009) defines it on the one hand as a study of secondary research because it refers to already existing data (share prices), on the other it also contains elements of empirical primary research as new data are generated. Prematurely applied by Fisher, Fama, Jensen and Roll in 1969, it has become the standard method of measuring market reactions to announcements or events (Binder 1998). The market reactions are measured by the change of stock price returns. The stock price represents a uniform measure which enables an objective valuation. The method is done under the assumption of capital market efficiency. Accordingly, new publicly available information is directly considered in the price formation process (Goerke 2009). In the article, events (research objects) are investor presentations by DAX 30 companies listed on 30 September 2013 (Deutsche Börse 2013). The focus was on 180 investor presentations which summarised earnings announcements of HY and YE reports from 2010-2012. The presentation data were obtained online from each company's individual homepage. The Internet platform 'Yahoo!Finance' (www.finance.yahoo.com) ensures the data collection of required share prices and returns of the DAX companies, on a daily basis. All share prices were closed prices adjusted for dividends and splits. The required data was collected and collated via Microsoft Excel 2007.

3.2 Dependent Variable: Abnormal Return

In the next step, ARs[3] were estimated to determine whether the events and their characteristics (independent variables) caused reactions on the share prices. Therefore, the statistical market model was applied which assumes a linear correlation among the security return (R) of company i at a specific date t and the return of a market portfolio (R_M) at the same date:

$$R_{i,t} = \alpha_i + \beta_i * R_{Mt} + \varepsilon_{it} \quad (1.1)$$

where:

- α_i = the unsystematic return of a security of company *i* which cannot be explained by the market development
- β_i = the systematic risk of securities and therefore the systematic risk which can be attributed to the market development
- ε_i = the statistical standard error for which applies the following: $\Sigma\ \varepsilon_{it}=0$.

The advantage of this model is the lower proportion of returns that are based on eccentric fluctuations of the market. Accordingly, it reduces the ARs which leads to an increased significance of the impact of events (MacKinlay 1997). To determine the $AR_{i,t}$ within an event window, the actual return $R_{i,t}$ must be deducted by the expected return $E(R_{i,t})$ of the company on the same date:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1.2)$$

The expected return is the return of a security that can be expected from the market without the appearance of the event (investor presentation) (Serra 2002). The following equation applies:

$$E(R_{i,t}) = \alpha_i + \beta_i * R_{Mt} \quad (1.3)$$

Parameters α_i and β_i were estimated with the Ordinary-Least-Square-Method (OLS-Method) which is in accordance to Campbell et al. suitable and efficient for an event study (Campbell/Lo/MacKinlay 1998).

Benchmark

The benchmark of this study was a manually adjusted German share index (DAX 30)with the companies that were listed on 30 September 2013[4]. The adjusted share index comprised the calculation of company returns for each trading day from July 2009 to June 2013. Then, aggregated average returns of all companies (benchmark returns) were calculated. Since the DAX 30 only comprises a very low number of companies, the impact of one company on the benchmark is relatively high.[5] This leads to a greater effect and increases the risk of inaccurate results. Thus, when calculating ARs of a company, the returns of the observed company were not included in the benchmark. Thereby, the return of a single company was compared to the benchmark return which then comprised the average return of the other 29 rather than 30 companies.

The yearly DAX performance was volatile, starting with a positive development in 2010 (plus 16 percent)[6], followed with a performance drop in 2011 (minus 15 percent) and ended with an increase of 29 percent in 2012[7].

Estimation and Event Window

Another prerequisite for conducting the event study method and calculating ARs is to appoint the 'estimation window' and 'event window'. The estimation window is the period of time before the actual event (see Illustration 1) (Hauser 2003). Here, $t=es_1$ and $t=es_2$ are the beginning and the end of the

[3] An abnormal return reflects the over- and underperformance of a company compared to the defined benchmark.
[4] HeidelbergCement AG, LANXESS AG and Continental AG were considered retroactively for the whole three year period, as they were included in the DAX30 in 2010 or 2012 whereas Salzgitter AG, MAN SE and Metro AG were not considered as they were eventually excluded from the index.
[5] The index *Standard & Poor´s* comprises 500 companies.
[6] In 2009, the performance increased by 24%.
[7] From January to June 2013, the performance increased by only five percent.

estimation window, respectively. In the article, the estimation window was 200 trading days which resulted in stable parameters and covered all seasonal effects (Goerke 2009).

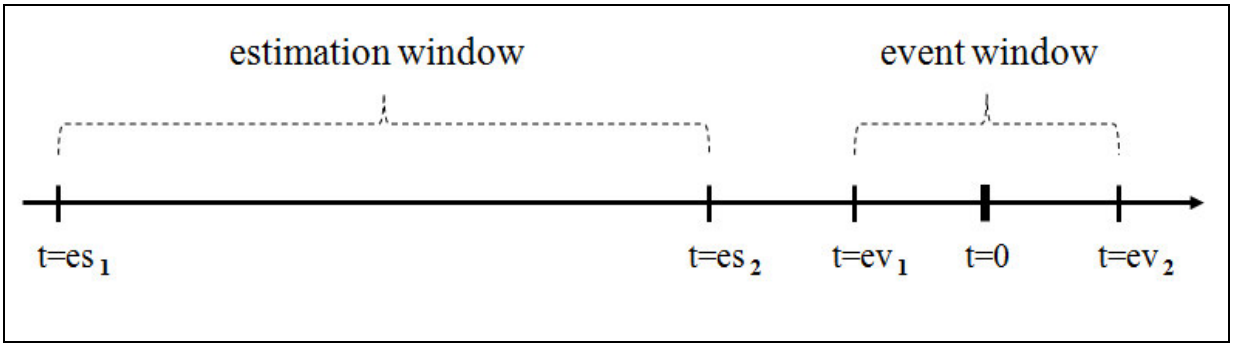

Fig 1*: Estimation and event window* (Own research based on Hauser 2003)

The event window indicates the number of days before and after the event date over which ARs are accumulated (Konchitchki/O'Leary 2011). The event date was defined as t=0 while $t=ev_1$ was the beginning and $t=ev_2$ the end of the event window. The event window covered 41 trading days, including the event day. It was necessary to observe the time period before the event because information to be announced at the events sometimes can be anticipated or market participants might illegally disclose or leak the information before the actual event date. Because capital market reactions may not take place immediately but after market participants have formed their opinions, the chosen time period was supposed to be long enough to measure stock change due to an event. At the same time, the event window was short enough to mainly prevent the results from being influenced by confounding events. The event windows should be justifiably confined so as not to be too broad, thereby excluding additional information which might cause additional market reactions and dilute the results of the originally analysed events (Goerke 2009). The chosen event window was in line with the reviewed literature.

3.3 Test of Significance

In order to evaluate the significance of an event on share prices, in accordance to Binder (1998), Goerke (2009) and Rasch et al. (2010), the parametric procedure of a t-test was applied. Within the article a significance level of α = 0.05 is applied, which is in line with the literature (Rasch et al. 2010). Since a delayed market reaction on new information or the monitoring of leakage before the actual event are conceivable, the significance analysis of several consecutive days may also be of interest. Therefore, cumulative Abnormal Returns (*CARs*) were calculated for every event. A CAR is the sum of at least two AR over the defined time window (Goerke 2009):

$$CAR_{i,(t_1,t_2)} = \Sigma_{t_1}^{t_2} * AR_{i,t} \qquad (2.1)$$

The following table shows the investigated symmetric and asymmetric CAR windows:

Symmetric CAR windows		**Asymmetric CAR windows**	
From day (t_1)	To day (t_2)	From day (t_1)	To day (t_2)
-20	20	-10	-1
-10	10	-5	-1
-3	3	0	4
-1	1	0	9
* A minus sign in column "From day" displays the day before the actual event			

Table 1: CAR windows

The calculated t-values of the CAR were adjusted by considering the number of days of the CAR window (Ott 2011):

$$t_{i,t} = \frac{CAR_{i,t}}{\sqrt{m} * \sigma_{i,t}} \quad (2.2)$$

where:

m = number of days within the CAR window

Due to the reason that multiple tests were carried out, in a very conservative way, the determined alpha must be corrected by dividing alpha with the number of tests. The alpha adjustment reduces the risk that ARs are accidentally declared as significant. Within the article the adjusted alpha would be 0.0031 percent as 1620 tests were carried out[8] (Crosbie 1987). In this context, no significant events were expected. The adjustment was seen as too strict and not executed.

