The Causes, Consequences and Countermeasures of Financial Fraud Based on the Case of Luckin Coffee

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Abstract. Muddy waters made an 89 pages' report on Luckin coffee, it said Luckin Coffee had been making fictitious trades since the third quarter of 2019. The massive financial fraud at Luckin Coffee has dealt a blow to the Chinese company's reputation.This article through the relevant theories of financial fraud and the actual condition of financial fraud, rui xing coffee GONE theory analysis of the financial fraud motivation, and on the basis of the use of event study research shares for rui xing coffee fraud exception response, in the end, through to the audit institutions, enterprise itself and the government and regulators all three Suggestions, To guard against the consequences of governance failure.

Keywords: Financial fraud; GONE theory; Luckin coffee; Event study; Governance suggestions.

1. Introduction

With the rapid development of economy, increasingly common, long-term capital market is an important part of financial market, due to the need to constantly improve our economic system, and market environment need to improve, some companies choose fraudulent financial reports to improve their fame and profit, less cost, increased revenue and profits,it is a common method, usually used for listed company. That would seriously undermine the mechanism. However, in recent years, the frequent occurrence of financial fraud in listed companies seriously influenced the stable development of our capital market. Therefore, it is necessary to identify the risk of financial fraud in listed companies and propose relevant governance measures in view of the identified risk. This is not only conducive to corporate governance level and external supervision of corporate financial fraud effectively management and supervision, but also conforms to the requirements of high quality development of listed companies in China, in this context, this study should be listed company financial fraud causes, consequences and countermeasures to produce detailed analysis. In view of this, this paper briefly analyzes the negative impact of financial fraud in listed companies, taking the financial fraud case of Luckin Coffee Company as an example to analyze its causes and consequences, on this basis, put forward its prevention methods.

2. Literature review

2.1 Phenomenon of financial fraud

The problem of financial fraud of listed companies has been hotly discussed by scholars at home and abroad. In 2012, the China Securities Regulatory Commission reported on the annual report of listed companies that the standard operation of listed companies in China has been continuously enhanced, and the level of corporate governance has been continuously improved. But in the company management, information disclosure, internal control, financial accounting management, raise funds

management and use and other aspects exist defects and deficiencies. These defects and deficiencies have created opportunities for financial fraud of listed companies. Luckin financial fraud case was exposed by the Muddy Waters, resulting in serious punishment [1].

2.2 The causes of financial fraud（GONE theory）

GONE theory, also known as the Four factors of fraud theory, was proposed by Bologua and other scholars in 1993. It is a famous theoretical tool for analyzing financial fraud [2]. GONE theory possesses Greed、opportunity、need and exposure.These four elements are prone to fraud ,the study call it the GONE theory for short [3].

2.3 The consequences of financial fraud

In the past 20 years, from the forced delisting of Rino International, China Express Channel and Huishan Dairy to the Luckin Coffee incident, the financial fraud of Chinese companies also brought the trust crisis of Chinese companies for several times. From 2012 to 2013, the road of Chinese companies to go public in the US was even interrupted for a time due to the trust crisis. The negative impact of financial fraud of listed companies should not be underestimated. It not only affects the business activities of listed companies and hinders the healthy development of intermediaries, but also damages the legitimate rights and interests of investors and disturbs the development of local economy.

In this paper, enterprise financial accounting as the research background, with GONE theory as the tool, through Luckin financial fraud events to discuss the means of financial fraud, fraud motivation and impact.

3. Case analysis

3.1 The motivation of fraud(basing on GONE theory)

3.1.1 The analysis of greed

Lack of the spirit of professional ethics, in the face of pressure and temptation, greed will often induce the real controller and managers of financial fraud, when they are no longer satisfied with the status quo, will take some measures against the law, moral bottom line to fill their own personal desires. Yang Fei, Luckin's co-founder and chief marketing officer, was sentenced to 18 months in prison for illegal business operations while serving as the co-founder and general manager of Beijing Koubei Marketing Planning Co. Lu is Luckin's largest shareholder and chairman of China Rent-a-Car, China Youche and Borgward Motors. Shenzhou Rent-a-Car and Shenzhou YouCar are both listed through multiple financing, and then through the issuance of stocks, equity pledge and other financing to cash out, and the performance of Luckin Coffee after the listing is the same. Luckin used false financial data to gain market acceptance and attract investors to invest in order to boost the company's share price. When the stock price is high, shareholders or executives of the company begin to sell down their holdings, resulting in high returns. Luckin's management cashed in 49% of its shares, or 24% of the total outstanding shares, through stock pledges, according to Muddy Waters' short selling report.

