
INSIDER TRADING ON THE GERMAN CAPITAL MARKET — CAN INSIDERS ACHIEVE EXCESS RETURNS THROUGH THEIR INFORMATION ADVANTAGE?

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How to cite: Ulrich, P., & Anselmann, D. (2021). **Received:** 19.04.2021

Insider trading on the German capital market — Can **Accepted:** 30.04.2021

insiders achieve excess returns through their **Keywords:** Insider

information advantage? In S. Hundal, A. Kostyuk, & Trading, Corporate

D. Govorun (Eds.), *Corporate governance: A search for Governance, Excess*

emerging trends in the pandemic times (pp. 99–103). Returns

<https://doi.org/10.22495/cgsetpt17>

JEL Classification: M00,

L86

DOI: 10.22495/cgsetpt17

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Abstract

This study investigates whether corporate insiders can generate excess returns on the German capital market due to their information advantage. This is done with the help of an event study based on a market model that estimates the expected returns. Furthermore, the effect size of individual aspects is examined in a multiple regression. It is shown that insiders can achieve short-term excess returns of up to 2.1% after purchases and of up to -2.95% after sales. Moreover, these are strikingly high for, relative to market capitalization, transactions of smaller firms and transactions of other executives. The greatest influence on the excess return of a transaction is the market capitalization of the company in the case of buy transactions, while the excess return of sell transactions is largely determined by the share of trading volume in the outstanding shares. An imitation of insider transactions by outsiders may allow for excess returns, but this strongly depends on the share to be traded due to the bid-ask spread as well as the trading commissions. Despite the existence of regulation, it is evident that insiders can achieve significant excess returns, presumably on the basis of non-public information.

1. INTRODUCTION

“Trading based on privileged access to information (...) has utterly no place in any fair-minded, law-abiding economy” (Levitt, 1998). Although this statement was already made in 1998, the words of the then Chairman of the Securities and Exchange Commission Arthur Levitt continue to reflect the attitude of developed countries towards insider trading, whose aim is to guarantee a functioning and trustworthy capital market. With respect to insider trading, this goal is to be achieved by prohibiting illegal insider trading, the exploitation of non-public information, and requiring corporate insiders to disclose their transactions.

While in obvious cases, such as the purchase of shares or options in the run-up to a highly price-sensitive publication, trading on the basis of non-public information may be verifiable, this is hardly possible for “normal” transactions. Nevertheless, it is obvious that in many cases a company insider possesses information on the development of the company that is not available to the public and thus not available to other investors. Regardless of the degree of price relevance of this information, a company insider can thus tend to achieve returns that cannot be realized by the rest of the market.

The measurement of excess returns from reported insider transactions has occupied research on insider trading for several decades, with a key study on this topic conducted by Seyhun (1992). Since then, much has changed, both in research and in legislation on insider trading.

The past decades have been characterized by steady development of insider trading regulations, especially in Europe. Even though there are opponents of legal regulation for various reasons, it has been further tightened in most developed countries over time. With increased demands on the transparency of insider trading in Europe, researchers began to look more closely at the individual European markets, after the focus of most studies had previously been predominantly on the U.S. market and, in isolated cases, the British stock market.

The subjects of the investigation were steadily expanded due to the increasing number and ease with which financial market data could be collected. While most studies before the millennium focused only on the excess returns achievable by insiders across all transactions, more recent studies have considered individual periods, conducted extended analyses of the influence of various transaction characteristics, and generally examined ever larger samples.

Due to the complexity of such studies and the need for a large amount of financial market data, there are hardly any publications dealing with current insider transactions. This period is of particular interest for the German market, as the introduction of the market abuse regulation (Marktmissbrauchsverordnung) in 2014 and

the accompanying stricter regulations were expected to change the returns achievable by insiders. This gap is taken as an opportunity to conduct a current study on the relevance of insider trading on the German stock market.

This study analyzes and evaluates the excess returns that can be achieved by corporate insiders on the German capital market. The following central research question is to be answered:

Can insiders achieve excess returns due to their information advantage?