3.4 Independent Variables

In case of identified significant events, potential reasons for specific AR/CAR distributions were investigated. According to McWilliams and Siegel, independent variables were defined and tested via the analysis of contingency (1997). Therefore, Operating Cash Flow (OCF) is a good measure to evaluate the company´s performance. It is also less vulnerable to manipulation than e.g. EBIT and Net Income. To analyse the correlation between ARs and OCF, the change of OCF over the previous period was a point of interest. Applying the analysis of contingency, the objective was to investigate whether there is a significant correlation between significant AR and OCF.

3.5 Contingency Analysis

Within the contingency analysis the correlation between at least two nominal variables is determined. With (r x c)-cross tabulation, where *r* are the rows and *c* are the columns, the empirical results are presented to recognise a potential connection. Therefore, marginal frequencies of the empirical values were determined to calculate the estimated frequencies.

4 Results

4.1 Descriptive Results

The *structure* of the investigated investor presentations was in line with the requirements of the current literature. To get the auditors' attention, the introductions contained the main financial and operational highlights aggregated on one sheet. The main part (body) dealt with a more detailed presentation of the results. At the end, an outlook was given for the next period. However, there was no clear picture about the outlook information. In some presentations exact outlook figures were reported, whereas other presentations only contained the estimated direction of a future development. An appendix accounted for 122 presentations. The usage and value of this additional information could not be analysed. All observed investor presentations were prepared in English, most of them in German as well.

The mean of total *slides* was 38. Between the mean of HY (32 slides) and YE presentations (44 slides) was an average variation of 12 slides. The difference was due to the longer time period and the larger scale of information which was reported in the YE presentations. The standard deviation was 25 slides. The results revealed a big gap between the minimum and maximum length. While Beiersdorf (seven slides; HY 2010) and Volkswagen (nine slides; YE 2012) concentrated on compressed data, Merck (95 slides; HY 2010) and Allianz (171 slides; YE 2011) stated very detailed information about the company structure, strategy, and their regions and segments. On average, with only 15 slides, Bayer and Deutsche Börse presented the least. Allianz on the other hand, with 123 slides on

[8] 180 tests multiplied with nine (event day plus eight CAR) equals 1620 tests; α divided by 1620 tests equals 0.000031.

average, presented the most slides. It should be mentioned though that the Allianz presentations contained large appendices of about one third of the total slides.

The events were held by either CEOs, CFOs or both together. In reference to Bursen-Marsteller (2001) and Göseke (2008) this was expected, as both *positions* symbolise the required expertise needed to present company results to the audience. More accurately, in 145 cases both the CEO and CFO presented together. 16 presentations were held only by the CFOs, while for 19 presentations no information was given.

The clear majority of presenters were male (n=157) while only the CFO of Lufthansa was female (since 2012). This also led to the only instance of group 'Male/Female'. In 19 cases no *gender* information was given. The results were in line with the 2010 findings of Holst and Wiemer. Different market reaction caused by gender aspects can only be assumed. However, since 2010, Holst and Schimeta have explored the increasing share of women in leadership positions in the 200 biggest German companies, especially in the DAX 30 companies (Holst/Schimeta 2013).

The 180 presentations contained slightly more than 7,000 *visualisations*. On average, it corresponded to 1.03 visualisations per slide. The minimum visualisation usage per slide referred to Henkel (HY 2010) while the maximum referred to Deutsche Telekom (HY 2012). Building the companies' mean, only Deutsche Telekom reported more than two visualisations per slide. Again, it is not the quantity but the quality of these visualisations and information which is important. One visualisation per slide seems to be a good orientation for investor presentations. It is in line with the principle that one slide should contain one key message. Slightly more than half of the presentations contained visualisations per slide in a range of 0.75 to 1.25.

Companies mostly applied column charts (48.9 percent) to present the development over time, and tables (29.3 percent) to aggregate information. Both types summed up to 78.2 percent of the total visualisations and were recognised in every presentation. With the exception of Adidas, Beiersdorf and Munich RE, at least 68 percent of the visualisations of each company referred to column charts and tables. Companies which presented less column charts often presented more tables instead, and vice versa. With some exceptions, other visualisations types were rudimentarily presented. In their presentations only eight companies chose to use photographs to present their products and in this regard it was the automotive industry companies which most dominantly utilised this visualisation form.

Illustration 2 shows a bell-shaped distribution of all 180 *ARs* of the event days, in 0.5 percent intervals. On average, the closer the interval is to the mean, the more ARs that were counted. The mean (0.42 percent) and median (0.26 percent) were slightly above zero percent and in line with the general development over the three years observation period. In absolute terms, 97 positive and 83 negative ARs were identified. 50 positive ARs were identified for YE presentations, 47 for HY presentations. Conversely, 40 negative ARs were observed for YE presentations, 43 for HY presentations. A distinction must be made between the mean of HY and YE presentations. While the mean of HY presentations was 0.08 percent, the mean of YE presentations was 0.72 percent. The difference could be a coincidence, but it could also be assumed that market participants paid more attention to YE rather than HY presentations. Consequently, a stronger market reaction was recognised on annual events. A standard deviation of 3.08 percent already indicated a noticeable volatility of share prices around the observed event dates.

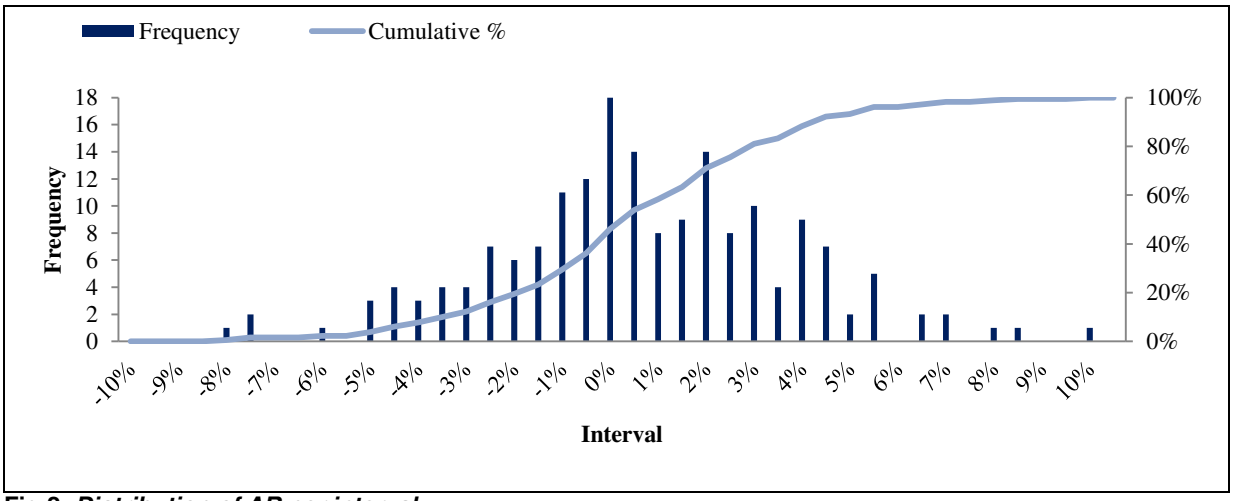

Fig 2: ***Distribution of AR per interval***

The minimum AR (-8.1 percent) referred to the energy corporation E.ON. It was driven mainly by the political decision to phase out nuclear power in Germany. The maximum AR (9.93 percent) referred to the chemical corporation LANXESS which recorded an increased demand from Asia and Latin America. Additionally, management made the announcement to significantly raise the dividends per share in the near future.

