

A Case Analysis of Risk Identification in Financial Reporting

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Abstract. This paper studies the identification of financial risks of Pagoda, with the background of the listing boom of China's stock market from 2014 to 2015 and the market prosperity and hidden dangers it brought. With the impact of the epidemic, many companies have exposed their vulnerabilities, especially the financial risks faced by listed companies have become more prominent. The theme of the study is to identify the financial risks that Pagoda may face through financial data analysis and evaluate them using the Z-Score model. The paper first reviews the relevant literature on financial risk identification, pointing out that the combination of traditional methods and modern technology can improve the accuracy of risk identification. Then, the article analyzes the financial status of Pagoda as of June 30, 2024, and finds that its revenue and net profit both declined, and its debt-to-asset ratio increased significantly, showing a trend of deteriorating financial structure. Calculated by the Z-Score model, Pagoda's Z value is in the "gray area", indicating that its financial situation is unstable. The conclusion points out that Pagoda faces multiple challenges such as declining consumption capacity, intensified market competition, and increased marketing expenses, which lead to rising financial risks. To cope with these risks, it is recommended that the company optimize its franchise model, slow down the pace of strategic transformation, and establish a continuous financial risk early warning mechanism to ensure the healthy development and sustainability of the company.

Keywords: Risk Identification, Financial Reporting, Pagoda.

1. Introduction

From 2014 to 2015, China's stock market experienced another wave of listing. During this period, the Chinese government launched a series of reform measures, including deepening institutional reforms and the role of leveraged bulls, and the stock market performed actively. Many companies chose to go public during this period to take advantage of the stock market boom and investor enthusiasm. But the listing boom is usually closely related to the stock market boom and investor confidence. During the stock market boom, investors are confident and willing to pay higher prices for stocks, providing a favorable market environment for companies to go public. Listing is like a wave sweeping the business community. At that time, many companies eagerly plunged into the torrent of listing, attracted by the many attractive prospects brought by listing, such as financing convenience and increased corporate visibility. However, there are many hidden dangers behind this wave. Once the market sentiment changes, the stock market may adjust or even collapse. In the process of pursuing listing, a large number of companies shortsightedly focused on the immediate benefits of listing, but ignored the assessment of their own risk resistance and the consideration of the sustainability of their business model. They failed to fully foresee the various challenges that might be faced in the future and hurriedly prepared for listing. When the global crisis of the epidemic suddenly came, the vulnerability of those listed companies that were not well prepared was exposed without reservation. The supply chain disruptions and sluggish consumer market caused by the epidemic have put these companies that originally lacked a solid foundation into a difficult situation. The shadow of poor management has shrouded many companies, and they are facing many problems such as deteriorating financial conditions and difficulties in capital turnover. For listed companies, financial risks may still hurt the foundation of the company at any time. Accurate identification of financial risks can help companies plan in advance, take preventive measures before risks come, and ensure the stable operation of the company. Under this premise, whether it is those listed companies

that have suffered from poor management during the epidemic or new listed companies that have just entered the capital market, they urgently need to solve a key problem: how to quickly identify risks in their own finances. The research on this issue is of far-reaching and significant significance. As a representative listed retail company in the market, Pagoda will be the object of this research this time. As a leading company in the fruit retail industry and one of the earliest listed companies in this field, the health of its financial situation is of great significance to the entire industry and the market. Therefore, this paper aims to identify the possible financial risks it faces by analyzing the financial data of Pagoda. By using the Z-Score model for analysis, it hopes to provide a reference example for many listed companies, revealing how to keenly identify financial risks in a complex business environment, thereby contributing to the healthy development of listed companies and the stability of the entire capital market.

2. Literature Review

The concept of financial risk identification can be traced back to the mid-20th century, when scholars began to explore how to identify the risks faced by enterprises through financial indicators. For example, in 1966, American scholar Beaver first proposed the use of univariate analysis to establish an early warning model for identifying and predicting financing risks. This was the earliest article to introduce the predictive usefulness of financial ratios into the empirical field [1].

