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The Impact of Short Selling on the Quality of Accounting Information Disclosure of Listed Companies

Lingxin Yuan[1,a,*]

[1]International Business Administration College, Sichuan International Studies University, Chongqing, 400000, China
a. ylxz1005@163.com
**corresponding author*

Abstract: As the capital market develops and matures, the requirements for the quality of accounting information of listed companies gradually increase. Under these circumstances, it is essential to verify whether implementing this system can improve the quality of accounting information and realize the effective allocation of resources. In order to empirically test the governance effect of short selling on the accounting information disclosure of listed companies, this paper uses the data of A-share listed companies from 2009 to 2011, uses the differential and probit model, and finds that short selling has no significant impact on the quality of information disclosure. China officially implemented the short-selling system on March 31, 2010. During the early stages of implementation, the trading volume of short-selling was small, and the scale of short-selling of listed companies was also small. Therefore, short-selling transactions in a short period of time will not significantly affect the quality of accounting information disclosure.

Keywords: Expansion, Margin short selling, Listed companies, Accounting information disclosure, Quality differentially

1. Introduction

Since the establishment of China's capital market, accounting fraud has occurred one after another, and the unilateral market malpractice of a lack of short selling mechanisms has become increasingly apparent. In order to strengthen the market price discovery mechanism and increase investors' risk management tools, the China Securities Regulatory Commission officially launched the margin financing and short selling system on March 31, 2010, allowing investors to short sell the underlying enterprises for the first time [1]. China's margin financing and short selling have been implemented for a short time, and there are many constraints on short selling. For example, short selling volume is small, which makes it difficult to match market demand. These factors make China's capital market have a certain gap with mature capital markets, and cannot meet the necessary conditions for the implementation of the marketization model, such as a perfect market mechanism, a sound legal framework, and a good credit foundation. However, since 2010, the China Securities Regulatory Commission has expanded the target companies of margin financing and short selling six times, hoping to improve the pricing efficiency of China's capital market and realize the effective allocation of resources through this system [2]. With the development and maturity of China's capital market, the requirements for the quality of accounting information of listed companies have gradually

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increased. Under these circumstances, it is particularly important to verify whether the implementation of this system can improve the quality of accounting information and realize the effective allocation of resources.

Information disclosure and irregularities in corporate disclosure in Chinese have been criticized. It not only aggravate the information asymmetry between investors and enterprises to the deriment of investore's interests, but also impede the effective allocation of resources. Research on factors affecting the quality of corporate disclosure has found that effective internal governance and external supervision, virtuous product market competition, developed financial market, favorable legal environment, and the speed of government intervention can significantly improve the quality of disclosure of listed companies [3-5]. At the same time, there is a governance effect of short selling on management discussion and analysis of disclosure [6]. Therefore, the deterrence of short selling will standardize management's strategic disclosure behavior and further improve the transparency of corporate information.

This paper utilizes the data of A-share listed companies from 2009 to 2011, and adopts the differential model and probit model for empirical testing. It also discusses the impact of the short selling system on the quality of information disclosure from the perspective of whether listed companies have financial restatements before and after the implementation of the short selling policy.

2. Literature Review

2.1. Information Disclosure

Information disclosure is the core issue in the study of corporate governance. The factors that affect the quality of disclosure mainly include the basic characteristics of an enterprise, the better the external governance etc. [7-10]. Accounting information disclosure is the disclosure of the company's operating status, financial results, cash flow and other information to the stakeholders of the enterprise in a public way. It is the product of the company's accounting and external reporting systems. Meanwhile, the accounting activities of enterprises will affect the investment decisions of the public and the formulation of national policies. Therefore, the accuracy of external accounting information disclosure is particularly important. Financial restatement is a form of accounting information disclosure by enterprises that is directly related to the authenticity and integrity of the enterprise accounting report. The original intention of financial restatement is to improve the quality of accounting information by modifying incorrect or misleading financial information. However, the management of listed companies may use financial restatements as a means to achieve their own interests and damage the interests of investors while disrupting the market order [11]. Inadequate quality of corporate disclosure can mislead investors' investment decisions, which is not conducive to the benign development of the capital market [12]. Therefore, it is necessary to conduct in-depth research and discussion on financial restatement.

