



# Internal Control Deficiency or Regulatory Failure? A Triangulated Case Study of Zixin Pharmaceutical Applying the Fraud Triangle Framework

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**Abstract.** In recent years, financial fraud has become a significant issue in the corporate world, posing a serious threat to investors and market integrity. This paper applies the Fraud Triangle Theory to analyze the case of financial fraud at Zixin Pharmaceutical and briefly compares it to Kangmei Pharmaceutical to highlight common weaknesses in regulatory mechanisms. The research focuses on identifying the motivations behind Zixin Pharmaceutical's fraudulent behavior by in-depth analyzing its internal controls, regulatory oversight, and enforcement mechanisms. The results indicate that Zixin Pharmaceutical's management, under pressure from performance expectations and financing demands, exploited internal control weaknesses and regulatory loopholes to engage in fraudulent practices, including fictitious transactions and revenue inflation. The comparison with Kangmei Pharmaceutical further emphasizes the need to strengthen internal controls, enhance external audit quality, and strengthen regulatory enforcement to curb financial fraud effectively. This study contributes to the existing literature by providing a detailed analysis of industry-specific causes of financial fraud in the ginseng trading sector and specific recommendations for improving corporate fraud detection and regulatory prevention mechanisms. The insights gained from this research can help strengthen regulatory frameworks and corporate governance practices, ultimately fostering a more transparent and trustworthy financial market environment.

**Keywords:** Financial Fraud, Zixin Pharmaceutical, the Fraud Triangle Framework.

## 1 Introduction

Recently, financial fraud has become a significant concern globally. Financial fraud refers to acts and statements through which financial market participants misinform or mislead other participants by deliberately or recklessly providing false, incomplete, or manipulative information related to financial goods, services, or investment opportunities, in violation of regulatory rules, statutory law, civil law, or criminal law [1]. Based on data spanning 1976 to 2023, it was found that, on average, 0.96% of Compustat-listed firms were engaged in financial misrepresentation that eventually trig-

gered regulatory enforcement actions [2]. It is obvious that financial misrepresentation would cause serious consequences, and the negative effects of financial misrepresentation occurred in several aspects. For employees, 93.4% were fired during the regulatory enforcement period. And many also confront reduced job opportunities, both financial penalties and other forms of punishment, as well as criminal sanctions [3]. What's more, businesses and consumers would be affected by financial fraud a lot, too. When it comes to businesses, some adverse effects, such as financial losses, damage to reputation, and increased costs, would be mentioned. As for consumers, financial losses, emotional distress, loss of trust in financial institutions and decreased financial stability are all the detrimental effects that would arise [4].

Due to the serious negative impacts mentioned above, everyone becomes distraught about the existence of financial fraud and is on guard against it. So it is particularly important to study some specific cases and draw some experience. The case of Zixin Pharmaceutical is a typical example of such fraudulent activities, which not only led to substantial financial losses but also undermined the confidence of investors and the integrity of the capital markets. This study aims to explore the underlying causes of financial fraud at Zixin Pharmaceutical with the use of Fraud Triangle Theory, and then provide insights into the identification and prevention of such fraud. The writer will also compare Zixin Pharmaceutical with Kangmei Pharmaceutical Co., Ltd. (hereinafter referred to as 'Kangmei Pharma'). By comparing the two regulatory responses and identifying their commonalities and differences, it can pinpoint the weaknesses in the regulatory mechanisms. And this will make suggestions to enhance regulatory effectiveness and prevent financial fraud.

While existing literature has extensively analyzed financial fraud from the perspectives of internal control deficiencies, regulatory loopholes, and inadequate law enforcement, a research gap remains in the in-depth exploration of fraud motivations and regulatory mechanisms in specific industries, such as ginseng trading. This paper addresses this gap by analyzing the motivations and causes behind financial fraud at Zixin Pharmaceutical, a case study. Applying the Fraud Triangle theory and combining it with a comparative analysis of Kangmei Pharmaceutical, this paper concludes that inadequate regulatory policies and enforcement are key factors contributing to the occurrence of financial fraud. This conclusion has significant theoretical and practical significance.

