Analysis on Governance Effect of Margin Financing Based on the Perspective of Corporate Earnings Management

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Abstract: This paper attempts to study how the margin financing policy directly affects the company from a micro perspective, which affects the management's profit manipulation behavior and thus indirectly affects the efficiency of the capital market. Through empirical analysis, this paper shows that the effect of margin financing and securities lending on earnings management is not obvious in companies with high degree of marketization. On the contrary, in areas with low marketization, the effect of margin financing and securities lending on earnings management is obvious. Therefore, there are also alternative effects in financing and securities lending and external governance factors in inhibiting earnings management.

1. The concept of margin trading

Margin financing and securities lending occurs in stock exchanges of securities exchanges or other trading venues approved by the State Council. Client investors first deposit certain collateral with securities companies, so that the securities companies lend funds to customers for their purchase. The business activities of securities or lending securities for the sale of securities. Margin trading, also known as securities credit trading or margin trading, means that investors first deposit a certain percentage of the guarantee money to a stock exchange that has the qualifications of the stock exchange and the margin trading, and then the securities. The company lends to investors to buy securities (financing transactions) or lend securities to investors for sale (selling transactions). Through this kind of transaction, investors can make long or short stocks and earn part of the spread to get investment income. In a narrow sense, margin financing and securities lending transactions only include financing and securities lending transactions between securities companies and investors, but broad-based margin financing and securities lending transactions also include financing and securities lending transactions between securities finance companies, banks and other financial institutions and securities companies. From a global perspective, the margin trading system is very common and is a basic credit trading system.

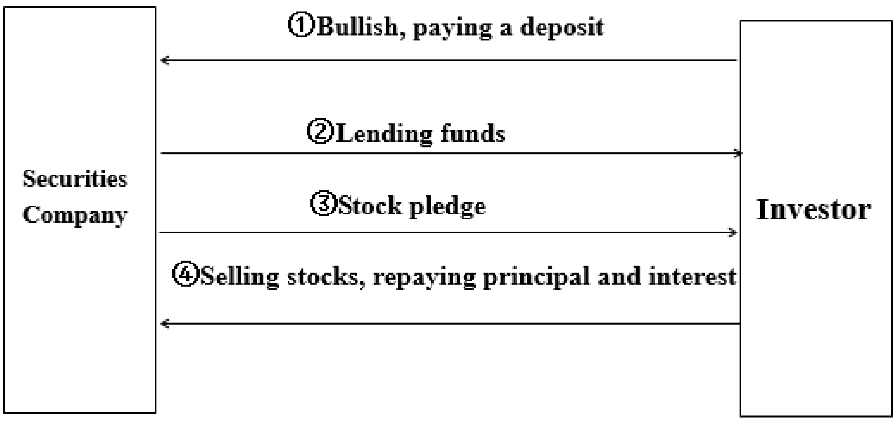

Figure 1 Schematic diagram of financing

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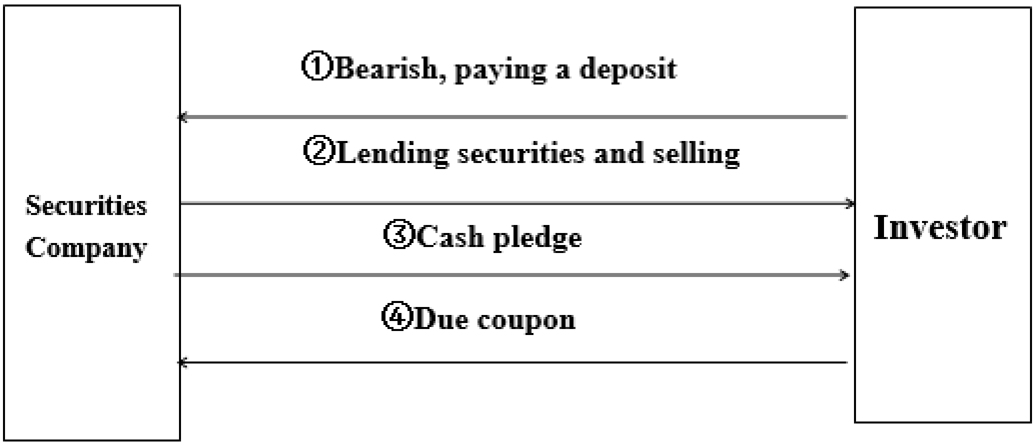

Figure 2 Schematic diagram of the securities

2. Trading risk of margin financing and securities lending

Margin trading and securities lending transactions can improve the overall investment environment of the market to a certain extent, enhance investor-related investment concepts and promote the steady development of the entire securities market. However, the margin financing and securities trading also has its own hidden dangers, which is a "double-edged sword." Compared with ordinary securities trading, the risks of margin trading, such as leverage risk, credit trading risk, legal compliance risk and forced liquidation risk, are generally more complicated and more concealed.

