

Model and Consequences of Xiangxue Pharmaceutical's Financial Fraud Case

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Abstract. From 2016 to 2020, Xiangxue Pharmaceutical conducted financial fraud and related-party fund embezzlement, leading to the issuance of a delisting-risk warning for its shares. Minority shareholders incurred substantial losses with limited recovery prospects. This article combines the GONE theory and the fraud triangle theory, and employs the F-Score model to analyze the abnormal characteristics of its financial indicators. It discerns both financial fraud and related-party fund misappropriation at Xiangxue Pharmaceutical. Financial fraud can inflict systemic harm on a company, and effective governance and remediation necessitate a dual-pronged strategy combining personnel adjustments and institutional development. At the same time, it is necessary to improve market supervision mechanisms, strengthen external penetrative audits and internal governance, and increase the cost of illegal activities to prevent financial fraud. This article extracts universal financial abnormal signals that serve as key reference indicators for minority shareholders when making investment decisions when making investment decisions, aiming to optimize the market investment ecology.

Keywords: Xiangxue Pharmaceutical, financial fraud, motivation analysis, F-Score model

1. Introduction

This study focuses on the financial fraud incident of Xiangxue Pharmaceutical (300147). Based on the “Administrative Penalty Decision” (Guangdong Securities Regulatory Punishment No. [2025] 5) issued by the Guangdong Regulatory Authority of the China Securities Regulatory Commission and the regulatory announcement of the Shenzhen Stock Exchange, we chronologically reconstruct the sequence of events.

As a benchmark enterprise in the traditional Chinese medicine industry, Xiangxue Pharmaceutical was fined RMB 20.65 million by the China Securities Regulatory Commission in March 2025 due to systematic financial fraud and related-party fund occupation issues for five consecutive years. The controlling shareholder, Wang Yonghui, received a RMB 10 million fine and a five-year market-entry ban. Subsequently, the company's stock was placed under ST warning. Due to Xiangxue Pharmaceutical's irregular operations and failure to timely and accurately disclose important financial reports, scattered small and medium-sized shareholders became one of the biggest bearers of losses in this case.

This study aims to conduct systematic risk quantification research on the financial fraud incident of Xiangxue Pharmaceutical based on the theoretical framework of financial fraud early warning and utilizing the F-score model [1, 2]. By developing a multidimensional financial-indicator framework, this study examines the time-series characteristics of 11 key variables, including current ratio, operational capacity, and profit quality, within the fraud cycle of the enterprise, in order to identify abnormal signal combinations hidden in the financial statement data. The innovative value of this study lies in combining the F-Score financial early warning model with the GONE theory and the motivation analysis of the fraud triangle theory. Through empirical data mining, we explore the predictable characteristics of fraudulent behavior, providing theoretical support and actionable suggestions for improving the capital market supervision mechanism and investor risk identification system.

2. Case introduction

Xiangxue Pharmaceutical is a company in the pharmaceutical industry, with its main business being the manufacturing of traditional Chinese medicine. This article analyzes the key context of the company's fraudulent motives and consequences, focusing on the core illegal facts of the financial fraud incident, regulatory penalties, and the resulting business crisis

Firstly, the characteristics of illegal facts. In December 2019, the company overstated its annual profits by 53.8325 million yuan by failing to recognize losses from the demolition of illegal villas, which accounted for 45.98% of the disclosed total profits, leading to systemic information deficiency in its financial statements. Secondly, the fraudulent behavior exacerbated the overall collapse of operations. From 2021 to 2023, the company's net profit attributable to shareholders was negative for three consecutive years, with a cumulative loss of 1.596 billion yuan, and the expected loss in 2024 is expected to further expand. The above-mentioned illegal facts, regulatory penalties, and operating conditions provide key node support for analyzing the motivations and consequences of financial fraud.

3. Theoretical analysis

This study integrates the GONE theory and the fraud triangle theory to construct a four-dimensional analytical model encompassing greedy motivation, pressure inducement, opportunity conditions, and self-rationalization cognition. Case analysis, combined with primary sources such as annual reports and regulatory letters, reveals the complementarity of the two theories: the “exposure” dimension of GONE theory provides risk assessment tools, while the “rationalization” component of the fraud triangle elaborates on psychological cognitive mechanisms, constituting an end-to-end framework of “motivation-behavior-cognition”. Based on fraud motivations, governance measures to prevent financial fraud in listed companies are proposed, with the aim of providing a reference for the governance of financial fraud in listed companies [3].