In the following, the number of positive and negative changes of OCF was compared to the previous period. A comparison of budgeted and actual figures would have been interesting but was not carried out because of the limited data in the presentations. Moreover, it must be restated that the quantification of changes was not considered within these results. Therefore, changes of one percent and 200 percent were part of the same group.

In 53 percent of the cases (n = 96), there was a positive change of OCF (negative change of OCF: 47 percent, n=84). 59 percent (57 cases) of positive OCF changes referred to YE presentations while 41 percent (39 cases) referred to negative changes.

4.2 Analytical Result

4.2.1 Market Reaction

Illustration 3 graphically shows a slight increase of 0.42 percent in cumulative average Abnormal Returns (CAAR) on all 180 event days, reaching its peak, at 0.78 percent, on the ninth day after the event. The CAAR development over the whole event window appeared very balanced. It creates the impression that investor presentations have no, or a very low, impact on share prices. However, this was due to the fact that within the calculation of CAARs, positive and negative ARs neutralised themselves. Consequently, a potential impact of observed events was diminished.

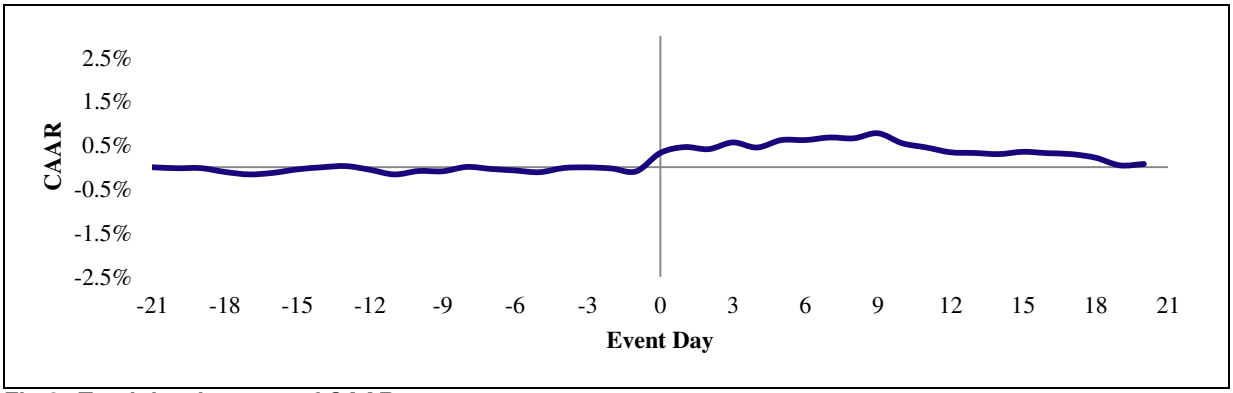

Fig 3: ***Total development of CAAR***

This also applies for the CAARs of the 90 HY and 90 YE events. But here, in the second half of the event window, a considerable difference between the presentation types becomes obvious (see Illustration 4).

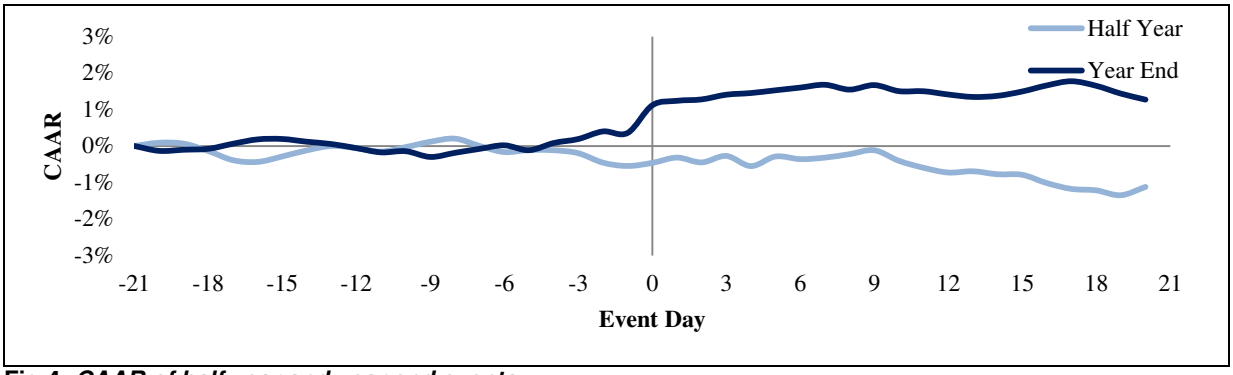

Fig 4: ***CAAR of half year and year end events***

Before t-tests were conducted, the requirement of normal distribution for the whole data set was clarified. Serving as an example, the Adidas returns were tested for normal distribution. Visually, the distribution of returns already seemed normally distributed (see Illustration 5). The Kolmogorov-Smirnov-Test confirmed this assumption with α = 0.055. Before the test was applied, eleven outliers ,which referred to earnings or product announcements, were excluded. It was assumed that the returns of the other DAX companies are also normal distributed, or close to it.

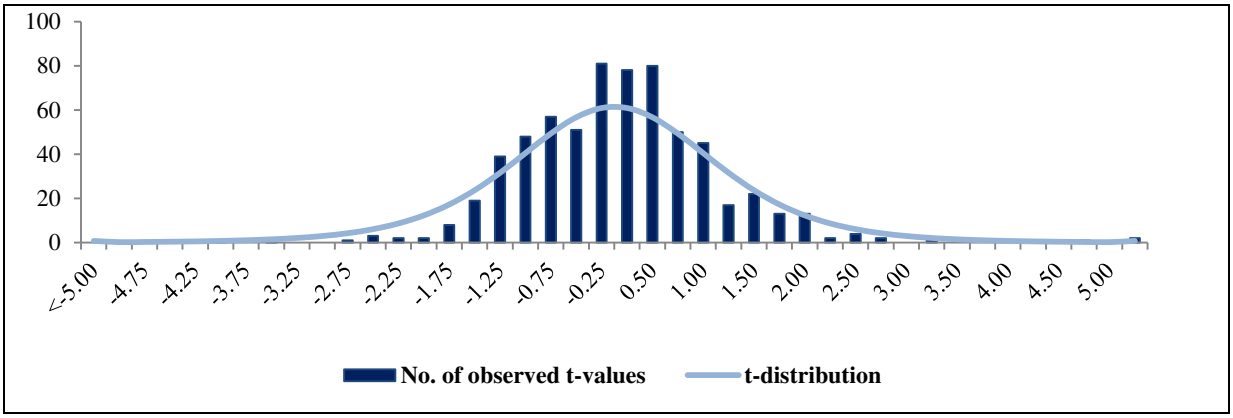

Fig 5: ***Distribution of Adidas returns per interval***

Since the requirement for conducting a t-test was fulfilled, in the next step it was identified whether investor presentations impact share prices. Within different time windows, significance tests on CAAR clarified this. Against the background of AR neutralisation, CAARs of all observed events were not significant at all. None of the calculated p-values were smaller than the defined significance level of five percent. The same applied for the separately tested HY and YE events. To take the AR neutralisation into consideration, ARs were not aggregated. Significance tests for all events and windows were examined individually, which resulted in the identification of significant events (see Table 2). The highest number of significant events was reported directly on the event day. Therefore, the null hypothesis H_1 was rejected for 32 percent of the observed events and the alternative hypothesis was accepted:

H_{1A}: There is a significant market reaction to investor presentations.

