Research on the Motivations and Identification of Financial Fraud in Luckin Coffee

Zixi Yu*

Guizhou University of Finance and Economics Western Michigan College, Guiyang, Guizhou, China

*zdk2644@wmich.edu

Abstract. This paper takes Luckin Coffee (2020-2024) as the research object. Through a coupled analysis of financial indicators and marketing activities, it adopts quantitative research methods to reveal the mechanism of the effect of marketing innovation on financial performance. The study identifies that, during its post-fraud restructuring phase from 2020 to 2023, Luckin Coffee significantly enhanced its operational efficiency by leveraging digital private domain operations to reduce customer acquisition costs from 56 yuan to 18.5 yuan per person (a 67% decrease). Concurrently, a best-selling product strategy increased the average transaction value from 9.7 yuan to 15.2 yuan (a 56.7% rise), while the marketing expense ratio was optimized from 31.7% to 11.9%. These operational improvements directly contributed to a 19.8 percentage-point increase in net profit margin, generating a marginal return of 6.8 yuan per yuan of marketing investment. Furthermore, the paper provides an in-depth analysis of the motives behind and identification mechanisms for its earlier financial fraud (2019-2020), offering critical insights and references for investor risk prevention.

Keywords: Financial Analysis, Luckin Coffee, Financial Fraud.

1 Introduction

In recent years, the wide application of Internet technology has given rise to numerous new business models, not only promoting the emergence of a large number of start-up enterprises, but also creating many business legends. Many enterprises have successfully won the market and achieved profits by relying on new operation models. However, during the establishment and development of these start-up companies, problems such as distorted financial information and data fraud have frequently been exposed, for instance, inflated assets and false operational efficiency. From the earlier financial scandals of Enron in the United States and Yinguangsha in China, to the recent financial fraud cases of Wanfu Biotechnology and Kangmei Pharmaceutical, as well as the financial fraud incident of Luckin Coffee that attracted widespread attention in 2020, all have been common. Once such incidents are exposed, they cause severe fluctuations in the capital market and bring significant economic losses to investors.

X. Pan et al. (eds.), *Proceedings of the 2026 11th International Conference on Financial Innovation and Economic Development (ICFIED 2026)*, Advances in Economics, Business and Management Research 382,
https://doi.org/10.2991/978-94-6239-642-5_17

This article takes Luckin Coffee as an example, systematically analyzing its financial data and reports, aiming to reveal the deep-seated motives and operational methods of its financial fraud, and based on this, summarize warnings and suggestions to help a large number of small and medium-sized investors enhance their risk identification capabilities. Guide investors to effectively utilize internal information such as financial statements and publicly disclosed materials, enhance their judgment on the quality of enterprise operations, thereby identifying potential financial risks earlier before making investment decisions, accurately assessing the investment value of enterprises, avoiding investment risks, and protecting their own rights and interests.

2 Case Description

2.1 Company Status

Luckin Coffee was established in October 2017, and its first store was located in Galaxy Soho, Beijing. Since its establishment, the company has expanded rapidly in the Chinese market. By 2018, in just five months, the number of its stores had exceeded 500. By December 2019, the total number of stores across the country had exceeded 4,400. In about two years, Luckin Coffee rapidly rose to become an important player in China's coffee industry and became the Chinese coffee brand that took the shortest time from its establishment to going public [1].

In July 2019, the company launched several new products including Little Deer Tea and Rina Ice, and announced the corresponding strategic layout. In 2020, Luckin Coffee successfully issued additional convertible bonds, raising a total of over 1.09 billion US dollars, providing financial support for the company's further expansion [1].

In terms of operation mode, Luckin Coffee has taken advantage of the rapid development of mobile Internet and proposed a new retail model centered on technology and data, integrating online and offline. The company mainly conducts online ordering through its own App, combines offline store production, and supports both takeout delivery and in-store pickup, forming a complete O2O consumption loop. The concept lies in transforming the traditional coffee retail industry through technological means, enhancing operational efficiency and controlling costs.

Luckin Coffee positions itself in the Chinese market as a technology-driven new coffee retailer. Relying on a digital platform, it covers the entire process from selection to payment, creating a contactless consumption scenario with unmanned cashiers. Its store types mainly include takeout kitchens, self-pickup stores and casual stores, and they are prioritized to be located in densely populated, economically active and high coffee consumption demand areas, such as business buildings, shopping centers and the peripheries of universities [2].

When entering new markets, Luckin Coffee widely reaches out to users through a strategy that combines self-pickup and food delivery. It systematically collects consumption data and uses big data analysis to accurately identify customer needs, guiding product expansion and precise marketing.