3.1.2 The analysis of oppotunity

Internal reasons. Effective internal control system is a necessary guarantee for the healthy operation of a listed company, which can make the company avoid many violations of law and regulations. The chaotic internal control system will provide listed companies with financial fraud opportunities. Luckin's self-investigation report said Liu Jian, COO(chief operating officer) and director of Luckin Coffee, and several employees had fabricated sales of up to 2.2 billion yuan. However, the internal management or audit supervision department has not found or disclosed such large-scale financial fraud, which reflects the unreasonable division of functions and powers within

the company, lack of supervision and other internal control problems and corporate governance imbalance.

External causes. Regulatory lapses in external markets reduce the opportunity cost of fraud. Luckin, like most foreign-incorporated Chinese companies listed in the US, uses Variable Interest Entities (vies). Due to the differences in laws between China and the US, US regulators cannot directly obtain the audit papers of Chinese stocks, while China Securities Regulatory Commission is difficult to administer the VIE structure of listed companies, and the deadlock in cross-border audit supervision is difficult to break, which also provides opportunities for their financial fraud.

3.1.3 The analysis of need

Necessity is the foundation of everything. The "need" factor is also known as the "motivation" factor. Enterprises may hide their real business conditions and management structure to attract more social investment and seek more benefits based on the needs of listing. For the companies that want to go public and protect their license, they issue additional shares and rights issues to continuously raise funds and invest. These fraudulent behaviors are to obtain more funds and dividends from the capital marke [4].

Based on the analysis of Luckin Coffee's economic business and operating performance, its needs for financial fraud include the following: first, to prevent fund breakage and meet financing needs. For cross-border listed Chinese concept companies, financing is the most important, and the inclusive and flexible transboard trading system of the American market can better carry out large-scale financing. Before the listing (June, 2016 - April, 2019.4), Luckin Coffee went through four rounds of financing of more than $100 million. After the successful listing, it issued a total of 33 million ADS at $17 per fixed share, raising $695 million. In January 2020, Luckin raised more than US $800 million by issuing additional and convertible bonds through several institutions on the grounds of developing "unmanned retail" strategy [5]. In the 17 months of capital financing, Luckin Coffee's entire financing process, in addition to equity financing, actually borrowing, is a combination of venture capital + mortgage loans and shareholder borrowing financing. The second is to obtain a higher offering price. Luckin has only been on the market for a short time and is currently in the rising stage. As the scale expands, the sales volume will increase continuously. Under such performance pressure, Luckin chooses financial fraud. So the direct motivation of Luckin's fraud is to keep the company's performance growing and win the ratio[6].

3.1.4 The analysis of exposure

Exposure factors mainly refer to two aspects: one is that corporate fraud is less likely to be detected. Luckin Coffee is registered in Cayman Islands, and its main business is located in China. Due to the separation of its main business location and IPO listing place, the information asymmetry of public investors is aggravated. If financial fraud is carried out, it is more hidden and difficult for public investors to detect. In addition, for securities regulators and industry regulators, due to the consideration of supervision cost, more use of the company has disclosed information, but when the company's information disclosure, financial statements have risks, will lead to the supervision of the regulatory department has limitations, can not play the due supervision effect. The Public Company Accounting Oversight Board has also had limited access to audit papers from Chinese companies, limiting its effectiveness [7]. Second, the company's financial fraud is found to be less severe punishment. China's securities supervision market has a short development time and there are many imperfections. The supervision departments of our country can investigate and punish financial fraud companies are the Ministry of Finance, audit department, Securities Supervision and Administrative Commission, tax department and so on. Although there are many departments, the distribution of responsibility of each department is not clear enough. In addition, China in the existence of financial fraud in the punishment of enterprises, lack of strength, to bring small losses to the enterprise, which further promotes the climate of financial fraud. Before March 1, 2020, that is, before the implementation of the new Securities Law, the maximum penalty was limited and lack of extradition treaty [8-10].

3.2 Means of fraud

Generally speaking, the methods of financial fraud include: deliberately using improper audit policies, concealing activities that have a significant impact on the company's operations, and exaggerating sales, some of which are reflected in Luckin's financial fraud incidents.

