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The Impact of Short-selling Institutions on Chinese Stock Companies and Market

——From the Case of Luckin Coffee

YiZhu Chen[1,a,*]

[1] *Chongqing technology and business school, Xuefu Avenue, Haitangxi Street, Nanan District, ChongQing, 400000, China*
a. 1535237354@qq.com
**corresponding author*

Abstract: As a major engine of the capital market, the stock market is favored by investors. But the huge profit space and operability are also easy to breed the soil of corruption and fraud. At present, due to the increased participation efficiency of short-selling institutions, the financial risks faced by enterprises have further increased. Through the case of Luckin coffee, we observe the stock price changes after it encountered short selling, combined with the model of the arbitrage pricing principle to find the role of short-selling institutions in the market. By disclosing corporate financial fraud, short-sellers can improve the effectiveness of market supervision to a certain extent, reduce the occurrence of stock market premiums, and bring stock prices back to their true levels. On the premise of ensuring the stability of the stock market and introducing a reasonable system, the Chinese market can also consider developing a similar mechanism to inject fresh blood into economic development.

Keywords: financial fraud, short-selling institutions, monitoring, Chinese concept company, stock prices

1. Introduction

In recent years, with the increased awareness of information disclosure, several listed companies have been exposed to financial fraud, and Chinese companies have been the hardest hit by financial fraud due to their off-site listing and concept stock characteristics. At the same time, the emergence of short-selling agencies has also increased the financial risks faced by companies once again.

In previous studies of financial fraud, there have been many analyses of individual companies that have committed financial fraud, including the motivations, the means, and the impact for companies caused by fraud, but fewer considerations about the substantive role of short-selling institutions .We start from the case of Luckin Coffee's financial fraud to analyze the role of short-selling institutions, finding that short-selling institutions can monitor the market, promoting internal and external regulation. During the shorting progress, it hasn't resulted severe spillover effect for other companies but brought inflated stock prices back to realistic standard.

The paper consists of five parts. Section 1 introduces the paper, Section 2 reviews the relevant literature and gives the innovative points of the paper, and Section 3 introduces the research

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methodology. Section 4 analyses the role of short-sellers in monitoring the market through Luckin Coffee's share price. Section 5 summarizes the effects of short-selling institutions and finally discusses about the impact of introducing this mechanism to China.

2. Theory Analysis

2.1. Concept

Financial fraud always occurs when company's real property mismatches with market expectations. To obtain market shares and profits continuedly, company may take actions such as inflating its costs and expenses, cheating investors, and market. While short selling is an investment strategy depending on the judgment of a company's true financial situation. Through different price, short sellers can get returns. Chinese concept stocks are often suffered from short-selling attack due to their characteristics.

2.2. Review

Being access to more opportunities and investment support also means facing more complex market environment. Intrinsic triggers such as internal control failures [1], deliberate manipulation by management [2], equity incentives [3], and external factors such as solidified processes and inadequate regulation by external review bodies have prompted companies to attempt to obtain high risk-return returns through financial fraud. That's why the shorting agencies appear.

Jiang and Chen analyze data on China' A and H shares from 2010-to 2015, suggesting that short-selling agencies can strictly supervise the earnings reports of companies and reduce the risk of share price collapses in the future. They also point out that suffering selling and becoming the target of SEC has positive relation [4]. Lenky used a rational expectations equilibrium framework, assumed investors have asymmetric information and assessed the impact of forbidding short-selling in an economy, finding that by the implementation of short selling can change the risk-sharing environment and increase access to information [5].

Due to the transmission of market information, the stock price changes caused by the short-selling front end will also release signals. According to Denisa's analysis, it is shown that the opening and increase of short positions are considered as negative information and that negative information has a greater impact on CDS spreads than positive information [6].

In addition, the study by Massa et al. also shows that short-selling institutions will induce insiders of financial fraud firms to sell shares more and faster. The more serious fraud is, the more obvious it is [7].

2.3. Summary

Disclosure will not cause companies to overreact before the report is released [8], nor will it exacerbate price declines during short-selling declines on days of extreme negative returns [9], which indicated that impact of short-selling institution is rational even effective. However, it is not clear enough that the tendency of company's stock price and the possible changes of the whole market. Therefore, this article will start from this aspect, through the Luckin incident and its stock price changes, and conduct related discussions.

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3. Research Methods

3.1. Case Study Methodology

Case study is the basic method of this paper. We start from the case of financial fraud of Luckin, then point out the impact of shorting institutions on Chinese stocks and whole market through the stock price changes.

3.2. Arbitrage Pricing Theory

Arbitrage Pricing Theory (APT) is a broadening of the CAPM and is based on the factor model. Arbitrage pricing theory suggests that arbitrage is a determinant of the formation of modern efficient markets (i.e. equilibrium market prices). If the market has not reached equilibrium, there will be risk-free arbitrage opportunities in the market. And multiple factors are used to explain the risky asset returns, and according to the no-arbitrage principle, an (approximately) linear relationship between the risky asset equilibrium returns and multiple factors is obtained. [10] [11] [12]

3.3. Quantitative Analysis Method

We analyze the quantitative characteristics, quantitative relationships, and quantitative changes in the share price of Luckin, revealing the impact of shorting institutions on market price.