As time goes by, the research on financial risk identification pays more and more attention to practical application. Scholars began to study how to identify and evaluate the financial risks of enterprises by building models. For example, the famous Z-Score model was first proposed by Edward I. Altman, a professor at the Stern School of Business at New York University in 1968. He observed bankrupt and non-bankrupt manufacturing companies in the United States, selected 22 financial ratios, and established the famous 5-variable Z-score model through mathematical statistics screening. The model uses multiple variable schemes to establish a multivariate linear function formula, and the total evaluation score (i.e., Z value) formed after weighting various financial indicators is used to complete the evaluation of financial risks [2]. Rumelt published "Strategy, Structure, and Economic Performance" in 1974. This paper is a pioneering work in the field of strategic management, which also involves the impact of diversified operations on corporate financial risks [3]. In 1977, Edward I. Altman introduced the ZETA model, which is a further development of the Z-Score model and is used to more accurately identify the bankruptcy risk of enterprises [4]. Ohlson further developed the bankruptcy prediction model and used logistic regression to analyze financial ratios. Ohlson (1980) used the logit method to analyze the distribution of selected unpaired samples in the bankruptcy probability interval and the relationship between the two types of discrimination errors and the split point, and further developed the bankruptcy prediction model [5].

Later, the research on financial risk identification paid more attention to comprehensive analysis and multidisciplinary cross-disciplinary research. Scholars began to study how to combine financial indicators with non-financial indicators, and how to combine traditional statistical methods with modern machine learning methods to improve the accuracy and practicality of financial risk identification. For example, in 1990, Odom and Sharda published a paper titled "A neural network model for bankruptcy prediction", which introduced a neural network model to predict corporate bankruptcy. The results of the paper showed that neural networks may be applicable to bankruptcy prediction problems [6]. In 1993, Coats and Fant published a paper titled "Recognizing Financial Distress Patterns Using a Neural Network Tool". The study constructed neural networks (NNs) to estimate the future financial health of a company [7]. Neural networks are a relatively new mathematical method for identifying distinguishing patterns in data. The researchers used neural networks to identify financial data patterns that can consistently distinguish between generally healthy companies and distressed companies. The study found that the neural network model can make better predictions before corporate bankruptcy, which effectively overcomes the shortcomings of the Z-score model.

In modern times, Friede, Busch and Bassen published "ESG and Financial Performance: Aggregated Evidence from More than 2000 Empirical Studies." in 2015, which counted nearly 2,200 ESG-related studies from 1970 to 2014 and found that 90% of the research papers showed a non-negative relationship between ESG and corporate financial performance, and 62.6% of the research papers showed a positive relationship between ESG and corporate financial performance. This provides companies with an effective tool to identify and prevent financial risks, helping companies take timely measures to avoid or mitigate the impact of financial crises [8].

In the future, research on financial risk identification may focus more on real-time monitoring and dynamic analysis, as well as how to combine financial risk identification with corporate strategic decision-making to achieve sustainable development. At the same time, with the development of artificial intelligence and big data technology, the methods and tools for financial risk identification may also be further innovated and developed.

3. Financial Status and Risk Analysis

As of June 30, 2024, Pagoda's revenue in the first half of the year was RMB 559 million, a year-on-year decrease of approximately 11.1%. Its profit before interest and tax was RMB 9 million, a decrease of 63.6% compared to the same period in 2023. The number of stores decreased by 68 to 6,025 in the first half of the year. This was reflected in the basic and diluted earnings per share, which decreased by 64.7% year-on-year [9].