Firstly, the cultivation of excessive greed. In the GONE theory, “Greed” refers to an individual's excessive pursuit of wealth or benefits. In the corporate context, this often manifests as abuse of control power, maintaining the equity pledge chain through irregular means, such as not recognizing the loss from the demolition of villas on Guangzhou Biological Island and falsely increasing profits by 53.83 million yuan. Furthermore, it involved tunneling through the creation of a related-party transaction closed loop: in 2017, a subsidiary, Xiehe Precision, was sold to controlling shareholder Kunlun Investment for 1.62 billion yuan, and in 2021, it was repurchased for 1.5 billion yuan.

Through “selling high and buying low plus assuming debts”, funds were indirectly extracted, forming a vicious cycle of “high pledge subtract high fraud-high tunneling”.

Secondly, the pressure of fraud faced by Xiangxue Pharmaceutical presents a transmission chain of business deterioration, financing constraints, and equity pledge crisis. The core pressure stems from the continuous deterioration of operations. The decline in the main business from 2018 to 2020 led to consecutive negative net profits after deducting non-recurring gains and losses, necessitating the falsification of profits to maintain financing capabilities. Derivative pressure comes from equity pledge risks. The actual controller, Wang Yonghui, has long maintained an equity pledge ratio of over 70%. In 2020, the stock price plummeted by 60%, triggering a position closing warning, forcing the management to falsify performance to stabilize the stock price. The liquidity crisis further exacerbated the pressure. In 2020, the monetary funds were only 76 million yuan, while short-term borrowings reached 1.452 billion yuan, with a liquidity ratio of 0.36. It had to fill the gap through the occupation of 4.852 billion yuan of related party funds. These three pressures form a self-reinforcing loop, rendering financial fraud a self-destructive remedy.

Third, the existence of opportunities for trickery. In the GONE theory, “Opportunity” refers to the likelihood and cost of fraud detection. When external supervision is insufficient, penalties are weak, and internal controls have defects, the opportunities for fraud increase. Gao Minxue pointed out in “Efforts to Address Statistical Data Quality Issues Starting from External Supervision” that external supervision needs to cover the entire data production chain and must “implement penetrating examination in accordance with the law”. As shown in Table 1, the Xiangxue case provides a typical example: the China Securities Regulatory Commission fined the company 6 million yuan, fined the actual controller Wang Yonghui 10 million yuan, and imposed a 5-year market ban. Compared to the 4.8 billion yuan of occupied funds, the fines accounted for only 0.33%, and no criminal liability was pursued. Low sanctions and inadequate supervisory penetration jointly diminish the perceived risk of detection and being held accountable, providing an opportunity for Xiangxue Pharmaceutical to falsify for five years, which is consistent with the core viewpoint of the GONE theory that “opportunity is a condition for fraud to be implemented”.

Table 1. Comparison of illegal profits and illegal costs of Xiangxue Pharmaceutical

Project	Illegal gains	Illegal cost	Penalty/Benefit ratio
Fund occupation by related parties	The actual amount of capital occupation from 2016 to 2020 has accumulated to 4.852 billion yuan.	The company was fined 6 million yuan, and the actual controller was fined 10 million yuan, with a total fine of 16 million yuan.	About 0.33%
Inflated profits	In 2019, the falsely inflated profit amounted to 53.8325 million yuan	No separate penalty, included in the overall fine	No precise data calculation

Source: “Audit Report of Shanxi Xiangxue Pharmaceutical Co., Ltd.” published by Beijing Dehao International Certified Public Accountants in 2024.

Fourth, self-rationalization of fraudulent acts. In the fraud triangle theory, “rationalization” refers to the psychological cover-up of fraudsters for their own actions. They rationalize their fraudulent behavior by making excuses, reducing their moral guilt, and “legitimizing” their actions in their own cognition. As shown in Table 2, the management concealed fraud through systematic self-rationalization, justifying the occupation of 4.85 billion yuan as a “common industry practice”, but in reality, it violated the disclosure requirements of the Securities Law and had a debt ratio of 73.72%, far exceeding the industry average of 30%. The “trust financing” funds were essentially

used to repay debts to related parties. At the accounting level, the term “temporary differences” was used to delay the recognition of losses of 53.83 million yuan from the demolition of villas, confusing the recognition boundaries between asset impairment and contingent matters. This technique was used for five years without resolution and became a tool for long-term fraud.

