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Impact of public announcements on stock prices: relation between values of stock prices and the price changes in Lithuanian stock market

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Abstract

The previous studies have shown that there is a relation between values of stock prices and the price changes caused by public announcements. Thus the aim of this paper is to examine if the respective relation can be observed in Lithuanian stock market and how this relation is affected by different categories and types of announcements. The research covers public announcements issued by companies listed in Vilnius Stock Exchange. Simplified version of event study methodology was used in this paper and average absolute and abnormal returns were computed. Most of the results in this paper are consistent with the previous studies and a negative correlation between the values of stock prices and the price changes caused by public announcements was estimated.

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Keywords: Public announcements; stock market; abnormal returns; stock prices.

1. Introduction

According to Fama (1970), the stock prices should fully reflect all the information that is available to potential investors on an efficient market. Bearing in mind the fact that the main source of new information about any company gained by concerned parties usually are the public announcements delivered by companies in various

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ways, the stock prices on an efficient market should react directly to all the new information announced by companies. However, a growing amount of research shows that the activity of financial markets reflected by movements of stock prices does not always comply with the Efficient Market Hypothesis as determined by Fama (1970).

There is an extensive literature examining the reflection of public information in the stock prices. During the last decades the information content of news and the capital market efficiency was tested by focusing on how market reacts to public announcements (issued by companies and perceived by investors) including takeover announcements, shareholder details, periodic reports, asset acquisitions and disposals, dividend announcements, progress reports, company administrations, etc. However, it must be noted that the main emphasis in respective researches is being put on the categories of public announcements (with all the new financial information – annual, semi-annual, quarterly, monthly, etc. earnings announcements, forecasts of earnings, analysts' ratings and other financial information – as the most popular category) as well as the types of public announcements (it is quite common to classify the announcements as "good" and "bad"). However the relation between the value of the stock price itself and the price changes is being analyzed only by a few authors. The most remarkable of these researches is a research carried out by Vega (2006) whose insights pay a great importance in this paper. Thus the main purpose of this paper is to evaluate the relation between the value of stock prices in Lithuanian stock market and stock price changes, determined by public announcements in the context of different categories and types of announcements.

Vilnius Stock Exchange (SE) was selected for this research namely for two reasons. Firstly, the respective studies focus mainly on the developed stock markets (e.g., Moshirian et al., 2012, Ozsab, Overby, 2008, Pritamani, Singal, 2001) while less developed stock markets like Vilnius SE were analysed only by few. Secondly, according to Kiete and Uloza (2005) Lithuanian stock market has the semi-strong form of efficiency. This suggests that there is a probability to profit from the inefficiencies thus a respective research could have a practical applicability for investors (for a brief literature review, concerning the studies of Lithuanian stock market see table 1).

Eizentas et. al. (2012) used absolute return on stock in the research of impact of information signals on the stock market prices of the companies listed in the NASDAQ OMX Vilnius SE and the results have shown that there were a few categories of announcements that caused significant changes of stock prices. Kiete and Uloza (2005) used Patell's Standardized Residual Test, Standardized Cross-Sectional Model and the Cumulative Abnormal Returns method and the findings of their research have shown that Lithuanian market is in a semi-strong form of efficiency thus financial brokerages have many opportunities to exploit inefficiencies.

Table 1. The previous studies, concerning Lithuanian stock market

Author(s), year	Title of the article	The examined period
Eizentas, Krušinskas, Stankevičienė (2012)	Impact of public information signals on share prices: evidence from Lithuania	2005-2009
Laidroo, Grigaliūnienė (2012)	Testing for asymmetries in price reactions to quarterly earnings announcements on Tallinn, Riga and Vilnius Stock Exchanges during 2000-2009	2000-2009
Laidroo (2008)	Public announcement induced market reaction on Baltic stock exchanges	2001-2005
Kiete, Uloza (2005)	The information efficiency of the stock markets in Lithuania and Latvia	2001-2004

Laidroo and Grigaliūnienė (2012) investigated asymmetries in price reactions to announcements of quarterly earnings and the results have shown that reaction to positive news is higher than to negative news. All of the researches have shown that there are some inefficiencies in Lithuanian stock market that could be exploited by investors in order to gain profit, however none of the researches were based on the connection between values of stock prices and price changes caused by public announcements, which might show some inefficiencies as well.

Based on the previous studies, all the selected public announcements were classified into 6 categories (see table 2).

. Table 2. Categories of public announcements

Main category	Sub-categories
Positive financials	Periodical announcements, concerning the increase of revenues or profits, positive analysts' reports, positive financial forecasts, etc.
Negative financials	Periodical announcements, concerning the decline of revenues or increase of losses, negative analysts' reports, negative financial forecasts, etc.
Other financials	Annual report; periodical report, financing; financial costs/revenues, forecasts of financial results, etc.
Restructuring and management-related	Changes in auditors, changes in management board, changes in supervisory council, options granted to employees, etc.
Insider transactions	Notifications on transactions concluded by managers of the companies, notifications concerning insider trading, etc.
Meetings of shareholders	Shareholders' agreements, annual general meeting agenda, extraordinary general meeting agenda, annual general meeting decisions, extraordinary general meeting decisions, etc.

Not all of the categories had equal weights in the sum of public announcements issued in Vilnius SE, however, an assumption was made that the results are significant if the category consists of at least 1 percent of all the announcements issued in Vilnius SE in the respective period (which is equal to 130 announcements).