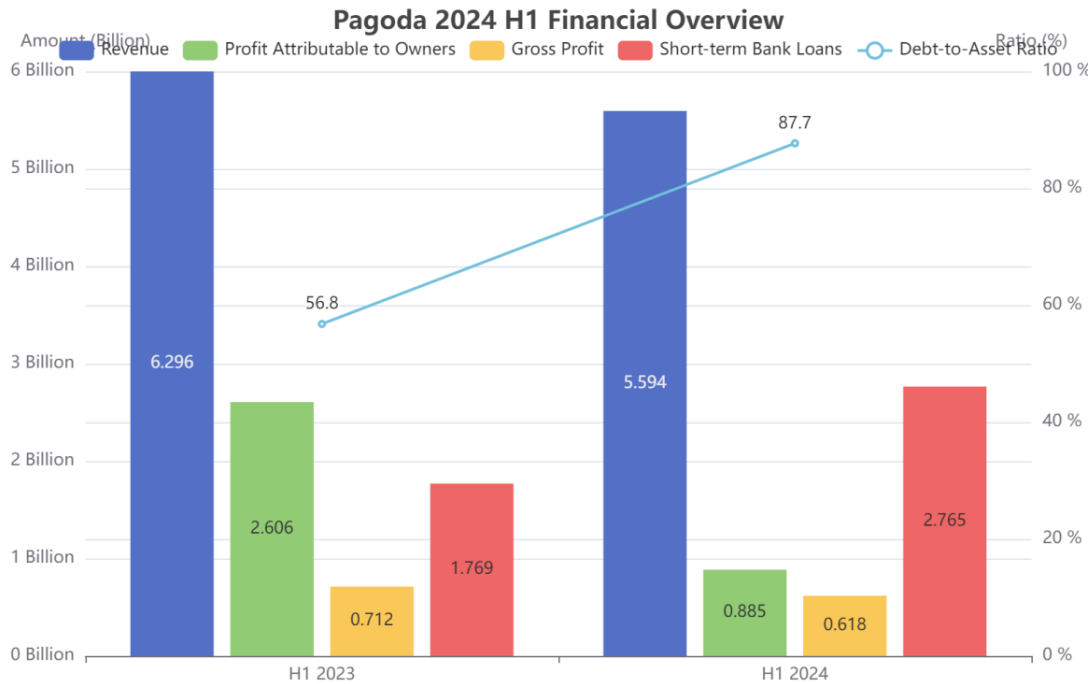


Figure 1. Pagoda 2024 H1 Financial Overview.

As shown in Figure 1, the financial status of Pagoda in the first half of 2024 and the first half of 2023 shows that the company suffered a double decline in revenue and net profit. Specifically, the company achieved revenue of RMB 5.594 billion, a year-on-year decline of 11.1%; the profit attributable to the company's owners was RMB 88.506 million, a year-on-year decline of 66.1%. The gross profit was RMB 618 million, a year-on-year decline of 13.2%. In terms of assets and liabilities, according to Pagoda's "Announcement of Interim Results for the Six Months Ending June 30, 2024", within half a year, Pagoda's asset-liability ratio surged from 56.8% to 87.7%. Short-term bank loans increased from RMB 1.769 billion to RMB 2.765 billion. The significant increase in these two data indicates that Pagoda's financial structure is deteriorating and financial risks are increasing. In terms of cash flow, Pagoda has not seen a significant cash flow break, and its working capital is basically

the same as at the end of 2023. According to the stock market, Pagoda's stock price has fallen by more than 70% this year, and its market value has evaporated by more than HK\$7 billion.

Judging from the basic data, the financial performance of Pagoda in the first half of 2024 is not optimistic. The double decline in revenue and net profit means that the company's competitiveness in the market may be weakening, which may be related to the intensification of market competition and the change in consumer preferences. The reduction in the number of stores reflects the company's adjustment in its expansion strategy and the decline in market demand. The surge in the debt-to-asset ratio and the increase in short-term bank loans directly point to the deterioration of the company's financial situation, which limits the company's growth space and increases operational risks.

From an extended interpretation, the challenges faced by Pagoda may include damage to its brand image and a decline in consumer trust. For example, the previously exposed food safety issues, the use of rotten fruits to make high-priced fruit cuts, and the sale of overnight fruits as fresh fruits and other violations have seriously affected Pagoda's reputation and consumer trust. In addition, Pagoda's high debt-to-asset ratio and cash flow problems may also lead to a decline in investor and market confidence in the company, which in turn affects the company's stock price and market value. These factors combined not only affect Pagoda's short-term financial performance, but may also have an impact on its long-term market competitiveness and sustainable development.

4. Construction of Risk Warning Model and Analysis of the Underlying Reasons

4.1. Establishment of Z-Score Model

In order to cope with the current unfavorable situation for Pagoda, a risk warning model is constructed to calculate the current financial risk of the company, which reflects the financial status of the company. The Z-score model is a classic financial risk warning model proposed by Edward I. Altman in 1968. The model analyzes multiple financial ratios of the company and calculates a comprehensive score (Z value) to assess the possibility of bankruptcy. This paper will also use this model to calculate the financial risk of Pagoda. The Z-score model first selects 5 important financial indicators, then assigns different weights to each indicator, calculates the Z value by weight, and finally compares the obtained Z value with the set critical value to determine its financial risk.

Z-score model is divided into two types: for listed companies and unlisted companies. Pagoda was listed on the Hong Kong Stock Exchange in 2023, so it chose the Z-score comprehensive model for listed companies.