The fact that the highest number of significant events was reported on the event day is contrary to the assumption that market reactions on new information are slightly delayed. Additionally, the results of symmetric CAR windows support this statement. The smaller the symmetric CAR windows, the more significant events that were recognised, with the exception of the "-20 to 20" CAR window. Asymmetric CAR windows before the event showed a relatively low number of significant events in comparison to those after the event. This led to the conclusion that new information became available for investors on the event day and not before. Moreover, it indicates that the events themselves were possible causes of ARs.

CAR Window	CAAR	p-value	No. of Significant Events	Significant Events in %	n
-20 to 20	0.07%	53.92%	2	1%	180
-10 to 10	0.71%	54.89%	2	1%	180
-3 to 3	0.58%	45.22%	9	5%	180
-1 to 1	0.49%	39.10%	24	13%	180
-10 to -1	0.07%	59.43%	0	0%	180
-5 to -1	0.05%	61.14%	4	2%	180
0 to 4	0.54%	41.96%	15	8%	180
0 to 9	0.87%	47.52%	5	3%	180
0	0.42%	29.80%	57	32%	180

Table 2: ***Significance test on CAAR and significant events per CAR window***

In the following analysis, the focus was on the 57 significant events. On average, 1.9 significant events per company were recognised. However, the distribution among the companies strongly varied between zero and a maximum of five significant events per company (see Table 3).

No. of Significant Events	6	5	4	3	2	1	0	Total
No. of Companies	0	1	3	4	11	6	5	30
in %	0	3	10	13	37	20	17	100

Table 3: ***Number of companies per number of significant events***

The investor presentations of Bayer, Deutsche Bank, Commerzbank, Fresenius Medical Care and Munich RE were not significant at all, while five significant events were attributed to Merck. 60 percent of the companies had two, three or four significant investor presentations.
An industry specific statement is difficult to make because the number of companies per industry is very small. However, an approximate finding for the automobile (four companies), chemistry & pharmacy (six companies) and finance branches (five companies) could be given. In contrast to the automobile (2.5 significant events per company) and chemistry & pharmacy (2.3 significant events per company) industry, the finance industry does not seem to be very volatile, having a quotient of 0.6. While significant positive and negative events were nearly balanced in the automobile industry, within the chemistry & pharmacy industry about two-thirds of significant events were positive. Thus, it can be assumed that significant events were not only driven by company performance but also influenced by the general trend of the branch.
The development of significant events over time was relatively stable at a level of 32 percent per period. At least eight events per period were significant. However, a difference is noticeable between the first three and last three periods. Within the first three periods the number of positive and negative ARs was relatively equally distributed with a slight predominance of negative ARs. In the last three periods the share of positive ARs was slightly larger than the negative one. About two thirds of the significant events referred to positive ARs while one third referred to negative ones (see Table 4).

Presentation Typ	Positive AR*	Negative AR*	Total	n
Half Year 2010	5	4	9	30
Year End 2010	3	6	9	30
Half Year 2011	4	5	9	30
Year End 2011	9	2	11	30
Half Year 2012	6	2	8	30
Year End 2012	9	2	11	30
Total	36	21	57	180
* with α = 0.05.				

Table 4: ***Periodical distribution of significant positive and negative AR (absolute)***

This distribution was in line with the DAX performance from 2010 to 2012 (see Illustration 2) but weakened the impact of presentations on share prices. In accordance to the presentation type, the distribution of significant events was relatively equal. 26 significant events referred to HY while 31 referred to YE presentations.
Illustration 6 shows the separate CAAR of the significant events over the entire event window, distinguishing between positive and negative ARs. Before and after the actual event, the development of ARs was relatively stable at one level. Directly on the event day, ARs increased or decreased significantly. On average the positive ARs increased by 4.9 percent and the negative ones decreased by 5.8 percent. This statement supports the presumption that investor presentations and the announcement of new information lead to market reactions in both directions.

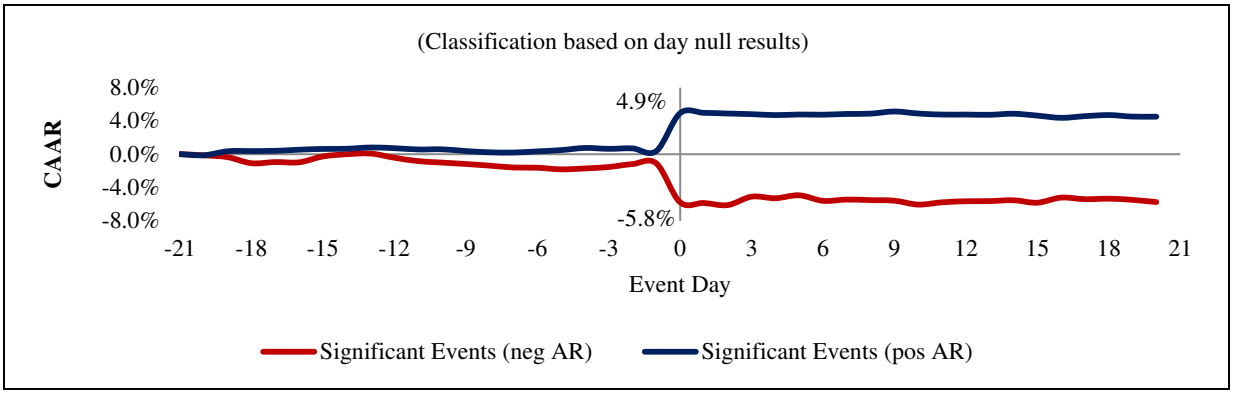

Fig 6: ***Development of CAAR of significant positive and negative AR***

4.2.2 Market Reaction Determinants

The numeric distribution of positive and negative changes corresponding to insignificant and significant events differed no more than three percent for each ratio. Focusing on the significant events, Table 5 presents the results of contingency analyses. The correlation between ARs and the change of OCF to the previous period was tested.

* α = 0.05	Positive AR	Negative AR	Total	Cramer's V	X^2_{emp}	X^2_{theo}*
Positive OCF	22	7	29	0.41	9.54	384
Negative OCF	14	14	28			
Total	36	21	57			

Table 5: ***Results of contingency analyses between AR and ratio changes***

The change of OCFs showed a significant medium correlation with ARs. At least for positive OCFs, a clear tendency was apparent. In three out of four cases a positive OCF led to a positive AR. A clear

tendency for negative changes of OCFs was not apparent. The low level of manipulation possibilities may have increased the acceptance of OCF as an evaluation ratio.
To conclude, the change in the defined ratios partly led to market reactions from investor presentations. Thus, the null hypothesis H_2 was rejected:

H_{2A}: There is a significant correlation between OCF and the market reaction to investor presentations.

However, the results were restricted because returns are multi-causal, inter alia impacted by historical data as well as future perspectives. For simplification purposes, the conducted contingency analyses assumed a mono-causality.

4.3 Limitations

The results could have been influenced by the design of the event study, especially due to the choice of investigation parameters. The calculation of significant events with different estimation windows or another benchmark would increase the robustness of the results.
The existence of confounding events such as annual meetings, product launches or political decisions could have also introduced biases. If they occurred within the estimation window, it could lead to parameter distortions of the normalisation model. The occurrence within the event window would decrease the ability to determine the impact of the observed event. Because investor presentations were held at the same day as earnings reports were launched, it was difficult to determine the influence of presentation itself. However, presentations and reports had the same data base and could not be seen as confounding events by definition. In general, this kind of bias can be reduced by either shortening the event window or by extending the estimation window (Womack 1996).
Orally given information and presentation skills were not analysed but may have impacted investment decisions. Under the assumption that some presentations were held in the morning and some in the afternoon, the market reaction could differ as it would leave more/less time to react within the presentation day.
The error probability of $\alpha = 0.05$ led to the conclusion that events were accidentally classified as significant events. Due to the high number of significance tests and the abdication of adjustments, the probability increased even more. Further, only a small data set of 180 events was tested a single time, resulting in 57 significant events. This effect may also change if other data sets are tested. For these reasons, the null hypothesis may have been wrongly rejected, although it was true (type one error; alpha error) (Schäfer 2011).
The conducted contingency analyses were mostly bivariate and observed the correlation between ARs and one variable. Since returns are affected by more than one variable, the results must be restricted. Besides OCF, other ratios could have also impacted the returns.
By analysing 100 DAX companies in 2005, Nenning und Kuiper found that on average about 40% of the market value is due to future earnings expectations. Conversely, it means that only about 60% of the market value refer to current results (Nenning/Kuiper 2006). In fact, future outlooks must also be considered.