2.2. Short selling

As an indispensable link in the chain of financial innovation, the short selling mechanism can improve the effectiveness of the capital market and promote the price discovery function of the capital market. Saffi and Sigurdsson used the short-selling stress test data of the US Securities and Exchange Commission to find that the introduction of short-selling mechanism significantly increased the efficiency of stock prices [13]. Moreover, as the most active traders in the securities market, margin traders' grasp of market opportunities, quick response to information and reasonable expectations of stock prices will all play a driving role in the entire securities market. The demanders of margin trading become the main driving force to realize the price discovery function. With the gradual improvement of China's margin financing system and the expansion of credit trading volume, the

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demanders of margin financing and short selling business will activate market transactions and strengthen the value discovery function, and the intrinsic value of individual stocks will be fully explored. The increase in the value of individual stocks in different indexes can help the market get rid of the depressed state of the oscillation. The two-way trading system of margin trading and short selling will greatly increase the turnover rate of securities trading. For the stock funds in the market, it undoubtedly effectively improves their liquidity, amplifies the efficiency of the use of funds, and further energizes the entire securities market [14]. In addition, short sellers are informed traders who will pass on relevant information to investors through trading volume and price fluctuations [15]. This kind of informed trading puts downward pressure on the stock price, which will lead to a decline in the market value of the stock or option held by the manager, and directly reduce the manager's wealth. This reflects the fact that the increase in short selling promotes negative disclosure of corporate information. Wang pointed out that the margin trading system can optimize the management behavior of enterprise management and reduce the financial restatement of enterprises by strengthening external supervision [16]. The attention of analysts will also reduce information asymmetry and increase the cost of managers' self-interested behavior, thus improving the quality of information disclosure in listed companies [17].

3. Hypothetically

Based on the short selling mechanism and the importance of accounting information disclosure quality of listed companies, this paper puts forward the following hypothesis:

H: The introduction of short selling mechanism promotes the improvement of accounting information disclosure quality of listed companies.

In places where the financial intermediation market is more developed, investors are more active, negative company news delivered by short selling volume can be spread more quickly, the amplification of the "voting with feet" effect is more obvious, and the punishment for managers' misconduct is also heavier. Moreover, when the market has a strong feedback effect on enterprises, managers can obtain short-selling threat information from the market in a timely manner, and adjust their decision-making behaviors according to the information.

4. Methodology

4.1. Data sourcing and preprocessing

This paper takes A-share listed companies from 2009 to 2011 as the research object, and uses relevant information about listed companies from Guotai'an database [18]. The data needs to be pre-processed before use, so that it can meet the requirements of the differential differential model. The processing method is as follows:

(1) Delete the insolvent company.

(2) Delete ST companies and samples with missing values for major variables.

(3) The samples were divided into an experimental group and a control group. The experimental group consisted of 90 shares that were short sold in 2010, and the control group consisted of 90 shares that were not short sold in 2010. In the end, 180 observations were obtained.

4.2. Theoretical basis

Large-scale public policy studies differ from ordinary scientific research studies in that it is difficult to guarantee complete randomness of sample allocation between implementation and control groups. In a trial with a non-randomized assignment of policy implementation and control groups (natural trial), there may be prior differences in the samples of different groups before the implementation of

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the policy, which will be ignored by a single pre/post comparison or horizontal comparison analysis method, and then further lead to a biased estimation of the implementation effect of the policy. The Difference-in-Differences (DID) model based on the data obtained from natural experiments can effectively control the prior differences between the research objects through modeling, and effectively separate out the real results of policy impact. Therefore, the DID model is chosen as the research approach in this paper, in addition to controlling for industry fixed effects in the regressions.

The difference-difference model used in this paper is as follows:

$$\Pr(\text{Disclosure})_{i,t} = \alpha + \beta_1 \text{Treat}_{i,t} + \beta_2 \text{Post}_{i,t} + \beta_3 \text{Treat\&post}_{i,t} + \delta X_{i,t} + \sum \text{Industry} + \varepsilon_{i,t}$$

Among them,

“disclosure” is the quality of information disclosure;

“X_ (i, t)” is the control variable, namely profitability: net profit margin on total assets (ROA),

4.3. Experimental design and procedure

4.3.1. Measurement of information disclosure quality

The quality of accounting information disclosure is the core issue in the study of corporate governance. This paper uses corporate financial restatement to measure the quality of accounting information disclosure. The value of the company with financial restatement before the implementation of the short-selling system on March 31, 2010 is 1, and the value of the company without financial restatement is 0. A value of 1 is given to companies that have had a financial restatement since March 31, 2010, when the short selling system was implemented, and 0 is given to companies that have no financial restatement.