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 0.99X_5 \quad (1)$$

Where:

$X_1 = \text{Working Capital/Total assets}$

$X_2 = \text{Retained earnings/Total assets}$

$X_3 = \text{EBIT/Total Assets}$

$X_4 = \text{Market value of Equity/Total liabilities}$

$X_5 = \text{Sales/Total Assets}$

In this prediction model, Altman proposed a critical value of 2.675. If the Z value is less than 1.81, the enterprise is at great risk of bankruptcy; if the Z value is between 1.81 and 2.675, it is called the "gray area" and its financial situation is extremely unstable; if the Z value of the enterprise is greater than 2.675, it indicates that the enterprise's financial situation is good [10]. According to Pagoda's "Interim Results Announcement for the Six Months Ended June 30, 2024" and "2023 Annual Report", the necessary data indicators for calculating the Z value are obtained, as Table 1 shown.

Table 1. Z-Score Model of Pagoda

Index	Calculation formula	Numeric
X1 (Working Capital/Total Assets)	5.26 / 7.59	0.69
X2 (Retained Earnings/Total Assets)	0.85 / 7.59	0.11
X3 (EBIT/Total Assets)	0.10 / 7.59	0.01
X4 (Market value of Equity/Total liabilities)	9.60 / 4.25	2.28
X5 (Sales/Total Assets)	1.03 / 7.59	0.13
Z (Weighted summation)	$1.2 * 0.69 + 1.4 * 0.11 + 3.3 * 0.01 + 0.6 * 2.28 + 0.99 * 0.13$	$2.51 < 2.675$

It can be seen that Pagoda's Z value is in the "gray area" and its financial situation is unstable. Considering that the data used is from the end of 2023, some important data indicators of 2024 compared with 2023 are shown in Figure 2. A serious decline will affect the size of the Z value. It is reasonable to speculate that the Z value in 2024 will be at a lower level.

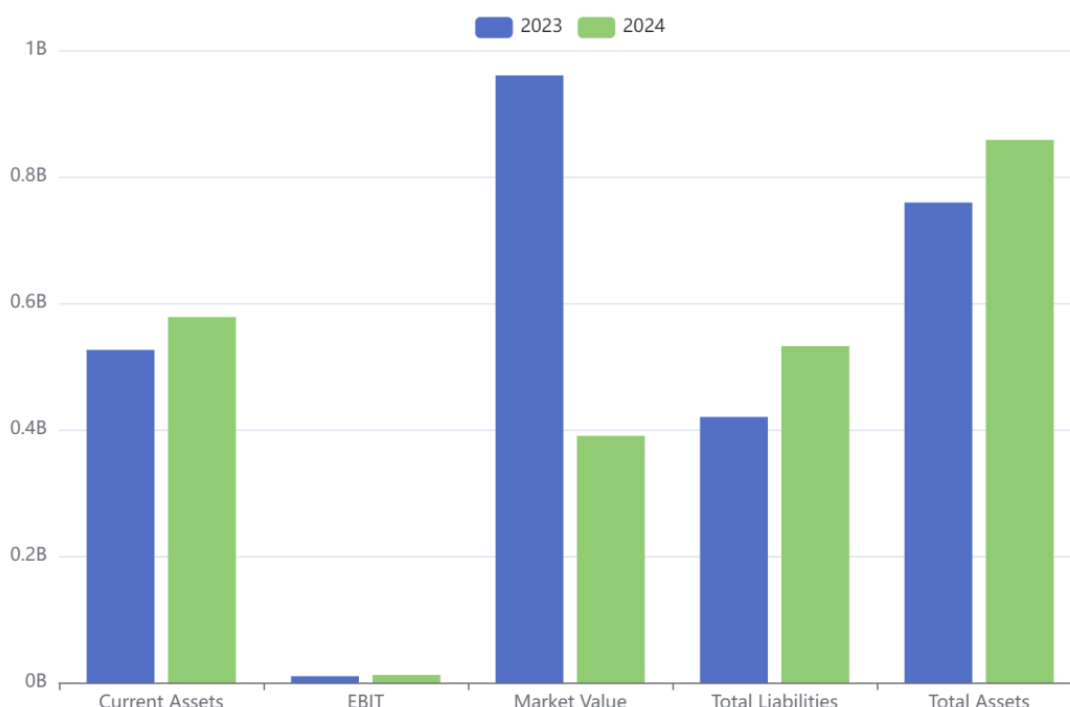


Figure 2. Financial Indicators of Pagoda from 2023 to 2024.

4.2. Analysis of the Reasons Behind

Declining spending power: The decline in China's overall spending power has led to a change in consumers' spending attitudes, and they are no longer willing to pay relatively high prices for Pagoda's high-quality fruit. This has directly affected Pagoda's revenue, as its main product is high-end fruit. The market positioning of fruit contrasts with current consumption trends.

