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Research on Listed Companies Clarification Announcements'

Stock Prices Reaction and its Influencing Factors

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Abstract: Using text analysis, this paper analyzes the textual features of clarification announcements released in the stock market. According to behavioral finance, cognitive psychology, event study and multivariate statistical methods are used to depict the characteristics of texts such as readability, descriptive approach, and structure. From the perspective of the reaction of stock prices, this paper explores whether the listed companies' clarification announcements are effective and what influences their effectiveness, using investor attention as a moderating factor.

Key words: clarification announcements, stock prices, text analysis, investor attention

1. INTRODUCTION AND THORETICAL DEVELOPMENT

Information from the online communities is an important basis upon which investors make investment decisions. If a rumor is not restrained, it can have a great influence on the securities market. Eventually, stakeholders may lose trust in the information disclosure system, resulting in disorder in the securities market.

Researchers have proven that not all the clarification announcements issued by listed companies can reduce the abnormal fluctuation of stock prices and promote their recovery^{[1][2]}.The main factors affecting stock price reaction to clarification announcements are the authority of the media releasing the rumors, the timeliness of the announcements, and the way the announcements are responded to^[3]. However, the textual features of clarification announcements still need to be further explored. Meanwhile, many researchers have begun to use data from social media to study the impact of investor attention on stock prices^[4], but few have studied the role of investor attention in stock price reaction to clarification announcements.

By summarizing the existing research on clarification announcements, we conducted an empirical analysis of stock price reaction to clarification announcements. Then, following the relevant theories such as behavioral finance and psychology, we analyzed what affects the difference in stock price reaction to clarification announcements using text mining. Finally, we constructed an investor attention indicator and analyzed its role in the relationship between the characteristics of the announcements' text and stock price reaction.

2. RESEARCH DESIGN

2.1 Data selection

After selecting the samples by specific criteria to reduce the noise, this paper collected 137 announcement samples from January 1, 2016 to March 1, 2018 from the cniif platform; The stock data used in the research come from the Rreset Database; This paper crawled investor attention data from Guba forum.

2.2 Event study

This paper adopts event study as the method to study stock price reactions to clarification announcements, and measures whether clarification announcements contribute to stock price recovery by looking at whether the

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absolute value of cumulative average abnormal return decreases.

2.3 Multivariate regression model

This paper used a multivariate regression model to study the influence of the clarification announcements' characteristics on stock price reactions. The basic model is as follows:

$$\begin{aligned} Car_id = & \beta_0 + \beta_1 PE + \beta_2 PB + \beta_3 EPS + \beta_4 ROE + \beta_5 Revenue + \beta_6 Amount + \beta_7 Turn \\ & + \beta_8 describe + \beta_9 readability + \beta_{10} structure + \beta_{11} participants + \beta_{12} describe \times participants \\ & + \beta_{13} readability \times participants + \beta_{14} structure \times participants \end{aligned} \quad (1)$$

Car_id is the average cumulative abnormal return (CAR) in the event window. The independent variables in this paper are *describe*, *readability* and *structure*. *describe* refers to the descriptive method of clarification announcement. *readability* refers to the readability of the announcements. *structure* is the ratio of the clarification portion to the rumor portion. *participants* are the number of participants, which is used as the moderator to measure the level of investor attention. The remaining indexes are the control variables of the equation. The regression analysis process is as follows: firstly, the effects of the control variables on the dependent variable were analyzed. Then the independent variables were added to the model. Finally, the moderator and the interaction terms were added to study the moderating effect of investor attention.

3. CONCLUSIONS

This paper finds that clarification announcements denying positive rumors are conducive to the recovery of the stock price, reducing CAR. By contrast, clarification announcements that deny negative rumors do not help a stock recover or help the negative CAR increase; As for the recovery of stock price, the more detailed the clarification announcement is, the stronger the refutation wording is, the greater the proportion of the clarification portion of the clarification announcement is and the easier it is to read, the better the stock price recovery is; Investor attention plays a moderating role in the relationship between stock price recovery and textual features, and the higher the investor attention is, the better the stock price recovery is.

Our research lends evidence supporting the validity of behavioral finance, cognitive psychology, and the predictive ability of data on financial forums. This study can be referenced for the textual analysis of similar announcements, and puts forward suggestions for listed companies publishing clarification announcements and regulatory agencies developing information disclosure systems.

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