4.3.2. Measure of short selling on short selling

In order to observe the changes in the quality of corporate disclosure before and after the implementation of the short selling system, this paper constructs a DID model and defines the virtual variables Treat and Post, which are the effect of margin financing and short selling policy.

If the company is included in the short selling list, Treat takes 1, otherwise, 0. If the observation year is the year after the company was added to the short-selling list, the Post takes 1, otherwise 0.

4.3.3. Perform descriptive statistics on the main variables

A-share listed companies from 2009 to 2011 were selected as the research objects, and matching samples were collected based on the research objects. Stata software was used to make descriptive statistics and linear regressions of the collected data.

4.4. Result

Table 1 and 2 report the regression results of the impact of short selling on the quality of information disclosure calculated using the Probit model. The results show that the coefficient of Treat is 0.525 (>0.05), which is not significant. It indicates that the short selling on securities financing transactions by listed companies from 2009 to 2011 do not significantly affect the quality of accounting information disclosure.

However, the hypothesis of this paper is that the launch of short selling mechanism promotes the improvement of accounting information disclosure quality of listed companies, so the experimental conclusion is contrary to the hypothesis of this paper.

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Table 1: Descriptive statistics for major variables (sample size: 360)

Variable	Obs	Mean	Std. Dev.	Min	Max
Treat	360	.5	.5006959	0	1
Post	360	.5	.5006959	0	1
restatement	360	.2472222	.4319974	0	1
ROA	360	.0364454	.0571789	-.0936595	.58771
industry	0				
F	0				
_Iindustry_2	360	.0944444	.2928531	0	1
_Iindustry_3	360	.55	.4981861	0	1
_Iindustry_4	360	.1166667	.3214695	0	1
_Iindustry_5	360	.0111111	.1049679	0	1
_Iindustry_6	360	.1111111	.3147071	0	1

Table 2: Short selling and quality of information disclosure

Probit regression			Number of obs	=		360
			LR chi2(4)	=		11.96
			Prob>chi2	=		0.0176
Log likelihood = -195.35418			Pseudo R2	=		0.0297
restatement	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.Treat	-.1379954	.2170118	-0.64	0.525	-.5633306	.2873399
1.Post	.2840776	.2042928	1.39	0.164	-.1163288	.6844841
Treat#Post						
1 1	.0291928	.2932918	0.10	0.921	-.5456486	.6040341
ROA	-4.474295	2.018301	-2.22	0.027	-8.430091	-.5184983
_cons	-.6323664	.1565652	-4.04	0.000	-.9392286	-.3255041

5. Analysis

By analyzing the result of this study, there are three reasons for its insignificance. Firstly, China officially implemented the short-selling system on March 31, 2010, and 2011 was in the early stages of implementation. In the early stages of implementation, the trading volume of short selling was smaller than that in the later stages, and the scale of short selling by listed companies was also smaller. Therefore, short-selling transactions in a short period of time will not significantly affect the quality of accounting information disclosure. Secondly, the sample companies selected in this paper have high transparency of accounting information, and all use financial restatements to supplement or modify the misleading content in the previously released financial reports. And these companies did not commit financial fraud by means of financial restatement. Short selling is more likely to disclose negative information about the boss's company. Therefore, in such cases, short selling does not significantly affect the quality of accounting information disclosure. Finally, at the early stage of its implementation, the short-selling system had little impact on the quality of information disclosure, while other factors affecting information disclosure were numerous, such as the company's financial status (including company size and asset-liability ratio), and the company's financial status. Corporate governance structure (including the size of the board of directors, the proportion of independent directors, and whether the company is audited by the four major companies), and other characteristics

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(including equity refinancing activities, mergers and acquisitions, property rights nature and stock volatility). Therefore, it is impossible to see the impact of short selling and the short selling system before and after its implementation in a short period of time.

6. Conclusion

This paper mainly analyzes the impact of short selling on the quality of accounting information disclosure by listed companies from 2009 to 2011. According to the analysis results, it can be seen that the short selling of securities did not significantly affect the quality of accounting information disclosed by listed companies during this period. However, this paper has deficiencies in the selection of sample size, time period, and number of control variables, as well as a small-time span and a small number of samples and control variables, making the research results insignificant. Therefore, in the future, on the basis of this paper, we will increase the number of samples and the number of control variables, expand the time span, and compare the changes in the disclosure quality of listed companies before and after the implementation of short selling policy in several years. In addition, the paper will focus on the allocative efficiency of the stock market and investigate the impact of short selling mechanism on the liquidity of individual stocks.

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