Table 2. Comparison of disguised means of capital occupation and actual flow of Xiangxue Pharmaceutical

Occupation in name	Year of occurrence	The involved amount has been announced	Claimed purpose	Actual flow direction	Violation of regulatory provisions
Purchase trust financial management	2016-2020	Accumulated 4.85 billion	Short-term investment and financial management	Debt repayment and equity acquisition by related parties	Article 63 of the Securities Law
Cooperative operation of traditional Chinese medicinal materials	2018-2020	In 2018 alone, it was 1.408 billion	Medicinal material procurement turnover	Project payment for Xianglan Guanzhou Hotel	Disclosure rules for related party transactions
Advance payment for asset acquisition	2017-2019	929 million for decoration	Development of the Bio Island project	Debt repayment of controlling shareholders	Prohibitive regulations on capital occupation

Data source: Compiled from the company’s announcement, Guangzhou Xiangxue Pharmaceutical Co., Ltd. Announcement on Receiving the “Prior Notice of Administrative Penalty” by the Company and Relevant Parties.

4. Model analysis

The F-Score model, developed by Joseph Piotroski, is a financial risk assessment system that comprehensively evaluates a firm’s financial health through binary scoring of nine indicators (1 point for meeting criteria, 0 points for failing to meet criteria). The model covers three dimensions: profitability, leverage and liquidity, and operational efficiency, and can effectively identify potential financial risk signals in companies [4]. As shown in Table 3, the application value of this model is particularly prominent in the case of Xiangxue Pharmaceutical. This traditional Chinese medicine enterprise, once known as the “Southern Xiangxue”, has been subject to ST treatment since March 2025 due to financial fraud. Its five-year-long irregularities can be revealed in advance through F-Score analysis [5].

Table 3. Changes in key profitability indicators of Xiangxue Pharmaceutical from 2018 to 2023

Year	Net profit (in billions of yuan)	Net profit after deducting non-recurring gains and losses (in billions of yuan)	ROA (%)	Cash flow from operating activities (in billions of yuan)
2018	0.42	-0.46	1.20%	-1.8
2019	0.71	-0.27	2.00%	-0.9
2020	0.98	0.12	2.50%	1.2
2021	-6.77	-7.31	-15.60%	-0.6
2022	-5.30	-5.10	-12.30%	-0.4
2023	-3.89	-4.02	-8.70%	0.2

Note: The data for 2019 includes an inflated profit of 53.83 million yuan, with an actual net profit of approximately 17 million yuan and an ROA of about 0.5%.

Firstly, the continuous deterioration of net profit and ROA. From 2018 to 2023, net profit plummeted, with a cumulative loss exceeding 2.2 billion yuan. In 2019, actual losses were concealed through inflated profits (deducted net profit - 27 million yuan). ROA fell from 1.2% to -8.7%, indicating inefficient asset utilization, and the relevant indicators in the F-Score model scored 0. Secondly, the abnormal divergence between operating cash flow and profit: In 2019, when profits were inflated, operating cash flow was negative, forming a phenomenon of “profit-cash flow divergence”, and the F-Score cash flow indicator scored 0. In 2020, related parties occupied funds of 1.357 billion yuan, which was 11.3 times the net operating cash flow for that year (120 million yuan), indicating that cash flow could not cover outflows [6]. Thirdly, comprehensive assessment results of profit quality. During the peak period of fraud from 2019 to 2020, after deducting inflated profits, actual net profit was negative, ROA declined, and cash flow was abnormal. The F-Score profitability dimension scored 0, confirming that deteriorating profit quality serves as an antecedent signal of fraud. Fourthly, multidimensional risk signals emerged: deterioration in leverage level (asset-liability ratio rose to 73.7%), collapse in solvency (current ratio of 0.36), and low operational efficiency (gross profit margin halved, asset turnover rate plummeted). Multiple indicators of abnormality directly pointed to financial risks [7]. Fifthly, the comprehensive score of the F-Score model is shown in Table 4. From 2018 to 2023, the F-Score dropped from 4 to 1, and the total score from 2019 to 2020 was ≤ 2 (high risk), which highly matched the actual violations, verifying the model's early warning capability [8]. Sixthly, the correspondence between risk signals and violations: The low scores in the F-Score model logically matched the violations: a score of 0 in profit indicators pointed to inflated profits in 2019, a score of 0 in leverage indicators reflected fund occupation, and abnormal accrued income exposed accounting manipulation, confirming that low scores are strong early warning signals of financial fraud [9, 10].