Theoretically, this study enriches the literature on the application of the Fraud Triangle Theory by in-depth analyzing the Zixin Pharmaceutical case and provides a new perspective on the motivations of financial fraud in specific industries. Practically, its findings offer concrete recommendations for improving regulatory policies, strengthening internal controls, and enhancing law enforcement, which will help reduce the occurrence of financial fraud, protect investor interests, and enhance market trust.

## 2 Current Research Progress on Financial Fraud

Previous researchers have already conducted in-depth investigations in this field. And the reasons why financial fraud would occur have been mentioned in [5]. Prior studies have found that the sustained economic boom and rising housing prices have led to a steady increase in personal debt, which indirectly increases the incidence of financial fraud. Under pressure from these economic factors, some individuals have begun to resort to financial fraud to increase their wealth. Furthermore, since the global financial crisis, public and political risk aversion has grown, along with the increasing exposure of mortgage fraud and consumer and investment scams. These factors have collectively prompted a re-examination of deregulatory policies, which has indirectly increased the incidence of financial fraud.

The negative impact of financial fraud is actually not limited to national borders. From a global perspective, loss of confidence in a nation's financial system by international investors will lead to capital flight and currency devaluation. And complicating cross-border legal actions and asset recovery. Direct losses, eroding trust, raising regulatory costs, and restricting economic growth are all the economic consequences of financial fraud, as it affects individuals, businesses, governments, and the broader economy [6].

The existing financial fraud techniques are classified based on three different factors: The success rate, the detection methods employed, and the specific types of fraud examined [7]. And the specific detection methods include: Bayesian belief networks, logistic regression or logistic model, neural network, support vector machine, genetic algorithms and programming, decision trees, forests, and CART, group method of data handling, text mining, self-organizing map, process mining, artificial immune system, and hybrid methods.

With the significant advancements in technology today, AI has emerged as a powerful tool in preventing financial fraud [8]. AI can distinguish between normal and fraudulent activities; when anomalies are detected, it can either terminate the transaction for further scrutiny or temporarily pause it to prevent potential fraud.

## 3 Motivations Using Fraud Triangle Theory

### 3.1 Pressure

The pressure of Zixin Pharmaceutical can be divided into 2 different parts: Performance growth and funding requirements. Firstly, performance growth. In 2010, Zixin Pharmaceutical entered the ginseng industry, and its revenue reached 640 million yuan that year, representing a 151% year-on-year increase, while its net profit surged by 184% to 173 million yuan. The company's performance in the first half of 2011 was particularly remarkable, with revenue and net profit jumping 226% and 325% year-on-year to 370 million yuan and 111 million yuan, respectively. This high performance may bring company executives extremely large pressure as they may want to maintain it to match the expectations of the investors. Secondly, Funding require-

ments: Zixin Pharmaceutical faced an extremely severe financial crisis. Initially, Zixin Pharmaceutical's substantial investments in the ginseng sector resulted in considerable inventory buildup. The firm acquired vast quantities of wild-simulated ginseng, and this inventory constituted an excessively large portion of the company's total assets.

In 2017, the company's inventory increased from 2.673 billion yuan in 2016 to 4.833 billion yuan, 1.8 times that of 2016. By 2022, Zixin Pharmaceutical's inventory had ballooned to a book value of 7.577 billion yuan, with consumable biological assets valued at 6.017 billion yuan, representing about 79.41% of the total inventory. The majority of these consumable biological assets were wild-simulated ginseng. As the market price of ginseng is highly volatile, once the price of ginseng plummets, the value of the inventory of Zixin Pharmaceutical will drop a lot, which will further exacerbate the company's financial pressure.