5 Conclusion

The article adds to the literature by documenting that investor presentations of DAX 30 companies partially have an impact on share prices (H_{1A}). It further clarifies that German investor presentations of earnings announcements are informative events for investors. In accordance to the event study method, 32 percent of 180 presentations were determined to be significant. Nearly two thirds of the presentations referred to positive ARs which was in line with the yearly DAX trend. CAAR of positive and negative significant events indicated that the strongest reaction occurred directly on the event date. Before and after the actual event, CAAR was stable. On the event day, CAAR either increased by 4.9 or decreased by 5.8 percent. MacKinlay's findings on the impact of earnings announcements of Dow 30 companies were similar, albeit in a weakened form. While the greatest return can be earned directly on the event date, it also includes the highest risk of negative returns. Thus, a clear statement about

the best time to invest cannot be given. The assumptions of pre-market or delayed market reactions can be rejected. This is in contrast to Ferguson and Scott, who explored a constantly increasing effect of investor presentations over a 31 days event window. However, they did not focus on earnings announcements. Branch differences exist with regards to volatility. If the three most frequent branches of the DAX are compared, within the automobile and chemical-pharmaceutical branch 2.3 and 2.5 significant events per company were recognised, respectively. In the finance branch, by comparison, only 0.6 were recognised.

The analysis of market reaction determinants provide different results. In a structural perspective, all requirements were fulfilled. With regards to content, in line with Dörner, OCF revealed a significant medium correlation and shows that changes in ratios can impact share prices (H_{2A}). The fact that apart from the analysed ratios in this study nearly no other ratios were reported to have been announced, confirms the voluntary nature of information in investor presentations. This does not preclude that other relevant ratios could have been reported in the media, but it does make a statistical analysis of other ratios difficult.

A fundamental finding for DAX 30 companies is that the market reaction to investor presentations occurs exactly on the event day. It increases the importance of voluntary measures and reveals that investor presentations should be prepared and held in a professional manner. Firstly, to get in contact with investors and to get a feedback. And secondly, to gain trust which is important for future developments. The presentation design and surroundings might have a bearing on investors but based on the analysed characteristics, the main focus lays on the earnings results, in particular OCF. Already confirmed by PwC (2012), companies should increase their transparency by providing more relevant ratios and explanations, not only in reports but also in presentations. It further provides evidence that companies are not able to talk up the price and do not have to expect delayed market reactions.

The results were strengthened by the public availability of the exact event dates, adjusted stock returns and slide presentations which reflect a high value of data collection. Additionally, the calculation of ARs with adjusted benchmarks improved their quality. Despite the presented results, there are also some limitations which should be acknowledged. The results could have also been impacted by the design of the event study, especially due to the choice of investigation parameters. The application of different estimation windows or benchmarks increases the robustness of the results. The same applies when simultaneously analysing randomly chosen trading days not pertaining to actual event days. Moreover, an adjustment of the significance level was not carried out. In reference to Bonferroni and the multiple testing, it would have been required, but was seen as too conservative. Consequently, this increased the probability that the null hypotheses were wrongly rejected (type one error). By reducing the number of CAR windows and therefore the tests, the risk of biases could be decreased. On the other hand, with too few CAR windows a specific market reaction could be missed.

The fact that earning announcements were communicated on the same date over different channels (reports, home pages, investor presentations) a clear impact allocation of investor presentations was impossible. In particular, this applied for the presentation content which is a report summary. Since market reactions are based on many factors rather than on one independent variable, the results of the correlation analyses were one-sided and also must be seen as restricted. Furthermore, orally given information and presentation skills were not taken into account.

Since the article only focused on the impact of three ratios, further research could be done in this area. Also inspired by PwC (2012), it could be analysed whether market reactions reflect the degree to which investors' information needs are satiated by the content range in the presentation. Aside from past oriented information, the market reaction on presented outlooks could be further investigated, as they are of particular interest for investors when evaluating future perspectives. An analysis could also be carried out for the second biggest German index (MDAX) simultaneously, to test the quality of the generated results.

References

Bassen A, Basse Mama H, Ramaj H 2010, 'Investor Relations: a comprehensive overview', *Journal für Betriebswirtschaft*, vol. 60, no. 1, pp. 49-79.

Bhabra, G 2008, 'Potential targets: An analysis of stock price reactions to acquisition program announcements', *Journal of Economics and Finance*, vol. 32, no. 2, pp. 158-175.

Bimberg, M 2009, *Unternehmensübernahmen und Erwerbsangebote in Deutschland: Eine empirische Analyse*, Gabler, Wiesbaden.

Binder, J 1998, 'The Event Study Methodology Since 1969', *Review of Quantitative Finance and Accounting*, vol. 11, no. 2, pp. 111-137.

Burson-Marsteller 2001, 'Der CEO: Wichtigster Faktor für das Unternehmensimage. Zusammenfassung einer Studie zur Reputation deutscher Vorstandsvorsitzender', *PRspektiven*, no. 2, pp. 1-8.

Bushee, B, Jung, M, Miller, G 2011, 'Conference Presentations and the Disclosure Milieu', *Journal of Accounting Research*, vol. 49, no. 5, pp. 1163-1192.

Campbell, J, Lo, A, MacKinlay, C 1998, 'The econometrics of financial markets', *Macroeconomic Dynamics*, vol. 2, no. 4, pp. 559-562.

Carter, M 2013, *Designing Science Presentations: A Visual Guide to Figures, Papers, Slides, Posters, and More*, Elsevier Incorporation, Oxford, United Kingdom.

Crosbie, J 1987, 'A pascal program to perform the Bonferroni multistage multiple-correction procedure', *Behavior Research Methods, Instruments & Computers*, vol. 18, no. 3, pp. 327-329.

Deutsche Börse 2013, 'Guide to the equity indices of Deutsche Börse', viewed 12 November 2013, <http://dax-indices.com/EN/MediaLibrary/Document/Equity_L_6_19_e.pdf>.

Dörner, A 2005, 'Stock market reactions to financial information', *Journal of Human Resource Costing & Accounting,* vol. 9, no. 2, pp. 94-111.

Ferguson, A, Scott, T 2011, 'Market reactions to Australian boutique resource investor presentations', *Resources Policy*, vol. 36, no. 4, pp. 330-338.

Fisher, L, Fama, E, Jensen, M, Roll, R, 1969 'The Adjustment of Stock Prices to New Information', *International Economic Review, no.*10, pp. 1-21.

Garten, M 2004, *Best Business Presentations: Expertenwissen für Multimediapräsentationen und professionelle Vorträge*, Gabler, Wiesbaden.

Gelula, M 1997, 'Working with slides and transparencies for presentations', *Surgical Neurology*, vol. 47, no. 3, pp. 308-312.

Gennotte, G, Trueman, B 1996, 'The Strategic Timing of Corporate Disclosures', *The Review of Financial Studies*, vol. 9, no. 2, pp. 665-690.

Gerpott, T J 2009 'Ereignisstudie', in: *Empirische Mastertechniken*, pp. 203-234, Gabler, Wiesbaden.