Earnings management is a core issue in accounting research. Related issues include earnings management motivation, earnings management and corporate governance, and measurement methods for earnings management. There is no unified opinion in the academic world on the concept of earnings management. Earnings management measurement methods are mainly divided into three categories: accrued earnings management, real earnings management and earnings distribution. At present, the mainstream earnings management methods mainly include accrued earnings management and real earnings management.

Factors affecting the company's earnings management can be divided into the following two categories: internal governance factors at the company level and the company's external governance environment. Corporate governance factors include the shareholding structure, the board of directors, the board of supervisors, the audit committee, institutional investors' shareholdings, and equity incentives. The shareholding structure is considered to be the core part of corporate governance. Leuz et al. (02003) analyzed the differences in earnings management among 31 countries, and found that countries with dispersed shareholding structure have fewer earnings management practices.

External governance factors also apply to earnings management. External governance factors mainly include property rights protection, government governance, legal level, market competition, and credit system contract culture. The relationship between external governance and earnings management is discussed from the perspective of investor protection. In areas with high investor protection, there are few earnings management practices. Research by listed companies shows that the level of market competition has a binding effect on the company's management misreporting accounting and financial information. The external governance environment in each region of China and the degree of earnings management of listed companies have significant local spatial clustering phenomenon. The better the external governance environment, the lower the degree of earnings management of enterprises. The external governance environment has a significant effect on the earnings management of listed companies. The difference in the internal governance level of the company will significantly affect the external governance environment's role in earnings management. The improvement of the internal governance level of the company can effectively reduce the negative impact of the external governance environment on earnings management. The weaker the market power of the company's products, the higher the degree of earnings management, the fiercer competition in the industry, and the higher the level of earnings management.

3. Research hypotheses and verification

For personal benefit, the management of the company may influence the investor's judgment on the actual value of the company through the manipulation of earnings and the falsification of financial statements, and damage the income of investors to achieve their personal goals. However, the existence of short selling has, to a certain extent, inhibited the motivation of management to manipulate profits. First, **in** a more efficient market, short-sellers will sell the shares of such companies through securities lending, significantly lower the company's stock price and lower the management's expected earnings, thus inhibiting management's earnings management motives. Secondly, the management earnings management motive will face legal and other penalties. Once its manipulation behavior is discovered, it will face a huge fine, and its own career development will be greatly restricted. Finally, after the earnings management incident is exposed, the company's existing investors will continue to increase the company's losses by voting with the feet. Based on the above analysis, this part attempts to analyze the inhibitory effect of short selling transactions on earnings management behavior from the perspective of mathematical reasoning.

3.1 Reasoning assumption

The mathematical derivation process of this paper is based on the principal-agent theory and the theory of maximizing the utility of short-sellers. The premise of the presumption is:

Hypothesis 1: The short seller can find out the earnings management behavior that the company will take in time, and punish the behavior through short selling when the public takes the action.

Hypothesis 2: When management adopts earnings manipulation behavior, both management and short-sellers can observe the losses to investors θ, and assume $\theta \sim N\left(\theta_{0,} \sum \theta\right)$, where the mean and variance are constant.

Hypothesis 3: The utility function of the short seller is $\bigcup \pi = -\exp(\pi)$, where $\pi = \left(v - \theta - P_1\right)\xi$ represents the short sale of the short trader, ξ is the short sale of the short trader, and ξ <0, indicating the short direction, at P1 Maximize utility at all times.

Hypothesis 4: The short-selling trader does not consider the cost of short-selling exchanges during short selling.

3.1.1 Mathematical reasoning process and results

The mathematical reasoning process mainly analyzes the management behavior and the short-sellers' response to management decision-making based on the principle of utility maximization under the principal-agent theory.