### **3.2 Opportunity**

According to the Administrative Penalty Decision of the China Securities Regulatory Commission, from 2013 to 2020, Zhongzhun Certified Public Accountants failed to fully understand the internal controls over the procurement of wild-simulated ginseng during the audit of Zixin Pharmaceutical. Although the audit working papers concluded that the internal controls over procurement and payment cycles were well-designed and operating effectively, the records did not cover the procurement of wild-simulated ginseng, and the walkthrough tests also excluded this business. Moreover, Zhongzhun did not obtain sufficient and appropriate audit evidence to support the conclusion that the controls were well-designed and operating effectively. From 2017 to 2020, Zhongzhun further overlooked the importance of identifying revenue fraud and inventory fabrication as special risks. Despite audit working papers documenting potential fraud risks in revenue recognition and possible fictitious inventory, Zhongzhun did not identify these risks as special risks, nor did it gain a thorough understanding of the control activities related to the procurement of "inventory - consumable biological assets".

Such audit failures created an opportunity for Zixin Pharmaceutical to commit financial fraud, as they allowed the company to inflate its assets by fabricating inventory purchases and confirmations without being detected promptly. The failure to identify these risks as special risks indicates that the company may not have sufficient control measures to address them. These shortcomings provided opportunities for company executives to exploit loopholes.

### **3.3 Rationalization**

On the one hand, company management may believe that short-term fraudulent behavior, boosting performance, will secure additional financing and market opportunities. They may believe that temporarily inflating financial results will secure additional capital and partnerships, ultimately benefiting the company's long-term development. This "for the good of the company" excuse alleviates management's guilt to

some extent, as they convince themselves that short-term fraud is a necessary step toward long-term success.

On the other hand, management may believe that inflating revenue and profits will stabilize the stock price and bolster investor confidence. By demonstrating superior financial results, they aim to maintain a stable stock price, which will attract new investors and keep existing ones satisfied. Therefore, they use “stabilizing the stock price” as a justification for fraudulent behavior. Furthermore, management may believe that other companies are engaging in similar fraudulent practices, thus perceiving their actions as “industry common practice” and justifying their own misconduct. They may reason that since everyone else is doing it, it must be acceptable.

## **4 The Financial Fraud Case of Zixin Pharmaceutical**

### **4.1 Company Profile**

Founded in May 1998, Zixin Pharmaceutical is a high-tech joint-stock company that integrates research, development, production, sales, and the cultivation of medicinal animals and plants. The company’s main business focuses on the research, development, production, and sales of traditional Chinese medicine, with a primary emphasis on TCM for treating cardiovascular and cerebrovascular diseases, digestive system diseases, and orthopedic injuries. Its key products include Huoxue Tongmai Tablets, Musk Bone-Connecting Capsules, Xingnao Zaizao Capsules, Compound Yiganling Tablets, Bushen Anshen Oral Liquid, and Simiao Pills. In addition to these, Zixin Pharmaceutical has also expanded into the ginseng industry and the gene sequencing instrument industry. The company’s ginseng products range from rough to deep processing, and the research, development, production, and sales of gene sequencing instruments represent a significant area of growth for the company.

### **4.2 Fraudulent Behavior**

According to the Administrative Penalty Decision of the China Securities Regulatory Commission, the fraudulent behaviours of Zixin Pharmaceutical include: Firstly, non-disclosure of Related Party Transactions. From 2013 to 2020, Zixin Pharmaceutical failed to disclose related party transactions as required, resulting in significant omissions in the annual reports for those years.

Secondly, overstating purchases and inventory. From 2014 to 2020, Zixin Pharmaceutical inflated the purchase costs of underground ginseng and subsequently capitalized such inflated costs as inventory. This led to false and misleading financial statements and undisclosed non-operating capital transactions in the annual reports for those years.