Table 4. Summary of F-Score for Xiangxue Pharmaceutical from 2018 to 2023

Evaluation dimension	Specific indicators	2018	2019	2020	2021	2022	2023
profitability	Net profit > 0 (1 point)	1	0	1	0	0	0
	Operating cash flow > 0 (1 point)	0	0	1	0	0	0
	ROA increase (1 point)	0	0	0	0	0	1
Leverage and solvency	Δ leverage ratio ≤ 0 (1 point)	0	1	0	0	0	1
	Δ current ratio > 0 (1 point)	0	0	0	0	0	0
	No additional shares issued (1 point)	1	1	0	1	1	0
Operating efficiency	Gross profit margin change (Δ) > 0 (1 point)	1	0	0	0	0	0
	Δ Asset turnover ratio > 0 (1 point)	0	0	0	0	0	0
	Accrued income/total assets ≤ 0 (1 point)	1	0	0	1	1	1
F-Score total score	-	4	2	2	2	2	3

Short-term impact: After the issuance of the ST warning announcement, the share price of Xiangxue Pharmaceutical plummeted by 28.6% in a single day, with a market value loss of 1.52 billion yuan, reflecting the strong negative reaction of investors to the exposure of corporate financial risks and the concentrated release of market panic [11]. Medium-term sustained decline: The cumulative abnormal return over the three trading days after the event was -12.3%, and the CAR expanded to -18.7% over the five trading days, indicating that investor concerns over governance failures and doubts about business sustainability continued to intensify, further undermining investor confidence [12]. Long-term impact: The shareholding ratio of institutional investors decreased from 18.5% before the risk exposure to 6.2% one year later, and financing channels were comprehensively contracted, indicating that the collapse of market trust had a profound impact on the company's long-term financing capabilities, which in turn affected its business expansion and debt repayment ability [13].

Overall, during the event window period, investors' selling behavior dominated the market based on their rational assessments of fraud risks, governance failures, and operational crises, leading to a significantly negative cumulative abnormal return for Xiangxue Pharmaceutical [14]. This reflects the market's effective punishment and risk pricing of financial fraud.

5. Case summary

The consequences triggered by Xiangxue Pharmaceutical's financial fraud have exhibited a multi-dimensional systemic collapse, causing a chain reaction from financial fundamentals to market trust. The financial consequences are manifested in the severe deterioration of asset quality. In 2019, the inflated profit of 53.83 million yuan led to artificially high retained earnings, and subsequent accounting adjustments expanded the accumulated losses to 1.596 billion yuan, fundamentally impairing the balance sheet's reliability. The company's debt structure is severely imbalanced. In 2020, short-term borrowings reached 1.452 billion yuan, while monetary funds were only 76 million yuan, resulting in significant short-term debt repayment pressure. In 2024, the asset-liability ratio climbed to 73.72%, with total liabilities of 5.937 billion yuan. Furthermore, the company's cash flow is nearly disrupted. From 2018 to 2022, the net cash flow from operating activities accumulated to -250 million yuan. In 2020, related parties occupied 1.357 billion yuan of funds, which was 11.3 times the net cash flow from operating activities for that year (120 million yuan), continuously

straining the capital chain. The operational consequences are manifested as a disruption across the entire supply chain.

Due to the escalating risk of payment collection, the stability of supplier cooperation has declined, leading to a collapse of supplier trust. From 2021 to 2023, the cumulative losses exceeded 1.3 billion yuan, with a noticeable decline in the main business and a significant reduction in production line utilization. The stability of the core team has been affected by the operational crisis, highlighting the issue of talent loss. This has hindered the progress of research and development projects and weakened innovation capabilities.

The market consequences were manifested in a wholesale erosion of creditworthiness. After the exposure of financial fraud, financing plans such as private placements were blocked. Small and medium-sized shareholders suffered losses exceeding 1.6 billion yuan, and a collective lawsuit by investors has been initiated, with potential compensation expenses further exacerbating financial pressure. Credit ratings were downgraded, limiting the company's financing capabilities and impeding bond issuance, forming a vicious cycle of "deteriorating operations - restricted financing - deepening crisis". In summary, financial fraud conceals real risks by inflating profits, leading to imbalances in financial structure, deterioration of operational capabilities, and loss of market trust, ultimately pushing the enterprise into a crisis of sustainable operation.

6. Conclusion

This article analyzes the financial fraud case of Xiangxue Pharmaceutical and finds that fraud motivations comprise controlling-shareholder greed, multifaceted pressures, regulatory gaps, and self-rationalization. The F-Score model can effectively warn of financial risks, while fraud leads to deterioration of the company's operations and collapse of market trust, forming a vicious cycle. The Xiangxue Pharmaceutical case confirms the complementary utility of GONE theory and the fraud-triangle framework: the former elucidates the risk transmission mechanism of greed-opportunity-exposure, while the latter supplements the psychological mechanism of pressure-rationalization; it confirms the early warning value of the F-Score model for financial risks and provides practical tools for investors and regulators. Based on the case analysis, this article proposes corresponding suggestions: enterprises need to improve their governance structure and strengthen internal control and supervision mechanisms. Regulators should increase penalties and implement penetrating reviews; investors can use financial models to identify potential risks and help the healthy development of the market.

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