The focus of the study is on the measurement of the excess returns that can be achieved by insiders in the context of an empirical investigation. The results of this empirical study will serve as a basis for answering the central research question.

2. METHODOLOGY

Due to the volume of data, the empirical analysis is limited to a consideration of the German stock market. The retention period for insider transactions is five years and can be requested from BaFin. The requested period of this data bank includes insider transactions from 01.01.2015 to 08.06.2020.

The BaFin data set provides the following characteristics of the transactions:

- name of the company and legal entity identifier (LEI);
- notification date, publication date and transaction date;
- name of the initiator and name and role of the reporting party;
- fitch issuer (FI) identification and type of transaction;
- average price, volume and trading venue name and code.

Stock prices required for the analysis were retrieved via Yahoo Finance, while other information such as price-to-book ratio and market capitalization were collected via Bloomberg.

In order to conduct the empirical analysis, it is also necessary to exclude individual transactions that cannot be used further for reasons of data availability or lack of labeling. The majority of transactions are excluded because the database does not provide a precise description of the type of transaction or because it is security other than a share.

3. DATA COLLECTION

Data collection was carried out with the aid of a standardized online questionnaire containing open and closed questions. To check the questionnaire, a pre-test was first carried out with several test persons. Subsequently, the actual survey took place in the period from November to December 2020. For this purpose, e-mail addresses of German SMEs were randomly generated in advance using the Nexis

database. A total of 8,890 companies were contacted by e-mail, whereby 1,016 e-mails could not be delivered. Thus, 7,874 companies received the link to the online survey. The online questionnaire was completed 168 times during the survey period. The response rate is therefore 2.1 percent, which is an acceptable result for an online survey.

4. STUDY OUTLOOK

In the empirical investigation, the event study already explained is used to determine the excess returns of insider transactions. In previous studies, different approaches occurred when considering the transaction by transaction date or publication date. While some studies look at excess returns using the trade date, there are also studies that are conducted using the reporting date, or those that contrast the two options. The following analysis will look at both the trade date and the reporting date in order to identify any differences. Furthermore, the analysis is divided into purchases and sales.

As observation horizon in each case 20 days before and after the transaction date were selected, whereby this extends over 41 trading days from $t-20$ to $t20$. The selective excess returns are defined as follows:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i * R_{m,t}) \quad (1)$$

where $R_{i,t}$ represents the return of the stock and $R_{m,t}$ represents the return of the market, in this case, represented by the CDAX. The parameters α_i and β_i indicate the intercept and slope, respectively, that emerged from the market model. This was done using a regression with an estimation period of 180 days, where $t-21$ is defined as the last day included in the regression. The CDAX, an index compiled by Deutsche Börse and comprising all German companies listed on the Frankfurt Stock Exchange, was chosen as the benchmark index.

The evaluations show that the majority of respondents see automation and digitization as the biggest future topics in management accounting. Trends such as artificial intelligence, robotics and social media are also integrated here, among others. The results of this study show that although some companies have recognized the relevance of cyber risks as well as cyber security, there is often a lack of strategic organizational implementation in order to successfully master the challenges that companies face.

The next topic of the study touches on the degree of automation in the various areas of management accounting. Globally, the highest degree of automation is found in cost and profit accounting. However, only 32 percent of companies rate this as high or very high. All other sub-areas of the management accounting department show significantly lower automation rates.

5. FIRST RESULTS AND CONCLUSION

The central research question of this investigation, whether insiders can generate excess returns due to their information advantage, can be clearly answered in the affirmative. For both purchases and sales, it has been shown that insiders generate significant excess returns over a short-term period. A deeper analysis of these results has shown that excess returns depend strongly on the underlying factors of the transaction.

The excess returns depend on the market capitalization, the transaction volume as well as the position of the insider in the company. On the one hand, these observations provide room for interpretations. On the other hand, they offer outsiders the opportunity to profit from the disclosure of certain transactions. Even though this thesis concludes that outsiders cannot participate in excess returns by imitating insider transactions, they can significantly increase their chance of obtaining excess returns by analyzing individual factors.

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