Intensified market competition: The supply side of the fruit market is highly competitive, and the current situation of oversupply has affected the revenue of Pagoda. With e-commerce giants such as Alibaba, Pinduoduo, Meituan, and JD.com entering the fruit retail field, they have used subsidies to seize the market and cultivate user habits. Consumers have more and more ways to buy fruit, and competition is becoming increasingly fierce.

Increased marketing expenses: In early 2024, Pagoda increased marketing expenses to support its new brand strategy, which affected profit performance. This includes increased expenses for store renovations, marketing promotions, and hiring good life ambassadors.

Cost control issues: Although sales costs have decreased, sales expenses and administrative expenses have increased significantly, especially sales expenses, which increased by approximately

22.6% to RMB 297 million, and administrative expenses increased by approximately 14.9% to RMB 169 million. These expenses have also directly eroded the company's profit margins.

Franchise model risk: Pagoda's franchise model may lead to over-reliance on franchise fees and franchise income. If the stores are not managed well or a large number of them are closed, it will have a serious impact on Pagoda's financial situation. At the same time, the difficulty of unified and standardized management of the franchise model will affect Pagoda's brand image and reduce trust in the brand.

Impact of falling stock prices: Such a sharp decline in market value and falling stock prices of Pagoda will weaken investors' confidence in the company's future profitability, making it more difficult for the company to raise funds in the capital market. At the same time, the continued decline in stock prices will affect the value of the shares held by the company's executives and employees, and thus affect their work enthusiasm and loyalty to the company.

Supply Chain Management: Pagoda faces challenges in supply chain management, such as high transportation costs, high losses during processing and storage, and too many intermediate links. As a result, the distribution chain of fresh products is long and inefficient in the warehousing and logistics links.

Business model challenges: Pagoda essentially wants to transform into a high-end retailer, which can be seen from its performance. However, due to the characteristics of the fruit industry, its supply chain is long, and the loss rate is generally high at 35%-45%. After adding the distribution costs of multiple links, the industry profit margin is even lower.

To sum up, Pagoda faces many challenges, from the macroeconomic environment to market competition, to internal operations and cost control, and the company needs to take effective measures to respond.

5. Countermeasures and Suggestions

To address these financial risks, retail companies can adopt the following strategies.

To develop the low-end market, the high-end retail industry has always been focusing on the retail of high-quality and high-priced goods. As the overall consumption capacity of consumers declines, some high-end retailers should choose to add more affordable goods to expand their audience.

The retail industry must optimize the franchise model and improve the management level of franchise stores based on the current market conditions to avoid the recurrence of negative news similar to the 315 reports on the Pagoda franchise store using rotten fruits in 2024, which affected the confidence of consumers and investors, and then led to a decline in the company's stock price, affecting the company's profitability and increasing the company's financial risks.

If an enterprise intends to transform its strategy, it must slow down its transformation pace in the current market environment, reduce marketing expenses and increase its cash flow to resist financial risks. This is to avoid the increase of asset-liability ratio due to too fast or failed strategic transformation, which will make the enterprise have insufficient cash flow to resist the risks brought by the transformation and put the enterprise in a dangerous situation.

For retail enterprises, in order to ensure the healthy development of the enterprise itself and control its financial risks, it is necessary to establish a continuous financial risk early warning mechanism, establish its own financial risk early warning model to evaluate its own financial status, monitor the company's various financial data in real time, understand the risks it faces, so as to better optimize its various measures.

6. Conclusion

This article conducts an in-depth analysis of the financial data of Pagoda Group, identifies significant risks in revenue, profit, assets and liabilities, cash flow and market performance, and uses the Z-Score model to calculate that its financial situation is in an unstable "gray area". The research

results show that the challenges faced by Pagoda include declining consumption capacity, intensified market competition, increased marketing expenses, cost control issues, franchise model risks, the impact of falling stock prices, and supply chain management. These factors work together to increase Pagoda's financial risks and pose a threat to its long-term development.

However, this study has certain limitations, mainly in terms of the timeliness of the data and the universality of the model. Since the update of financial data may affect the accuracy of the Z-score, and the Z-Score model is mainly applicable to listed companies, its applicability to non-listed companies needs further verification.

Future research can focus on real-time monitoring and dynamic analysis of financial risks, and explore ways to combine financial risk identification with corporate strategic decision-making to achieve sustainable development of the company. At the same time, with the development of artificial intelligence and big data technologies, it can explore the application of these technologies in financial risk identification to improve the accuracy and real-time nature of predictions.

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