3.1.2 Analysis of management behavior under the principal-agent theory

The management behavior analysis process considers three periods, namely 0 period, 1 period, and 2 periods. During the 0 period, the management decides whether to conduct earnings management. A=0 means no earnings management. The value of the company in period 2 is v. At this time, the nominal income of the management is $\int_0 = W_1 P_1 + W_2 P_2$, and the actual income of the management is $\int_0 = W_1 P_1 + W_2 \upsilon$. There may be a difference between the nominal income and the actual income. A=1 indicates that earnings management is carried out, and the private income generated by earnings management to management is β.At the same time, the value of the company's 2 period will be reduced by θ due to earnings manipulation.

Among them, W1 and W2 are two constants, and the number of shares issued by the company during the period of Table 1 and 2 is adjusted. P1 and P2 are the stock prices of the company in the

1 period and the 2nd period respectively. Only when $f_1 \geq f_0$, that is, the actual income obtained by the earnings management manipulation is greater than the income when not manipulated, the management will carry out the earnings management, and by sorting out the relationship The simplest formula is $2\theta \leq \varphi$. Earnings management will be taken within the scope of $[0,\varphi]$, otherwise no earnings management will be taken.

Specifically, taking $P_1(a=0)$ and $P_1(a=1)$ into $f_1 \geq f_0$ is obtained;

$$\theta < \beta / w_2 - w_1[P_1(a=0) - P_1(a=1)] / w_2 = \varphi - \Delta\varphi$$

$$\Delta\varphi = (w_2 / w_1)[P_1(a=0) - P_2(a=1)]$$

3.2 Short-sellers' reaction to management's behavior

When the management adopts the earnings manipulation behavior, that is, when a=1, the short seller adopts the short selling behavior, and the selling singular number is ξ.

At the same time, some shareholders in the market will make up for the private by buying or selling the u stock. Liquidity shock, so the total number of short-selling orders in the market is u+ξ.

According to Kyle's (1985) study, the price under the market's total short-selling order u+ is: $P_1 = v - \mathrm{E}(\theta / u + \xi) = v - [\theta_0 - \lambda(u+\xi)] = v - \theta_0 - \lambda(u+\xi)$.

θ_0 is a constant determined by the market equilibrium state, $\mathrm{E}(\theta / u + \xi) = \theta_0 - \lambda(u+\xi)$ is the unconditional mean of the agency cost, $\mathrm{E}[-\exp(-\pi)]$ is the conditional mean of the agency cost, and the negative sign in the formula indicates that the larger short selling demand leads to higher agency costs. Short-selling traders will make decisions based on their own utility maximization, and short-selling traders will maximize utility during the 1st period. Since the maximization problem of $\mathrm{E}(\pi) - 1/2Var(\pi)$ is equal to $\mathrm{E}(\pi)$, the problem translates into the maximization problem of seeking $\max \mathrm{E}(\pi) = \max \xi(\theta_0 - \lambda(u+\xi))$:

$$\xi = (\theta - \theta_0)/2\lambda^{'}, \text{ draw, } P_1(a=0) = v - \theta_0 - \lambda(u+\xi)(a=1) = v - \theta_0 - \lambda(u+\xi)$$

Because $P_2(a=1)$

Bring $\xi = (\theta - \theta_0)/2\lambda^{'}$ to $P_1(a=1) + v - (\theta + \theta_0)/2 + \xi u$ to get:

The short-selling of earnings management on earnings management 1 now narrows the scope of management's feasibility of earnings management, so to prove whether short selling has narrowed the management's profit margin, that is, to prove short selling transactions.

It does make the stock price of the 1 period lower than the stock price when the manipulation is not taken.

Bring the above results into $[0,\varphi]$ to get:

$$\Delta\varphi = (w_2 / w_1)[P_1(a=0) - P_2(a=1)] = (w_2 / w_1)(\theta - \theta_0)$$

Because $(\theta - \theta_0) > 0$ (according to $\xi = (\theta - \theta_0)/2\lambda^{'}\lambda^{'} > 0, \xi < 0$) so $\Delta\varphi > 0$. This proves that the management's earnings management behavior enables short-sellers to take corresponding short-selling behavior and curb the degree of earnings management.

When the management decides to adopt the earnings management behavior, the short seller can find this behavior in time. By short selling part of the company's stock, the company's stock price will fall. The company's price decline during the first period will lead to the narrowing of the private interest of the management. The incentives for management to manage earnings are suppressed. Under certain premise, the model proves the restraining effect of margin financing and securities lending on management's manipulation of profit from the perspective of short selling, which proves the rationality of hypothesis 1 proposed in this paper.