Goerke, B 2009, 'Event-Studies', in: *Methodik der empirischen Forschung*, third edition, pp. 467-484, Gabler, Wiesbaden.

Göseke, C 2008, 'Zum Rollenwandel des CFO und den Erfolgsfaktoren für die Zusammenarbeit zwischen CEO und CFO', *Controlling & Management*, vol. 52, no. 6, pp. 383-386.

Hauser, S 2003, *Informationsverarbeitung am Neuen Markt - Eine empirische Analyse der Determinanten von Kursreaktionen auf Ad-hoc- Meldungen*, Gabler, Wiesbaden.

Holst, E, Wiemer, A 2010, 'Frauen sind in Spitzengremien der Wirtschaft unterrepräsentiert', *Wirtschaftsdienst*, vol. 90, no. 10, pp. 692-699.

Holst, E, Schimeta, J 2013, 'Frauenanteil in Topgremien großer Unternehmen in Deutschland nimmt geringfügig zu - DAX-30-Unternehmen mit größerer Dynamik', *DIW Wochenbericht*, vol. 3, pp. 3-15.

Homburg, C, Artz, M, Seifried, J 2009, 'Der Einfluss von Neuproduktvorankündigungen auf den Shareholder Value: Eine empirische Untersuchung', *Zeitschrift für Betriebswirtschaft*, vol. 79, no. 6, pp. 751-779.

Horster, J, Knauer, T 2012, 'Eignung und Einsatz finanzieller Steuerungskennzahlen zur wertorientierten Unternehmenssteuerung', *Zeitschrift für Controlling & Management*, vol. 56, no. 2, pp. 118-124.

Janik, A 2002, *Investor Relations in der Unternehmenskommunikation: Kommunikationswissenschaftliche Analysen und Handlungsempfehlungen*, Westdeutscher Verlag, Wiesbaden.

Jegadeesh, N, Kim, W 2006, 'Value of analyst recommendations: International evidence', *Journal of Financial Markets*, vol. 9, no. 3, pp. 274-309.

Kapterev, A 2011, *Presentation Secrets: Do what you never thought possible with your presentations*, Wiley, Hoboken, NJ, USA.

Kley, C 2004, 'Einfluss von Banken-Credit-Ratings auf deren Börsenwerte', in: *Bankenrating: Kreditinstitute auf dem Prüfstand*, pp. 271-289, Gabler, Wiesbaden.

Konchitchki, Y, O'Leary, D 2011, 'Event study methodologies in information systems research', *International Journal of Accounting Information Systems*, vol. 12, no. 2, pp. 99-115.

Könen, R, 2004, 'Bilanzanalyse und Unternehmensbewertung', in: *Handbuch Investor Relations*, pp. 383-400, DIRK e.V., Gabler, Wiesbaden.

Krause, H-U, Arora, D 2008, *Controlling-Kennzahlen - Key Performance Indicators*, Oldenbourg, München.

Kuhlmann, M 2001, 'Visualisierung und Präsentation von Informationen: Wie Controller ihre Informationen an den Mann bringen', *Zeitschrift für Controlling, Accounting & System-Anwendungen*, vol. 45, no. 5, pp. 293-300.

MacKinlay, A 1997, 'Event Studies in Economics and Finance', *Journal of Economic Literature*, vol. 35, no. 1, pp. 13-39.

McWilliams, A, Siegel, D 1997, 'Event Studies in Management Research: Theoretical and Empirical Issues', *The Academy of Management Journal*, vol. 40, no. 3, pp. 626-657.

Möller, T, Kernchen, E 2011, 'Information Overload am Kapitalmarkt', *Zeitschrift für Unternehmens- und Gesellschaftsrecht*, vol. 40, no. 1, pp. 1-26.

Nenning, G, Kuiper, N 2006, 'Wie zukunftsfähig sind die Strategien deutscher Unternehmen?', *Stern Stewart Research*, vol. 35 , [Online] viewed 04 November 2013, http://www.sternstewart.com/files/26_studie_35_wie_zukunftsfaehig_si nd_die_strategien_deutscher_unternehmen.pdf.

Nielsen, C, Bukh, P 2011, 'Investor Relations: Communicating Strategy from a Business Model Perspective', *Working Paper Series*, vol. 1.

Ott, C 2011, *Der Informationsgehalt von Credit Ratings am deutschen Aktienmarkt: Eine empirische Untersuchung*, Gabler, Wiesbaden.

Philipp, F 2011, *Wie Kostenmanagement die Aktienkurse beeinflusst: Aktienmarktreaktionen auf die Ankündigung von Sparprogrammen*, Diplomica, Hamburg.

Piwinger, M 2009, 'IR als Kommunikationsdisziplin', in: *Praxishandbuch Investor Relations: Das Standardwerk der Finanzkommunikation*, second edition, pp. 13-62, Gabler, Wiesbaden.

PricewaterhouseCoopers (PwC) 2012, 'Kennzahlenkommunikation im Wandel', [Online] viewed 27 October 2013, <http://www.pwc.de/de_DE/de/kapitalmarktorientierte-unternehmen/assets/PwC-Studie-Kennzahlenkommunikation-2012.pdf>.

Rapp, M, Wullenkord, A 2011, *Unternehmenssteuerung durch den Finanzvorstand (CFO): Aktuelle Herausforderungen und Lösungen*, Gabler, Wiesbaden.

Rasch, B, Friese, M, Hofmann, W, Naumann, E 2010, *Quantitative Methoden: Einführung in die Statistik für Psychologen und Sozialwissenschaftler*, third edition, vol. 1, Springer, Berlin Heidelberg.

Rose, C 2003, 'Impact of investor meetings/presentations on share prices, insider trading and securities regulation', *International Review of Law and Economics*, vol. 23, no. 3, pp. 227-236.

Schäfer, T 2011, *Statistik II, Inferenzstatistik*, Springer, Wiesbaden.

Serra, A 2002, 'Event Study Tests - A brief survey, Universidade do Porto', *Working Paper*, [Online] viewed 18 November 2013, <http://www.fep.up.pt/investigacao/workingpapers/wp117.pdf>.

Tischer, S, Hildebrandt, L 2011, 'Linking corporate reputation and shareholder value using the publication of reputation rankings', *SFB 649 Discussion Paper 2011-065*, pp. 1-39.

Womack, K 1996, 'Do Brokerage Analysts' Recommendations Have Investment Value?' *Journal of Finance*, vol. 51, no. 1, pp. 137-167.

Yahoo! EMEA Limited 2013, DAX, Historische Kurse, viewed on 18 October 2013, < https://de.finance.yahoo.com/q/hp?s=%5EGDAXI>.

Yalcin, A, Yalcin N 2010, 'How to get best results from a presentation? How to increase effectiveness of a presentation?', *Procedia Social and Behavioral Sciences*, vol. 6, no. 11, pp. 480-486.