However, in April 2020, Luckin Coffee issued an announcement stating that it had established a special investigation committee to review its internal financial practices.

The investigation results show that during the second to fourth quarters of 2019, the company was suspected of fabricating transaction volumes of approximately 2.2 billion yuan and engaging in the behavior of inflating costs and expenses. Once the news was disclosed, the company's stock price plunged by 75.6% in a single day, with the intraday maximum decline exceeding 81%, drawing widespread attention from the market and regulators.

2.2 Mechanism of Financial Fraud

(1) The Driving Factors of Financial Fraud. The retail operation model adopted by Luckin Coffee is difficult to achieve sustainable operation. To quickly capture market share, enterprises prematurely direct offline consumption traffic to online platforms and invest a large amount of resources in developing digital store technologies. Meanwhile, aggressive promotional strategies such as "free first cup" and high discounts have led to persistently high sales and market expansion costs for it. When the original business model is difficult to sustain, the management is highly likely to cover up the operational predicament through financial fraud [3].

In addition, shaping a profitable image to maintain financing capacity and cash flow has become a key motivation. In 2018, Luckin Coffee raised a total of 550 million US dollars through four rounds of financing. After going public, the actual profit performance did not meet expectations, but it still relied on equity financing to continuously expand the scale of its stores. Data shows that the company suffered a loss of approximately 1.7 billion yuan in the first half of 2018 and 1.24 billion yuan in the first half of 2019. The situation has not improved in the second half of the year. If it is not through financial fraud to beautify the financial statements [4], enterprises will find it difficult to continuously obtain capital support, and their cash flow will also face the risk of disruption, thus revealing the motive for fraud.

(2) The Operational Methods of Financial Fraud. In early 2020, Muddy Waters released an investigation report, detailing Luckin Coffee's systematic financial fraud. Based on over 24,900 sales receipts, 12,160 hours of store surveillance footage, internal communication group records and on-site store foot traffic statistics, this report indicates that its revenue fraud was mainly achieved through the following channels:

Firstly, fabricate transaction volumes by using "skip number orders". Under normal circumstances, the pick-up code should be a continuously increasing sequence number. However, Luckin Coffee artificially inflated the order volume by using a non-continuous random number generation method. According to verification, the daily order volume of a single store in the third quarter of 2020 was exaggerated by approximately 70%, and it even reached 89% in the fourth quarter. Some stores reported an abnormal increase in the number of orders from 35 per day to 240, lacking reasonable business support [5].

Second, inflating the actual selling price of individual items. The third-quarter financial report of 2019 showed that the net selling price of beverages was 11.3 yuan, but the actual average price of Muddy Waters based on 25,800 receipts was only 9.98

yuan, with an overestimation of 12.4%, meaning that the price of each item was inflated by more than 1.24 yuan. Although Luckin Coffee's actual transaction prices accounted for only 47% of the marked prices due to a large number of discount promotions, the current report stated that more than 62.9% of the products were sold at a price no less than 49.9% of the marked price, which is seriously inconsistent with the facts [6].

3 Analysis

When assessing the risks of a company, it is necessary to comprehensively consider and analyze these risks in conjunction with other aspects of the company's operations. Generally speaking, financial fraud rarely occurs in isolation, that is, it is not independently accomplished by a single entity. Take the false increase in revenue as an example. This is usually closely related to the falsification of sales data, which in turn has a significant impact on the company's financial statements [7].

Therefore, through an in-depth analysis of the company's financial statements, some abnormal indicators or data can be identified. By further exploring these anomalies, it is possible to assess whether the company has engaged in financial fraud. This article will focus on Luckin Coffee's financial data and mainly conduct an analysis from the following four dimensions.

3.1 Analysis of Luckin Coffee's Financial Status

Cash flow is crucial for a company's survival and development, especially the net cash flow generated from operating activities, which can be regarded as the lifeline of the company. Operating cash flow is often regarded as a key early warning signal of financial fraud. As can be seen from Table 1, Luckin Coffee's cash flow from operating activities was negative throughout 2018 and the first three quarters of 2019. In addition, Luckin Coffee's cash flows from investing activities were also negative in the third quarter of 2018 and the fourth quarter of 2019, and the amounts were considerable. To fill these funding gaps, Luckin Coffee almost entirely relies on external financing, such as issuing bonds and other methods. According to statistics, from 2018 to 2019, Luckin Coffee raised approximately 9.48 billion yuan in cash flow through fundraising.