3.2.1 Falsely report actual sales

It is not the same as the common method of fraudulent sales. According to the anonymous report released by Muddy Water Research from Q4 2019 to January 2020, Luckin adopted numbers jumping randomly within a centain range based on the original order. Greatly altered the actual number of orders, such method resulted in huge inflation from the actual sales. In addition, the report also believes that Luckin has falsely reported the net selling price of the product, and the actual estimated price is about 46% of the tag price, rather than the 55% claimed by Luckin official.

3.2.2 False advertising and raw material costs

The report pointed out that Luckin exaggerated its advertising expenditure in Q3 2019 by more than 1.5 times, and the actual cost for the main advertiser Focus Media was only 46 million, far lower than the 140 million in Q2. According to the data given by the CTR market research, the falsely increased advertising expenses and the falsely reported revenue of the store are 336 million and 397 million respectively. It is reasonable to speculate that the managers are likely to fill this part of the falsely reported advertising costs into the store revenue.

3.3 The impact after financial fraud

3.3.1 Use the event research method to research changes in stock prices

This article mainly uses the event research method to analyze the impact of Luckin Coffee's stock price before and after the fraud. The event study method was first proposed by Fama et al. It is a test method suitable for semi-strong efficient markets. It is often used to analyze and evaluate the impact of the promulgation of new policies or the occurrence of major events on the stock market. The research use the market model to establish an equation for the index return (R_{it}) of Luckin Coffee's stock price and the daily return (R_{mt}) of the market. The market model is a linear model that assumes a certain linear relationship between market returns and the returns of a particular security. The form of the market model is as follows:

$$Rit=\alpha+\beta iR_{mt}+u_{it} \quad (1)$$

The report identified Luckin Coffee's fraud released by Muddy Waters on January 31, 2020 as Event I, Luckin Coffee's admitted the annual report fraud on April 2, 2020 as Event II and regarded them as research events, and fully considered the impact of Event I and Event II on the company's stock price. Then set the Table 1:

Table 1. Event window period and estimated window period

Events	Trading day	Event window	Estimation window
Muddy Waters Releases Luckin Coffee's Fraud (Event I)	2020-01-31	2020-01-28 to 2020-02-05	2019-09-30 to 2020-01-30
Luckin Coffee admits annual report fraud (Event II)	2020-04-02	2020-03-27 to 2020-04-08	2020-02-10 to 2020-04-01

This paper uses Excel to generate a scatter plot to obtain the values of the parameters α and β. The scatter plot is as follows:

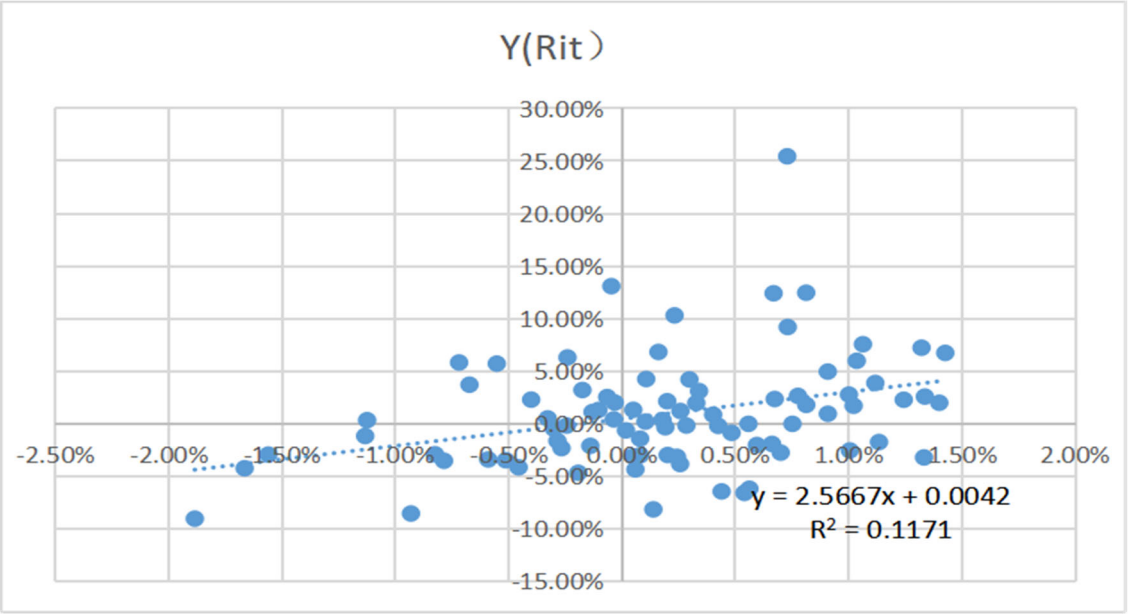


Fig. 1 Equations obtained during the estimation window of event I

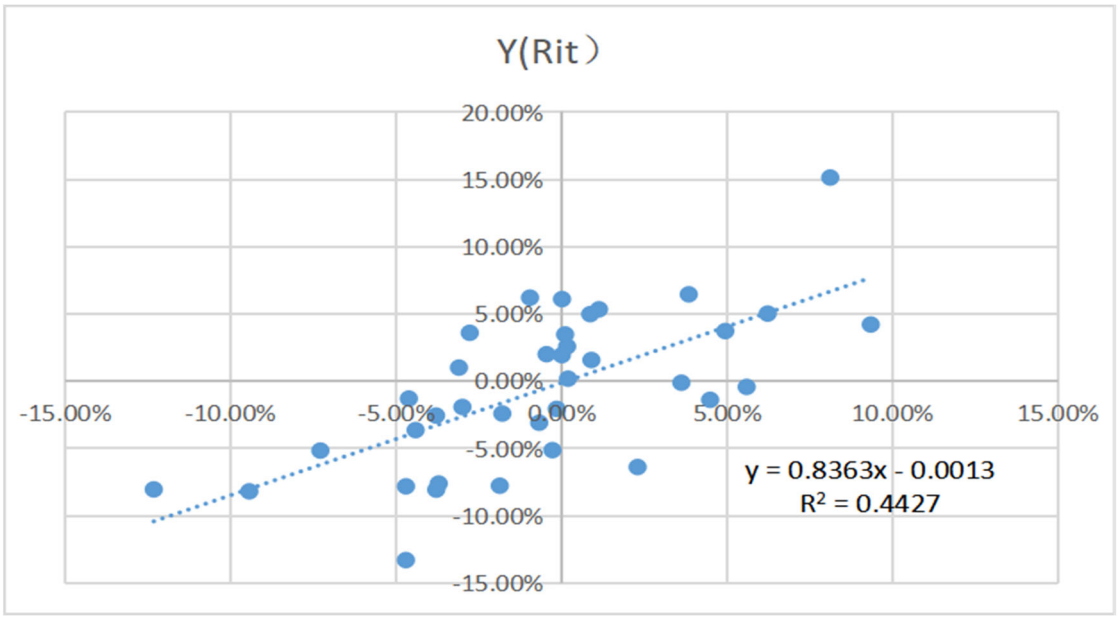


Fig. 2 Equations obtained during the estimation window of event II

The final parametric equations are obtained as follows:

Table 2. Parametric equations from events

Event	Estimation window	Parametric equation	α	β
01-31 Event I	2019-09-30 to 2020-01-30	y=2.5667x+0.0042	0.0042	2.5667
04-02 Event II	2020-02-10 to 2020-04-01	Y=0.8363x-0.0013	0.0013	0.8363

From the value of β, Luckin Coffee's daily return rate (Rit) is positively correlated with market return rate (Rmt), and the β value of event I is much larger than that of event II, indicating that before the occurrence of event I, the positive relationship between Luckin Coffee 's Rit and Rmt was relatively significant, and the relationship between the two was greatly reduced after the occurrence of Event I.

According to Equation (1), the expected return rate of Luckin Coffee's stock price in the event window can be calculated by:

$$AR_{it} = R_{it} - E(R_{it}) \quad (2)$$

Then the difference between the actual return rate and the expected return rate can be calculated, and can get the abnormal return rate:

$$CAR_{it} = \sum_{t=t_1}^{t_2} AR_{it} \quad (3)$$

AR_{it} and cumulative abnormal return rate.The return rate for the event I event window period is shown in Table 3:

Table 3. Rate of return earned during the Event I event window

Date	Trading day	Expected return rate %	Abnormal return rate %	Cumulative abnormal return rate %
2020/1/28	-3	17.64%	-10.93%	-10.93%
2020/1/29	-2	0.31%	-0.35%	-11.29%
2020/1/30	-1	-9.54%	5.66%	-5.63%
2020/1/31	0	-27.15%	16.41%	10.78%
2020/2/3	1	-8.59%	5.08%	15.86%
2020/2/4	2	40.46%	-24.86%	-9.00%
2020/2/5	3	0.91%	-0.72%	-9.72%