Thirdly, revenue and Profit Manipulation. In 2017 and 2018, Zixin Pharmaceutical engaged in fraudulent activities to inflate revenue and profit. As a result, the annual reports for those years contained false records.

### 4.3 Review of the Financial Fraud Incident of Zixin Pharmaceutical

Table 1 shows Zixin Pharmaceutical's inventory and accounts receivable balances from 2017 to 2021. Over these five years, the company's inventory balance fluctuated significantly, starting at 61.09 billion yuan in 2017, peaking at 76.10 billion yuan in 2018, and then declining slightly to 67.56 billion yuan in 2019. It rebounded to 68.52 billion yuan in 2020 and peaked again at 76.10 billion yuan in 2021. Accounts receivable balances also showed significant fluctuations, steadily increasing from 9.21 billion yuan in 2017 to 11.52 billion yuan in 2019, before declining to 9.72 billion yuan in 2020 and further to 7.48 billion yuan in 2021. These data are crucial because they highlight that Zixin Pharmaceutical's inventory and accounts receivable balances are significantly higher than the industry average. This discrepancy suggests potential issues with inventory management and credit policies.

**Table 1.** Zixin Pharmaceutical's partial financial reports from 2017 to 2021.

	Inventory balance (billion yuan)	Accounts receivable balance (billion yuan)
2017	61.09	9.21
2018	76.10	9.26
2019	67.56	11.52
2020	68.52	9.72
2021	76.10	7.48

Data source: Zixin Pharmaceutical 2017-2021 annual report.

## 5 Compared to Kangmei Pharma

### 5.1 Introduction of the Financial Fraud Case of Kangmei Pharma

Kangmei Pharmaceutical Co., Ltd., referred to as "Kangmei Pharmaceutical", was founded by Ma Xingtian in Puning City, Guangdong Province, in 1997. Its predecessor was Guangdong Kangmei Pharmaceutical Co., Ltd. It went public in 2001. Its main business is the trade of Chinese herbal medicines, the production and sales of Chinese herbal medicine slices, Chinese patent medicine preparations, health foods, chemical drugs, and medical devices, and the development of a modern pharmaceutical logistics system.

In a midnight report released, Kangmei Pharmaceutical reported 2018 revenue of 19.356 billion yuan, a year-on-year increase of 10.11%, while net profit was 1.135 billion yuan, a year-on-year decrease of 47.20%. Along with the release of its 2018 annual report, Kangmei Pharmaceutical also issued a notice regarding the correction of prior accounting errors, stating that the company had made a series of revisions to its 2017 financial statements. The notice stated that after receiving an investigation report from the China Securities Regulatory Commission, Kangmei Pharmaceutical conducted a self-examination and discovered discrepancies in cash, operating income,

operating costs, and inventory in its 2017 financial statements. The company subsequently restated and re-disclosed the 2017 financial statements. The revised 2017 financial statements revealed significant misstatements: an overstatement of monetary funds by 29.944 billion yuan, an understatement of accounts payable by 19.546 billion yuan, an overstatement of inventory by 8.898 billion yuan, an overstatement of operating costs by 7.662 billion yuan, and an overstatement of retained earnings by 3.257 billion yuan.

## 5.2 Conclusion from the Comparison

Given the frequency of financial fraud occurrences, it has to question whether it is due to inadequate enforcement and regulatory measures in the market. Therefore, this study compares Zixin Pharmaceutical with the company most similar to it - Kangmei Pharmaceutical. The financial fraud at Kangmei Pharmaceutical mainly involved the inflation of monetary funds and profits, revealing significant shortcomings in regulatory policies for identifying and addressing such issues. Although the responsible parties were eventually held criminally liable, the delay in enforcement allowed the fraudulent activities to persist for several years, causing substantial losses to investors and the market. The regulatory authorities' failure to promptly detect these issues through information disclosure and audit supervision highlights the gaps in regulatory policies for identifying and dealing with financial fraud.