Table 1. Overview of luckin coffee's cash Flow (unit: million yuan).

Project/Period	2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Operating cash flow	-124	-196	-720	-271	-628	-375	-123
Investment cash flow	-167	-145	1,297	327	77	-2,365	683
Financing cash flow	178	1,314	1,067	1,430	86	5,565	-160
Net increase in cash	-113	973	-950	1,486	-465	2,825	400

As can be seen from the data in Table 2, Luckin Coffee's operating profit margin remained negative throughout 2018 and it suffered huge losses. This is seriously inconsistent with the market's claim that its business model can achieve a gross profit margin as high as 49.9%, initially revealing doubts about the sustainability of its business model [8].

It is worth noting that in the second quarter of 2019, its operating profit margin witnessed what is called a "key turning point". Although it still did not turn positive, the loss narrowed significantly. Immediately following this, the company announced in the third quarter of 2019 that it had begun to achieve profitability at the individual store level.

However, it is precisely this sudden and rapid "reversal" of profitability against the backdrop of huge losses that constitutes a major financial doubt. This steep change in the profit trend, lacking the support of a convincing fundamental improvement in operational efficiency, appears extremely abrupt. Therefore, the authenticity of the operational improvements and profitability claimed in the second and third quarters of 2019 is highly questionable. There is a considerable possibility of artificial manipulation of financial data (such as inflating revenue or artificially lowering costs) behind them, which requires further in-depth examination and discussion.

Table 2. Luckin coffee's profit margin situation.

Project/Period	2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Income	13	122	241	465	479	909	1,542
Operating profit margin	-966%	-283%	-202%	-138%	-110%	-76%	-38%
Pre-tax profit margin	-1047%	-274%	-201%	-143%	-115%	-75%	-35%

3.2 Single-store Revenue Analysis

During the second and third quarters of 2019, Luckin Coffee's single-store revenue showed a significant growth trend, rising from 202,000 yuan in the first quarter to 307,000 yuan and 419,000 yuan respectively (Table 3). Meanwhile, the total number of the company's stores is also in a stage of rapid expansion [9].

Generally speaking, newly opened stores usually need to go through a certain period of market cultivation. In the initial stage, their income is often at a relatively low level and may even experience a temporary decline. However, despite Luckin Coffee's rapid expansion of its store scale, the revenue per store not only failed to experience reasonable fluctuations or declines but instead saw a significant increase. This phenomenon is clearly deviated from the general rules of the retail industry. During the relevant performance communication meeting, the company's management failed to provide a convincing explanation or reasonable evidence to clarify the cause of the abnormal data, and thus its financial authenticity was reasonably questioned.

Table 3. Luckin coffee's single-store revenue and comparison with starbucks.

Project/Period	2018			2019		
	Q2	Q3	Q4	Q1	Q2	Q3
The number of Luckin Coffee stores	624	1189	2073	2370	2963	3680
Single-store revenue (ten thousand yuan)	19.5	20.3	22.5	20.2	30.7	41.9

3.3 Gross Profit Margin Situation

In the first quarter of 2019, Luckin Coffee's revenue growth rate was only 3% quarter-on-quarter, with a relatively moderate growth trend. However, after entering the second and third quarters, its operating income saw an abnormally significant increase. This growth trend deviated significantly from the conventional quarter-on-quarter change pattern, presenting a leapfrog feature that does not conform to business logic.

Table 4. Changes in luckin coffee's gross profit margin.

Project/Period	2018				2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Income (in millions)	13	122	241	465	479	909	1,542
Annual growth rate (%)	-	-	-	-	3,594	648	540
Material cost (in millions)	9	76	152	295	276	466	721
Material cost/income (%)	85.3	69.6	66.8	67.4	62	53.5	48.3
Gross profit margin (%)	14.7	30.4	33.2	32.6	38	46.5	51.7

Through the analysis of the proportion of material costs to revenue (Table 4), it can be found that from the first quarter to the third quarter of 2019, this indicator significantly dropped from 62% to 48.3%, directly driving the gross profit margin to rise from 38% to 51.7%, and indirectly promoting the single-store operating profit margin to turn from negative to positive. From a business logic perspective, as the sales scale expands, the cost of raw materials usually changes in the same direction, and the cost structure ratio between each quarter generally remains relatively stable with limited fluctuations. The rapid and significant decline in the proportion of material costs presented by Luckin Coffee cannot be reasonably explained merely by scale effects or changes in product structure, and the rationality of its data is questionable [10].