2. Method

The most commonly used technique for testing the interaction between public announcements and the stock price changes is the event study methodology. Due to the resemblance of this research to the one carried out by Ryan and Taffler (2004), the event study methodology used in this paper was based on the one suggested by the authors. According to this methodology, each new information signal announced by a particular company in the Stock Exchange is estimated by replacing the calendar date into an event date and this event date is treated as the date of public announcement. The 7 day window was selected due to the desire to explore reactions of the investors in the short term though the probability of the distortion of results caused by non-trading days being included in the event lag was borne in mind. In order to eliminate this distortion a criteria which must be met by the public announcements included in the research was set – every event lag of [-6;+6] days was obliged to contain only one public announcement or few public announcements that could be attributed to the same category.

In order to evaluate the stock price changes determined by public announcements average absolute returns and abnormal returns were estimated. Average absolute returns were computed as arithmetic mean. However the average absolute returns do not eliminate the effect of the market. Thus abnormal returns (AR) are being computed as suggested by Sprenger and Welpe (2001):

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

Where: ARi – the abnormal return associated with particular company i on the 7th day;

Ri – actual return for company i on the 7th day;

E(Ri) – expected return for company i on the 7th day.

The simple version, suggested by Sprenger and Welpe (2011), was being used in order to estimate expected return, according to which the expected return was the actual return of relevant market index – in this case NASDAQ OMXV index served for this purpose. Eventually average abnormal returns (AAR) were computed as arithmetic mean of AR.

The research is based on separate computations of average absolute and abnormal returns for respective categories of announcements as well as the sentiment of news in the three stock price ranges.

The period chosen for the analysis was 2005 – 2012 years. The selected sample consisted of 1380 public announcements most of which were financial-related. Three stock price ranges were defined – the lowest from 0,01 to 1,00 litas, moderate from 1,01 to 10,00 litas and the highest from 10,00 to 100,00 litas.

3. Results

The main findings of this paper are consistent with the previous studies – the impact of public announcements on the prices of stocks in different prices ranges varies notably, which means that it is purposeful to carry out further researches in respective manner. The analysis based on comparison of mean price changes in different stock price ranges in Lithuanian stock market has shown that the biggest distortion of results is related with the stocks of lowest prices. In the range of lowest stock prices, the highest average abnormal returns were estimated for negative financial news of the companies (the highest stock prices declines), which was equal to -7.07 percents, and for other financial news (the highest stock prices increases), which was equal to +13.47 percents. Significantly different results were observed in the middle range of stock prices the highest declines as well as the highest increases were estimated for news concerning the general meetings of shareholders – after the respective news of positive content the stock prices increased by +4.58 percents on an average, while the news of negative content caused stock prices declines of -5.56 percents on an average. The least significant activities in stock price movements were observed in the highest range of stock prices and in this range the highest negative average abnormal returns were estimated for restructuring issues (-3.46 percents) while the highest positive average abnormal returns were estimated for news concerning the general meetings of shareholders (+3.59 percents).

It must be noted that the results were not consistent with the popular proposition of previous authors that announcements of good content determines more remarkable stock price activities than the ones of bad content – irrespective of stock price ranges, the average increases of stock prices after "good" announcements estimated in this paper excelled the average decreases of stock prices after "bad" announcements (see fig. 1).

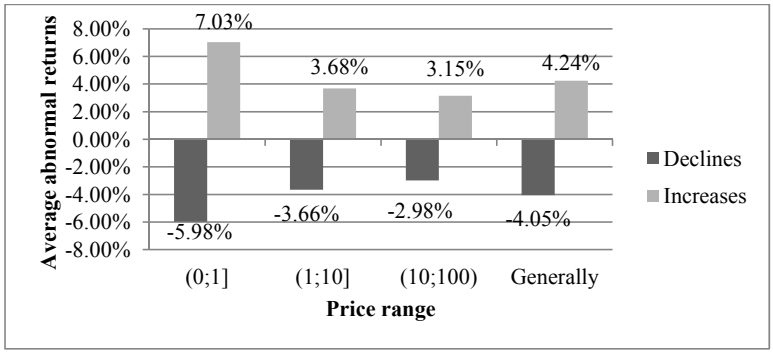

Fig. 1. Average abnormal returns in different price ranges

Even though the findings of this research have shown obvious negative correlation between the values of stock prices and the stock price changes caused by public announcements were are some restrictions that must be taken into account. Firstly, the selected sample was relatively small and only one stock market was selected thus the results can't be considered as universally acceptable. Secondly, previous studies lack of applicable information to determine the upper and the lower boundaries of stock price ranges. Thirdly, the simple version of model, designed to evaluate the impact of public announcements on stock prices was used.

4. Discussion/Conclusions

The main purpose of this paper was to deepen the understanding of the relation between public announcements and activities of stock markets by analyzing an aspect which was rarely mentioned in respective previous studies – the influence of values of stocks. Details of the linkage between values of stock prices and stock price changes in the respective context are intriguing, as public announcements had significantly different impact on stock prices of different ranges. In addition to that, the observed linkage was fairly tendentious – the lower stock price ranges the

higher abnormal returns were estimated. However, this tendency lacks universal soundness due to the restrictions mentioned earlier thus it is expedient to carry out further researches in the same pattern.

The empirical results show that types and categories of public announcements do not play essential role when determining the relation between values of stock prices and stock price changes as the average abnormal returns estimated for all the categories as well as both of the types were higher in lower price ranges and vice versa (with only one exception). Nevertheless, the categories and the types of public announcements did have different impacts on stock prices; however, these impacts were not tendentious as in contrast to the effect of values of stock prices. In spite of that, higher average abnormal returns were estimated for the news of positive content that for the news of negative content (the difference varies from 0.02 percents to 1.05 percents in different price ranges), which might suggest that a more remarkable reaction of investors should be associated with the good sentiment of news. In order to testify these findings further researches on Vilnius SE should be carried out with a use of modified methodology (e.g. OLS regressed market model), enlargement of the selected sample and possibly different stock price ranges.

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