4. Research summary

Based on the background of the pilot funded securities lending transaction in China in recent years, this paper studies the impact of margin trading on the management of listed companies' earnings management. By adopting the double difference model, the empirical analysis of this paper is as follows:

4.1 The development of margin financing and securities lending transactions will help curb the earnings management behavior of listed company management and improve the company's earnings quality.

With the development of margin trading, securities market regulators and investors pursue higher quality financial information. At the same time, due to professional skills and transaction size restrictions, institutional investors, as the main force of margin financing and securities lending, will be more sensitive to the restatement of financial statements, more willing and able to tap the non-public information of listed companies. The resulting leverage increases the risk of management's earnings management behavior, forcing management to be cautious about earnings management.

4.2 The equilibrium degree of the shareholding structure of listed companies will affect the governance effect of margin trading, and the more balanced the company's shareholding structure, the more limited the effect of this governance effect.

As the focus of corporate governance, the ownership structure will affect the suppression of the company's earnings management behavior to a certain extent. When the shareholding structure of listed companies is not balanced, the equity checks and balances are invalid. This means that the management of listed companies is more likely to manage excessive earnings. At the same time, there is room for improvement in earnings quality. At this time, margin trading has a surplus on earnings. The inhibition of management will be more intense. On the contrary, if the company's shareholding structure is balanced, the behavior of major shareholders will be subject to a certain degree of checks and balances, that is, the governance effect of margin financing and securities lending will not play a more obvious role.

4.3 The nature of equity of listed companies will also affect the suppression of earnings management by margin financing and securities lending transactions.

Compared with non-state-owned enterprises, when state-owned enterprises are the underlying securities, margin trading has a stronger inhibitory effect on earnings management. Based on China's special institutional background, state-owned enterprises still occupy a large proportion of existing listed companies. Compared with non-state-owned enterprises, state-owned enterprises are more tolerant to operators, and the relative lack of incentive and restraint mechanisms leads to the existence of more serious internal control of state-owned enterprises, which seriously affects the company's operational efficiency and resources. Optimize the functionality of the configuration. Therefore, compared with non-state-owned enterprises, the governance effect of margin financing and securities lending will play a more significant role in state-owned enterprises.

5. Policy recommendations

Margin financing and securities lending can affect the business activities of listed companies at a micro level. By introducing the transaction, the opportunistic behavior of the listed company's management is suppressed, thereby improving the company's earnings quality. This aspect will help improve the pricing efficiency of the capital market, and on the other hand, it will promote the optimal allocation of resources. However, the balance of the company's shareholding structure and the nature of the equity will affect the suppression of the financing and securities lending. Therefore, in order to make the financing and securities lending better play the governance effect, this paper believes that we should start from the following two aspects.

5.1 Strengthening the punishment of excessive earnings management.

The empirical research in this paper shows that the governance effect of margin financing and securities lending on listed companies is mainly reflected in the earnings management behavior of the listed company's management. Due to the leverage of margin financing and securities lending, any positive or bad news will have a major impact on the company's operations, which will lead to serious external supervision and increase the cost of management's earnings management. Therefore, in order to better ensure the development of China's margin financing and securities lending transactions, the regulatory authorities should strengthen the punishment of excessive earnings management and further increase the opportunity cost of listed companies' earnings management behavior, so as to more effectively curb the earnings management behavior of listed companies. Improve the earnings quality of listed companies, and thus improve the quality of China's margin financing and securities lending transactions, and promote the development of margin financing and securities lending.

5.2 Improve the mechanism of equity checks and balances.

From the perspective of the balance of ownership structure, we should improve the mechanism of equity checks and balances and constrain the behavior of management, so as to avoid excessive manipulation of profits to a certain extent. First of all, consider expanding the scope of the main body of shareholding, and then change the state of "one big share" unique **to** China. The ownership of equity is the development trend of the future capital market. As long as the equity issue is resolved, many of the industry's own related problems can be solved. Second, resolve the circulation of state-owned shares and legal person shares, and gradually establish a unified capital market. At present, China's stock market is separated from each other. The tradable shares are divided into A shares and B shares in H shares. This not only greatly restricts the liquidity of China's capital market, but also limits the role of external governance mechanisms. Finally, efforts will be made to improve the share-trading reform and balance the various interest groups to maximize utility.

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