Tables and Figures

Working Papers des Institute of Management Berlin an der Hochschule für Wirtschaft und Recht Berlin

1 Bruche, Gert/ Pfeiffer, Bernd: Herlitz (A) – Vom Großhändler zum PBS-Konzern – Fallstudie, Oktober 1998.
2 Löser, Jens: Das globale Geschäftsfeld „Elektrische Haushaltsgroßgeräte“ Ende der 90er Jahre – Fallstudie, Oktober 1998.
3 Lehmann, Lutz Lars: Deregulation and Human Resource Management in Britain and Germany – Illustrated with Coca-Cola Bottling Companies in Both Countries, March 1999.
4 Bruche, Gert: Herlitz (B) - Strategische Neuorientierung in der Krise - Fallstudie, April 1999.
5 Herr, Hansjörg/ Tober, Silke: Pathways to Capitalism - Explaining the Difference in the Economic Development of the Visegrad States, the States of the Former Soviet Union and China, October 1999.
6 Bruche, Gert: Strategic Thinking and Strategy Analysis in Business - A Survey on the Major Lines of Thought and on the State of the Art, October 1999, 28 pages.
7 Sommer, Albrecht: Die internationale Rolle des Euro, Dezember 1999, 31 pages.
8 Haller, Sabine: Entwicklung von Dienstleistungen - Service Engineering und Service Design, Januar 2000.
9 Stock, Detlev: Eignet sich das Kurs-Gewinn-Verhältnis als Indikator für zukünftige Aktienkursveränderungen?, März 2000.
10 Lau, Raymond W.K.: China’s Privatization, June 2000.
11 Breslin, Shaun: Growth at the Expense of Development? Chinese Trade and Export-Led Growth Reconsidered, July 2000, 30 pages.
12 Michel, Andreas Dirk: Market Conditions for Electronic Commerce in the People’s Republic of China and Implications for Foreign Investment, July 2000, 39 pages.
13 Bruche, Gert: Corporate Strategy, Relatedness and Diversification, September 2000, 34 pages.
14 Cao Tingui: The People's Bank of China and its Monetary Policy, October 2001, 21 pages.
15 Herr, Hansjörg: Wages, Employment and Prices. An Analysis of the Relationship Between Wage Level, Wage Structure, Minimum Wages and Employment and Prices, June 2002, 60 pages.
16 Herr, Hansjörg/ Priewe, Jan (eds.): Current Issues of China’s Economic Policies and Related International Experiences – The Wuhan Conference 2002 - , February 2003, 180 pages.
17 Herr, Hansjörg/ Priewe, Jan: The Macroeconomic Framework of Poverty Reduction An Assessment of the IMF/World Bank Strategy, February 2003, 69 pages.
18 Wenhao, Li: Currency Competition between EURO and US-Dollar, June 2004, 18 pages.
19 Kramarek, Maciej: Spezifische Funktionen des Leasings in der Transformationsperiode, Juni 2004, 32 pages.
20 Godefroid, Peter: Analyse von Multimedia-Lern/Lehrumgebungen im Fach Marketing im englischsprachigen Bereich – inhaltlicher Vergleich und Prüfung der Einsatzfähigkeit an deutschen Hochschulen, September 2004, 48 pages.
21 Kramarek, Maciej: Die Attraktivität des Leasings am Beispiel polnischer Regelungen der Transformationsperiode, April 2005, 33 pages.
22 Pan, Liu/Tao, Xie: The Monetary Policy Transmission in China – „Credit Channel” and its Limitations.
23 Hongjiang, Zhao/ Wenxu, Wu/Xuehua, Chen: What Factors Affect Small and Medium-sized Enterprise’s Ability to Borrow from Bank: Evidence from Chengdu City, Capital of South-western China’s Sichuan Province, May 2005, 23 pages.
24 Fritsche, Ulrich: Ergebnisse der ökonometrischen Untersuchung zum Forschungsprojekt Wirtschaftspolitische Regime westlicher Industrienationen, March 2006, 210 pages.
25 Körner, Marita: Constitutional and Legal Framework of Gender Justice in Germany, November 2006, 14 pages.
26 Tomfort, André: The Role of the European Union for the Financial Integration of Eastern Europe, December 2006, 20 pages.
27 Gash, Vanessa/ Mertens, Antje/Gordo, Laura Romeu: Are Fixed-Term Job Bad for Your Health? A Comparison between Western Germany and Spain, March 2007, 29 pages.
28 Kamp, Vanessa/ Niemeier, Hans-Martin/Müller, Jürgen: Can we Learn From Benchmarking Studies of Airports and Where do we Want to go From Here? April 2007, 43 pages.
29 Brand, Frank: Ökonomische Fragestellungen mit vielen Einflussgrößen als Netzwerke. April 2007, 28 pages.
30 Venohr, Bernd/ Klaus E. Meyer: The German Miracle Keeps Running: How Germany’s Hidden Champions Stay Ahead in the Global Economy. May 2007, 31 pages.
31 Tomenendal, Matthias: The Consultant-Client Interface - A Theoretical Introduction to the Hot Spot of Management Consulting. August 2007, 17 pages.
32 Zenglein, Max J.: US Wage Determination System. September 2007, 30 pages.
33 Figeac, Alexis: Socially Responsible Investment und umweltorientiertes Venture Capital. December 2007, 45 pages.
34 Gleißner, Harald A.: Post-Merger Integration in der Logistik - Vom Erfolg und Misserfolg bei der Zusammenführung von Logistikeinheiten in der Praxis. March 2008, 27 pages.
35 Bürkner, Fatiah: Effektivitätssteigerung im gemeinnützigen Sektor am Beispiel einer regionalen ‚Allianz für Tanz in Schulen’. April 2008, 29 pages.