4. Case Study

Through the changes in the share price of Luckin Coffee, it shows that the average share price of Luckin(from January 2nd to 24th, 2020)was $42.74 per share, but during the shorting period(from January 27th to February 7th) it fell to $36 per share. Although the share price of Luckin Coffee did not plummet as much as expected after the shorting, the market's attitude towards the star stock was polarized. By calculating the standard deviation of the share price, we found that the standard deviation of Luckin's share price was $4.99 in the second half of 2019, while the standard deviation widened to 8.85 by the shorting event on April 6, indicating that some investors were influenced by the Muddy Water's shorting report and questioned the development prospects of Luckin Coffee.

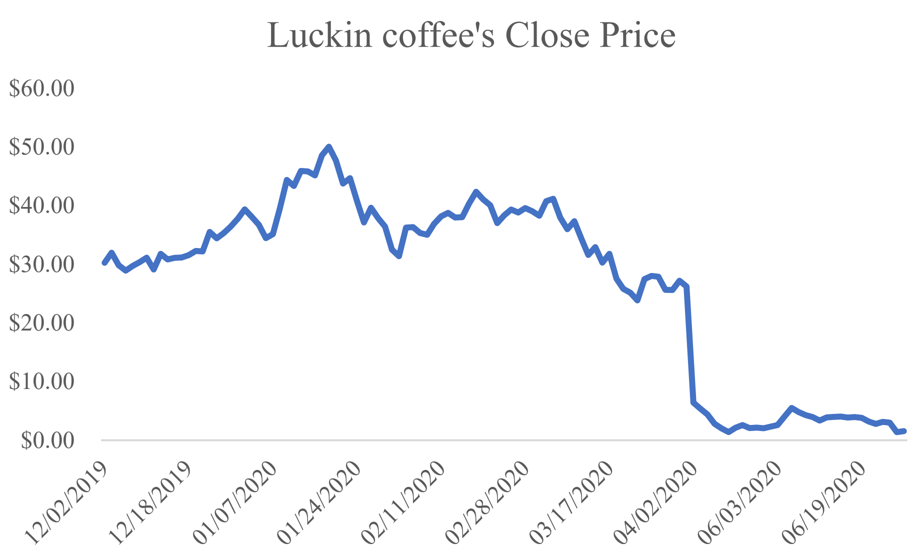

Figure 1: Close prices of Luckin coffee.

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In addition to directly impacting on company's share price, Muddy Water's shorting also monitored the market. In April, Luckin Coffee's management exposured their financial fraud, which could not be separated from the drive of Muddy Water's shorting. On April 2, Luckin's share price plummeted to lowest of US$6.40 per share, which continued to fall in the following days, closing at US$4.39 per share on April 6. With ferment, eventually Luckin Coffee finished its trading on Nasdaq on 29 June 2020, and the share price was set at $1.38 per share, a 90% drop from issue price of $17 of last quarter.

Except for focusing on the share price of Luckin, we also tried to analyze the changes of similar companies in the market, such as Wanzhou International, Guizhou Maotai, and Mengniu, to explore the spillover effect. However, by analyzing the data, we found that the share prices of similar companies only showed a short-term fluctuation and weren't consistently affected, which means the spillover effect wasn't obvious in this case.

Table 1: Price change of relevant Chinese stocks.

Time	Chinese stock	Change
2020.2.3	Moutai	-4.64%
2020.2.3	Wanzhou International	1.33%
2020.2.3	Mengniu	0%
2020.4.2	Moutai	3.81%
2020.4.2	Wanzhou International	4.17%
2020.4.2	Mengniu	0.35%

The role of the short-selling agencies is clearer from this short-selling incident. On the one hand, short sellers play a supervisory role, prompting companies to improve the truthfulness of their financial disclosure and the effectiveness of an external regulatory intervention. On the other hand, shorting agencies can change the market's inflated share prices by exposing fraudulent companies and pushing the stock market's prices to more reasonable and realistic levels. The smaller spillover effect of discovery is also beneficial to market stability.

5. Conclusion

Through this case, we can see that under the foreign stock market system, shorting agencies as an participant in the market, can play the role of third-party monitoring and correcting deviated market pricing. What's more, the weakening of the spillover also keeps the stability of the market. However, due to the profit-making nature of short-selling institutions, we cannot rule out the possibility of malicious short-selling and the potentially destabilizing effects it may have on companies and the market.

Now, the Chinese stock market hasn't introduced the shorting agency, and maybe some of companies' share prices in the market are overvalued. Based on the consideration of both profits and harms, the domestic market can take regulated guidance and a sound management mechanism, making the shorting agency plays the role of an active participant and monitors the market , insuring that the share price reflect the true level of the enterprise as far as possible. At the same time, they can work together with the CSRC and auditors to monitor corporate finances and maximize the interests of investors.

All in all, the function of any institution in the market is not absolute. Only if the macro environment allows and the market demand is compatible with the role of the can institution truly facilitated.

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