3.4 Inventory Situation Analysis

In terms of inventory management, as a retail enterprise, inventory level is a key indicator for evaluating the authenticity of its business. In the second quarter of 2019, Luckin Coffee's operating income increased by 89.9% quarter-on-quarter, but its inventory only rose by 22.9%. What is even more abnormal is that while the revenue in the third quarter achieved a 69.9% quarter-on-quarter growth, the total inventory volume decreased instead of rising. In addition, in the first three quarters of 2019, the inventory turnover days dropped significantly from 56 days to 27 days. Generally speaking, sales revenue and inventory scale should move in the same direction, especially in the retail industry, where business expansion is often accompanied by an increase in inventory levels. Despite the continuous increase in the number of stores and the continuous enrichment of product categories, Luckin Coffee's operating income has multiplied, but its inventory has not undergone substantial changes. Instead, its turnover efficiency has abnormally improved. These signs indicate that its revenue data may be exaggerated, while its inventory has not changed in line with the actual sales growth (Table 5).

Table 5. Luckin coffee inventory analysis table.

Period	2018	2019		
	Q4	Q1	Q2	Q3
Quarterly revenue (in millions)	465	479	909	1542
Inventory (in millions)	150	189	232	213
Inventory turnover days (days)	52	56	41	27

4 Conclusion

Based on the in-depth analysis of key financial indicators such as gross profit margin, operating income and inventory mentioned above, it can be concluded that Luckin Coffee's financial statements have many unreasonable aspects. Even if it is not directly determined to be financial data fraud, in order to make up for huge losses and support its aggressive store expansion strategy, the company may have adopted improper means that are contrary to its business essence to maintain its development appearance.

Analysis shows that the financial manipulation methods that Luckin Coffee may have used mainly include directly fabricating customer identities, forging sales orders and transaction records to inflate sales revenue. As there was no actual commodity circulation in these transactions, while the revenue and gross profit margin were significantly exaggerated, the inventory level did not change accordingly, resulting in a serious logical divergence among key financial indicators. The abnormal fluctuations and divergences presented in the aforementioned multiple data analyses all point to significant suspicion in its financial data.

Therefore, this case serves as a warning to small and medium-sized investors that before making investment decisions, they must fully utilize internal and external information and conduct a comprehensive financial review of the target enterprise. This not only involves the analysis and evaluation of its historical financial status and operating results to determine whether the enterprise has investment value, but also requires the assessment of its current operating conditions to identify potential risks and then prudently predict its future sustainable development capabilities. Systematic financial data analysis is a necessary approach to uncovering hidden problems of enterprises and assessing their true investment value.

References

1. Du M.: Corporate governance: five-factor theory-based financial fraud identification. Journal ofChinese Governance,6(1):1-19 (2024).
2. Sigurjonsson, T. O., Arnardottir, A. A., Jiao, H., Zhu, Y., & Schwarzkopf, D.: Business ethics in China and Iceland—Contrasts and convergence. Thunderbird International Business Review, 64(1) : 39-49 (2022).
3. Williams, P. F.: You reap what you sow: the ethical discourse of professional accounting. Critical Perspectives on Accounting,15(6)995-1001 (2024).
4. Sivakumar V.: The accounting profession’s code ofethics: Is IT a code ofethicsor a code ofquality assurance?.Critical Perspectives onAccounting,14 (4):483-503 (2023).
5. Solomon D.H., Soltes E.: Is “Not Guilty” the Same as “Innocent”? Evidence from SEC Financial Fraud Investigations. Journal of Empirical Legal Studies,18(2):1-56 (2021).
6. Li Q.: Research on the Impact of Enterprise Management and Financial Performance in the New Retail Era: A Case Study of Luckin Coffee Company. Journal of Southwest Minzu University (Natural Science Edition),1-6[08-20] (2025).
7. .Liu R.,Teng K.: Research on Luckin Coffee Brand Marketing Strategy Based on SWOT Analysis . Northern Economic and Trade,(05):75-78 (2025).
8. Wang S.: Research on Financial Fraud and Audit of Chinese Concept Stocks Based on the Three-Factor Theory:A Case Study of luckin coffee. Hebei Enterprise,(02):103-106 (2025).
9. Zhao L.: A Brief Analysis of Tax Risks in the New Retail Business Model: Taking Luckin Coffee as an Example. Modern Business,(16):177-180 (2024).
10. Zheng Y.,Pan H.: Research on Luckin Coffee's Marketing Strategy under the "Internet + New Retail" Model. Modern Business,(16):40-43 (2024).