36 Körner, Marita: Grenzüberschreitende Arbeitsverhätnisse - Grundlinien des deutschen Internationalen Privatrechts für Arbeitsverträge. April 2008, 22 pages.
37 Pan, Liu/ Junbo, Zhu: The Management of China's Huge Foreign Reserve and ist Currency Composition. April 2008, 22 pages.
38 Rogall, Holger: Essentiales für eine nachhaltige Energie- und Klimaschutzpolitik. May 2008, 46 pages.
39 Maeser, Paul P.: Mikrofinanzierungen - Chancen für die Entwicklungspolitik und Rahmenbedingungen für einen effizienten Einsatz. May 2008, 33 pages.
40 Pohland, Sven/ Hüther, Frank/ Badde, Joachim: Flexibilisierung von Geschäftsprozessen in der Praxis: Case Study „Westfleisch eG - Einführung einer Service-orientierten Architektur (SOA). June 2008, 33 pages.
41 Rüggeberg, Harald/ Burmeister, Kjell: Innovationsprozesse in kleinen und mittleren Unternehmen. June 2008, 37 pages.
42 Domke, Nicole/ Stehr, Melanie: Ignorieren oder vorbereiten? Schutz vor Antitrust Verstößen durch Compliance"-Programme. June 2008, 25 pages.
43 Ripsas, Sven/ Zumholz, Holger/ Kolata, Christian: Der Businessplan als Instrument der Gründungsplanung - Möglichkeiten und Grenzen. December 2008, 34 pages.
44 Jarosch, Helmut: Optimierung des Zusammenwirkens maschineller und intellektueller Spezialisten. January 2009, 35 pages.
45 Kreutzer, Ralf T./ Salomon, Stefanie: Internal Branding: Mitarbeiter zu Markenbotschaftern machen – dargestellt am Beispiel von DHL. February 2009, 54 pages.
46 Gawron, Thomas: Formen der überörtlichen Kooperation zur Steuerung der Ansiedlung und Erweiterung von großflächigen Einzelhandelsvorhaben. April 2009, 43 pages.
47 Schuchert-Güler, Pakize: Aufgaben und Anforderungen im persönlichen Verkauf: Ergebnisse einer Stellenanzeigenanalyse. April 2009, 33 pages.
48 Felden, Birgit/ Zumholz, Holger: Managementlehre für Familienunternehmen – Bestandsaufnahme der Forschungs- und Lehraktivitäten im deutschsprachigen Raum. July 2009, 23 pages.
49 Meyer, Susanne: Online-Auktionen und Verbraucherschutzrecht – ein Rechtsgebiet in Bewegung. Zugleich ein Beitrag zu Voraussetzungen und Rechtsfolgen des Widerrufsrechts bei Internetauktionen. December 2009, 29 pages.
50 Kreutzer, Ralf T.: Konzepte und Instrumente des B-to-B-Dialog-Marketings. December 2009, 40 pages.
51 Rüggeberg, Harald: Innovationswiderstände bei der Akzeptanz hochgradiger Innovationen aus kleinen und mittleren Unternehmen. December 2009, 31 pages.
52 Kreutzer, Ralf T.: Aufbau einer kundenorientierten Unternehmenskultur. December 2009, 59 pages.
53 Rogall, Holger/ Oebels, Kerstin: Von der Traditionellen zur Nachhaltigen Ökonomie, June 2010, 28 pages.
54 Weimann, Andrea: Nutzung von Mitarbeiterpotenzialen durch Arbeitszeitflexibilisierung – Entwicklung eines optimierten Arbeitszeitmodells für eine Abteilung im Einzelhandel, June 2010, 35 pages.
55 Bruche, Gert: Tata Motor's Transformational Resource Acquisition Path – A Case Study of Latecomer Catch-up in a Business Group Context, October 2010, 28 pages.
56 Frintrop, Philipp/ Gruber, Thomas: Working Capital Management in der wertorientierten Unternehmenssteuerung bei Siemens Transformers, November 2010, 35 pages.
57 Tolksdorf, Michael: Weltfinanzkrise: Zur Rolle der Banken, Notenbanken und „innovativer Finanzprodukte", November 2010, 20 pages.
58 Kreutzer, Ralf T./ Hinz ,Jule: Möglichkeiten und Grenzen von Social Media Marketing, December 2010, 44 pages.
59 Weyer,Birgit: Perspectives on Optimism within the Context of Project Management: A Call for Multilevel Research, January 2011, 30 pages.
60 Bustamante, Silke: Localization vs. Standardization: Global approaches to CSR Management in multinational companies, March 2011, 29 pages.
61 Faltin, Günter/Ripsas, Sven: Das Gestalten von Geschäftsmodellen als Kern des Entrepreneurship, April 2010, 22 pages.
62 Baumgarth, Carsten/ Binckebanck, Lars: CSR-Markenmanagement – Markenmodell und Best-Practice-Fälle am Beispiel der Bau- und Immobilienwirtschaft, September 2011, 46 pages
63 Lemke, Claudia: Entwurf eines Modells zur serviceorientierten Gestaltung von kleinen IT-Organisationen in Forschungseinrichtungen Theoretische Überlegungen und methodische Konzeption als erste Ergebnisse eines Forschungsprojektes an der HWR Berlin, October 2011, 43 pages
64 Greiwe, Joris/ Schönbohm, Avo: A KPI based study on the scope and quality of sustainability reporting by the DAX 30 companies, November 2011, 31 pages
65 Lemke, Claudia: Auszug aus der Modellierung des IT-Dienstleistungsmodells „proITS" am Beispiel der Struktur von Forschungseinrichtungen und deren IT-Service – Erkenntnisse aus einem Forschungsprojekt an der HWR Berlin, February 2012, 46 pages.
66 Grothe, Anja/ Marke, Nico: Nachhaltiges Wirtschaften in Berliner Betrieben – Neue Formen des Wissenstransfers zwischen Hochschule und Unternehmen, March 2012, 40 pages.
67 Meyer, Susanne/ Fredrich, Jan: Rechtsgrundlagen einer Pflicht zur Einrichtung einer Complance-Organisation, May 2012, 19 pages.
68 Schönbohm, Avo/ Hofmann, Ulrike: Comprehensive Sustainability Reporting – A long road to go for German TecDax 30 companies, June 2012, 23 pages.
69 Baumgarth, Carsten/ Kastner, Olga Louisa: Pop-up-Stores im Modebereich: Erfolgsfaktoren einer vergänglichen Form der Kundeninspiration, July 2012, 33 pages.

70 Bowen, Harry P./ Pédussel Wu, Jennifer: Immigrant Specificity and the Relationship between Trade and Immigration: Theory and Evidence, October 2012, 32 pages.
71 Tomenendal, Matthias: Theorien der Beratung – Grundlegende Ansätze zur Bewertung von Unternehmensberatungsleistungen, December 2012, 35 pages.
72 Schönbohm, Avo: Performance Measurement and Management with Financial Ratios – the BASF SE Case, March 2013, 26 pages.
73 Olischer, Florian/ Dörrenbächer, Christoph: Concession Bargaining in the Airline Industry: Ryanair's Policy of Route Relocation and Withdrawal, April 2013, 26 pages.
74 Dörrenbächer, Christoph/ Gammelgaard, Jens/ McDonald, Frank, Stephan, Andreas/ Tüselmann, Heinz: Staffing Foreign Subsidiaries with Parent Country Nationals or Host Country National? Insights from European Subsidiaries, September 2013, 27 pages.
75 Aschfalk-Evertz, Agnes/ Rüttler Oliver: Goodwill Impairment Testing according to IFRS in the United Kingdom - An empirical analysis of the discount rates used by the thirty largest FTSE 100 companies, November 2013, 28 pages.
76 Stockklauser, Stephanie/ Tomenendal, Matthias: The Value of Political Consulting – A Segmentation of Services and Evaluation Tools, December 2013, 40 pages.
77 Rosentreter, Sandra/ Singh, Penny/ Schönbohm, Avo: Research Output of Management Accounting Academics at Universities of Applied Sciences in Germany and Universities of Technology in South Africa - A Comparative Study of Input Determinants, December 2013, 33 pages.
78 Baumgarth, Carsten/Sandberg, Berit/Brunsen, Hendrik/Schirm, Alexander: Kunst-Unternehmens-Kooperationen (KUK) - Begriffsbestimmung, Typologie und potenzieller Nutzen, January 2014, 43 pages.
79 Tomenendal, Matthias/Lange, Hans Rüdiger: Cluster-Entwicklung in einem dreistufigen Modell: das Fallbeispiel des Berlin-Brandenburger Energietechnik-Clusters, June 2014, 31 pages.
80 Rhode, Alexander/ Schönbohm, Avo/ van Vliet, Jacobus: The Tactical Utilization of Cognitive Biases in Negotiations, June 2014, 28 pages.
81 Tomendal, Mathias/Bernhard, Martin G.: Die virtuelle Beratungsorganisation am Rand des Chaos – Wie ein kleines Unternehmen große Projekte durchführen kann, August 2014, 27 pages.
82 Fischer. Ingo/Kieler, Julia: Towards an Employer Brand - An Evidence-Based Approach to Develop an Employer Brand: a Case Study of a Berlin-Based Business Incubator in the Online and Mobile Gaming Industry, June 2015, 28 pages.
83 Rumpel, Rainer: Das GQMS-Vorgehensmodell für das Messen der Wirksamkeit von Informationssicherheitsmanagementsystemen, June 2015, 39 pages.
84 Witzmann, Natalie/Dörrenbächer, Christoph: The Link Between Cultural Due Diligence and Socio-Cultural Post-Merger Integration Management as a Critical Success Factor in M&As, June 2015, 24 pages.
85 Yildiz, Özlem/Herrmann-Linß, Caterina/Friedrich, Katja/Baumgarth, Carsten: Warum die Generation Y nicht nachhaltig kauft - Eine adaptierte ZMET Studie zum nachhaltigen Modekonsum der Generation Y, October 2015, 34 pages.
86 Konrad, Sebastian/Bartsch, Peter: Rohstoffspekulation und Nahrungsmittelmarkt, November 2015, 38 pages.
87 Pelzeter, Andrea/Bustamante, Silke/Deckmann, Andreas/Ehlscheidt, Rudi/Freudenberger, Franziska: Mitarbeiterrekrutierung und -bindung durch CSR – Erkenntnisse aus sechs Fallstudien, December 2015, 42 pages.

Special Edition:
Ben Hur, Shlomo: A Call to Responsible Leadership. Keynote Speech at the FHW Berlin MBA Graduation Ceremony 2006. November 24th, 2006, Berlin City Hall, April 2007, 13 pages.

Imprint

Series Editor
Head of IMB Institute of Management Berlin

ISSN
1869-8115

Print
HWR Berlin

Berlin December 2015

www.hwr-berlin.de