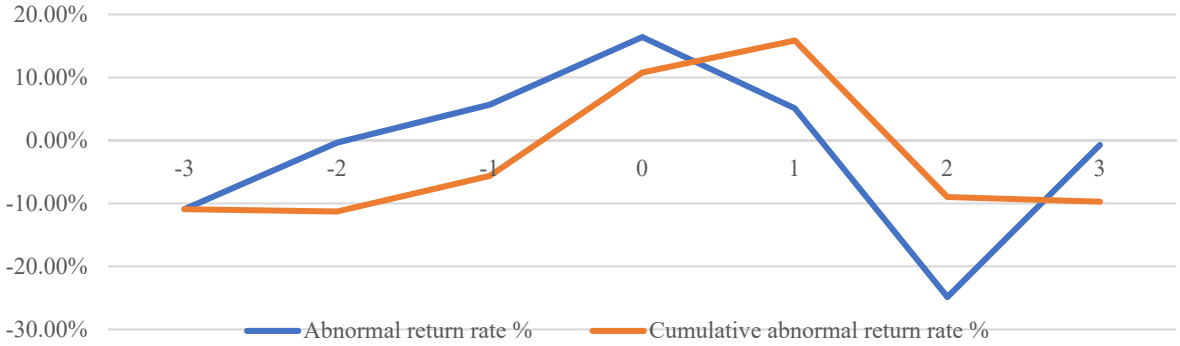


Fig. 3 2020-1-31 Event I Abnormal Return Rate and Cumulative Abnormal Return Rate

From the combination of Table 1 and Figure 3, Luckin Coffee was exposed to fraud on the 31st, and the return rate on February 1 and February 2 was not announced. After the fraud was revealed, the CAR value dropped significantly to -24.86% on the day of the event. Meanwhile, Luckin Coffee denied the fraud, which increased the CAR value to -0.72% on February 5. Judging from this change, the fraud event has had a great effect on the changes in the stock price of Luckin Coffee.The returns obtained during the event window of Event II are shown in Table 4:

Table 4. Rate of return earned during the Event II event window

Date	Trading day	Expected return rate %	Abnormal return rate %	Cumulative abnormal return rate rate %
2020/3/27	-4	-6.88%	-1.19%	-1.19%
2020/3/30	-3	-0.23%	0.11%	-1.08%
2020/3/31	-2	5.06%	1.15%	0.07%
2020/4/1	-1	-3.17%	-0.47%	-0.40%
2020/4/2	0	-63.33%	-12.24%	-12.64%
2020/4/3	1	-13.46%	-2.48%	-15.12%
2020/4/6	2	-15.52%	-2.88%	-18.00%
2020/4/7	3	-0.13%	0.13%	-17.87%
2020/4/8	4	-0.13%	0.13%	-17.74%

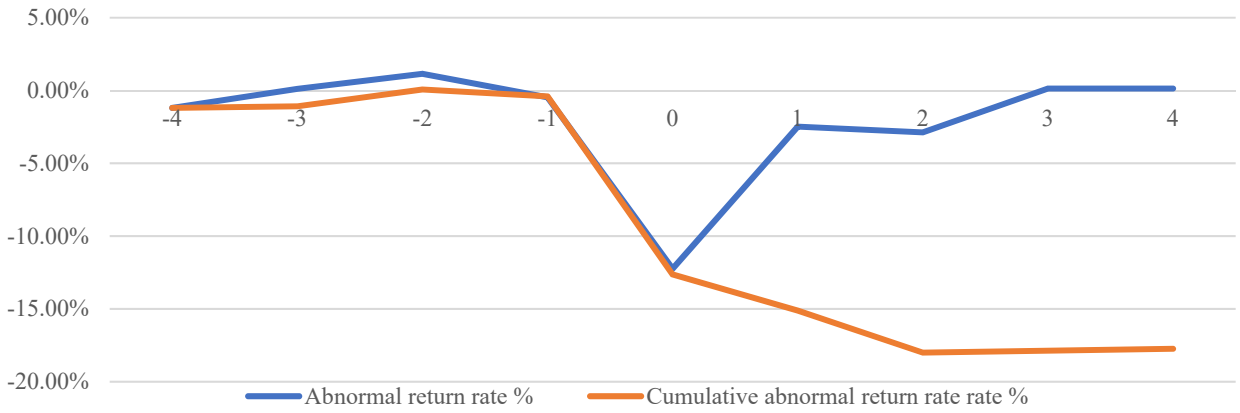


Fig. 4 2020-4-2 Event II Abnormal Return Rate and Cumulative abnormal return rate Rate