The situation with Zixin Pharmaceutical differed, as regulatory gaps primarily manifested in insufficient regulatory oversight of its ginseng-related business activities. The company inflated its revenue and profits by fabricating ginseng transactions and concealing related-party transactions. The lack of detailed regulatory scrutiny for these specific activities enabled the company to exploit these loopholes for fraudulent purposes. Although Zixin Pharmaceutical was also penalized, the sanctions were relatively lenient and failed to form a sufficient deterrent against potential financial fraud. The punitive measures mainly focused on fines and delisting, while the penalties for the responsible parties were relatively light, failing to deter potential fraudulent behavior effectively. This situation may lead to a scenario where the benefits of fraudulent activities outweigh the costs, increasing the risk of other companies following suit.

By comparing these two cases, it is evident that there are loopholes in regulatory policies and enforcement in different areas. The Kangmei Pharmaceutical case exposed regulatory gaps in identifying the inflation of monetary funds and profits, while the Zixin Pharmaceutical case highlighted the insufficient regulation of specific business activities. Both companies faced issues with inadequate enforcement. For cases like Kangmei Pharmaceutical, regulators need to improve enforcement efficiency and effectiveness; for cases like Zixin Pharmaceutical, more severe penalties for responsible parties are required. These cases demonstrate that enhancing regulatory policies and increasing enforcement efforts are crucial for preventing financial fraud.

## 6 Countermeasures to Financial Fraud

Through the analysis of Zixin Pharmaceutical, it can be realized that there are still deficiencies in the countermeasures to prevent and stop financial fraud. The comparison between Kangmei Pharmaceutical and Zixin Pharmaceutical gave a deeper understanding of the harm of financial fraud and provided some suggestions for strengthening prevention.

Firstly, from the internal perspective of the enterprise, it can optimize the corporate governance structure and improve internal control. While enhancing the oversight effectiveness of the audit committee, companies (especially those with industry-specific businesses like ginseng trading) also need executive directors familiar with corporate operations, as these directors play a key role in identifying internal control weaknesses [9]. When adopting a corporate governance framework with an audit committee, establishing various advisory committees and involving outside directors and audit committee members can ensure greater transparency and accountability, clarify the division of responsibilities between management's supervisory and executive activities, and ultimately achieve effective corporate governance.

Secondly, from the external perspective of the regulation. It is really crucial to strengthen external audit supervision. External audits are performed by independent and professionally qualified individuals [10]. External auditors audit a company's financial statements based on specific regulations and principles. Because there is no connection between the auditors and the audited companies, the financial information they provide is objective and reliable for investors and government agencies. Furthermore, audit reports are valuable to the companies themselves, as they focus on their financial status and operating results and examine management issues to mitigate potential risks.

## 7 Conclusion

This study applies the Fraud Triangle theory to a detailed analysis of the financial fraud case at Zixin Pharmaceutical, revealing the motivations and causes behind the fraud. The analysis reveals that, under pressure from performance expectations and financing needs, Zixin Pharmaceutical's management exploited internal control deficiencies and regulatory loopholes to engage in fraudulent practices, including fictitious transactions and inflated revenues. A comparative analysis with Kangmei Pharmaceutical highlights common weaknesses in regulatory mechanisms and insufficient enforcement, factors that contributed to this type of fraud. The findings underscore the importance of strengthening internal controls, enhancing external audit quality, and strengthening regulatory enforcement to effectively combat financial fraud and preserve market integrity.

The primary contribution of this paper lies in its in-depth application of the Fraud Triangle theory to the Zixin Pharmaceutical case, providing a comprehensive perspective on the causes of financial fraud. By identifying specific internal control weaknesses and regulatory deficiencies, this study provides practical

recommendations for improving fraud detection and prevention mechanisms. Future research could consider expanding the scope to include more cases and exploring the role of advanced technologies in fraud detection to further enhance the robustness of regulatory frameworks and corporate governance practices.

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