From the combination of Table 2 and Figure 4, after Luckin Coffee announced on April 2, 2020 that the 2019 annual report had a fraud problem, the CAR value immediately dropped to -12.24% on that day. After the event day, the abnormal return rate is less than 0. After April 7, all the trading volume of Luckin Coffee is 0. In Figure 4, it seems that the cumulative abnormal return rate rate is less than 0. It shows that the fraudulent event of Luckin Coffee has a great impact on the stock price, and this event reflects that the management problems within Luckin Coffee Company are more serious, resulting in a large amount of funds belonging to false transactions.

4. Countermeasures and suggestions

4.1 From the perspective of audit institutions -- learning muddy waters

4.1.1 Enhance their understanding of the company's business model

Audit institutions are not only auditing financial data, but also on this basis, they need to investigate the business nature of enterprises and truly analyze the business model and financial problems of enterprises, so that they can really find problems.

4.1.2 Improve the reliability of data and evidence collected during the audit process

When auditors are used to obtain evidence to check the internal report is given priority to, ignore the company's external evidence, to save costs, seldom take the way of field investigation, combined with the audit forensics way is not standard, there is no specific provision in the mode of forensics, cause the auditor to blind forensics, neither efficient nor evidence data quality. If the audited company deliberately falsifies, the audit unit is difficult to detect. Therefore, audit institutions should improve the reliability of data and evidence collected in the audit process. So as to reduce the audit risk.

4.2 The enterprise

4.2.1 Improve the governance structure and internal control

Should diversify ownership structure of listed companies, to avoid a dominant, dispersing the first big shareholder control of the strict division of the shareholder meeting, board of directors and board of supervisors, management right and right, the mechanism of mutual supervision and checks and balances, especially to the audit committee and board of supervisors and the supervision function of internal audit department, found that disclosed the question in time, Ensure that independent directors really play a supervisory role and can express their opinions objectively, impartially and independently.

4.2.2 Adhere to the principle of professional ethics and integrity

There is no wall in the world that is not transparent. The law's net is slow and sure, such as Yinguangxia, Zijin Heye, Green Earth, Wanfu Health Science, Kangzhi Pharmaceutical, etc., these

financial fraud cases without exception will only let the company decline. Therefore, only by adhering to the principles of professional ethics and integrity can listed companies promote the progress of enterprise technology; To help enterprises get rid of difficulties and achieve their phased development goals; And help enterprises to establish a good image, create enterprise brand.

4.3 Government and regulations

4.3.1 Strengthen supervision of listed companies

From the current situation, in order to better prevent financial fraud of listed companies, it is necessary to further strengthen supervision and better avoid financial fraud of enterprises, which need to be refined and deepened.

4.3.2 Improve laws and regulations

While Luckin does business in China, it is incorporated in China as a subsidiary, with the parent company incorporated in the Cayman Islands, a British overseas territory, and listed on the Nasdaq exchange in the United States, which is legally a foreign company registered by a foreign securities regulator to be listed on a foreign exchange. The China Securities Regulatory Commission has no direct jurisdiction. However, no matter where the listed company is listed, the listed company should strictly abide by the laws and rules of the relevant market and fulfill the obligation of information disclosure truthfully, accurately and completely.

4.3.3 Learn foreign methods

Regulators could learn from flying inspections abroad. If the inspection results are different from the company's statements, there will be a large probability of problems, which is worth focusing on.

5. Conclusion

In the context of the current severe global epidemic prevention situation and the downward international economic situation, this paper, based on the analysis of the four factors of GONE theory and the event research method, studies the changes of samples and stock returns before and after the occurrence of Luckin coffee fraud, and obtains the abnormal reaction degree of stock prices to the incident. Financial fraud has multi-factor influence and repetition, so anti-financial fraud will be long-term, complex, and for a single element of prevention measures will lead to fraud governance failure, this paper through three different perspectives to deal with the prevention of governance: audit institutions, enterprises themselves as well as the government and regulatory agencies. Finally, Chinese concept share companies, government regulatory departments, internal and external audit institutions should maintain the international reputation of Chinese enterprises, optimize the financing environment of Chinese enterprises and achieve the sustainable and healthy development of Chinese enterprises as the goal, comprehensive measures to curb financial fraud.

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