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Financial Risk Analysis of the Pharmaceutical Industry Based on Z-score Model: A Case Study of Changjiang Health

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Abstract: *In view of the increasingly prominent financial risks caused by the limited scale and insufficient innovation ability of the domestic pharmaceutical market, in order to explore how to effectively prevent financial risks and promote the stable development of pharmaceutical enterprises. This article takes Changjiang Health as an exampleand uses the Z-score model to analyze its financial risks in depth. It focuses on the impact of controlling shareholder violations on the company's financial health, comparesindustry performance, and reveals its financial vulnerability. After analysis, ChangjiangHealth is facing high financial risks and needs to optimize its capital and debt structure and strengthen financial control. Meanwhile, this study provides a reference for financial risk assessment in the pharmaceutical industry. The research results not only guide the Yangtze River Health to improve financial health, but also provide risk warnings for investors inside and outside the industry, better promoting the sustainable development of the pharmaceutical industry as a whole.*

Keywords: *Pharmaceutical Industry, Z-score Model, Financial Risk Analysis, Debt Paying Ability, Profitability*

1. Background analysis

With the global population growth, aging, increasing health awareness, and changing disease patterns, the pharmaceutical industry has attracted much attention and shown a bright future. Driven by both economic growth and healthcare reform in our country, the pharmaceutical industry has rapidly developed and has become a leading position in the global frontier market. The importance of this industry is not only related to people's livelihoods, economy, and national security, but also as a strategic emerging industry, it promotes the coordinated development of the industrial chain, significantly increases employment opportunities and tax revenue, and provides strong support for further economic development. During the public health crisis, such as the COVID-19 epidemic, the pharmaceutical industry became more critical, rapidly supplying vaccines, drugs and medical equipment, and making great contributions to the fight against the epidemic. Therefore, strengthening pharmaceutical research and development innovation, improving product quality, and accelerating industrial transformation and upgrading play a crucial role for China.

The pharmaceutical industry, while thriving, also faces many significant financial risks that cannot be ignored. The issues of financial fraud and incident suspension are particularly prominent. Since 2016, multiple companies, including Guangyuyuan, have been exposed for financial fraud. These companies have long adopted opaque "buyout sales" models and irregular accounting treatment methods, resulting in many false statements in their financial reports. In addition, due to the strict approval process required for pharmaceutical products, any problems at any stage may lead to product discontinuation. For example, Dandong Pharmaceutical was forced to suspend the production of decoction paste due to defects in its quality management system. Such incidents not only cause significant economic losses to enterprises, but also affect the healthy development of the entire industry.

Guo Yue (2024) analyzed the financial risk management theory and took the private enterprise Mongolian Grass Ecology in the PPP model as the research object. She conducted financial identification, evaluation, cause analysis, and proposed corresponding strategies for the case enterprise[1]. Wang Fang (2024) identified the types and causes of financial risks faced by listed companies in China, and proposed corresponding suggestions based on the current development trend of listed companies[2]. Yang Xuting (2022) took K University in Inner Mongolia as a case study and proposed a series of response strategies to address some of the problems in the construction of the internal control risk assessment system[3]. Sun Xinyu and Yu Shanbo (2020) explored the financial risks faced by Chinese listed companies in the context of widespread implementation of internal controls, conducted a systematic analysis of these risks, and proposed some countermeasures to address these issues[4].

In summary, current research by domestic scholars mainly focuses on identifying and evaluating financial risks and internal control risks. However, for the pharmaceutical industry, there is still a lack of research on developing and implementing effective financial risk management measures. Therefore, this article selects Changjiang Health as a case study, and uses the Z-score model to calculate the Z-value to display the financial related indicators of the enterprise, in order to analyze its financial risks and propose suggestions for strengthening the existing financial risk management system. The in-depth exploration of financial risks in the pharmaceutical industry through this case aims to explore feasible strategies and methods for managing these risks, providing theoretical support and practical guidance for the sustainable development of the industry.

2. Related concepts and theoretical models

2.1 Concept of Financial Risk

The "Research on Financial Risk Analysis and Control of Pharmaceutical Enterprises - Taking Fosun Pharma as an Example" published by domestic scholars Shi Bin et al. (2023) defines the financial risks faced by enterprises: financial risk describes the possibility that an enterprise is affected by uncontrollable and unpredictable factors, resulting in the final production and operation results deviating from the originally set goals, and further affecting the enterprise's operating results, causing economic losses to the enterprise[5]. Furthermore, based on the core dimensions of financial activities, these risks can be refined into four categories: liquidity risk, credit default risk, capital raising risk, and investment decision risk. Meanwhile, based on the controllability of risks, financial risks can be divided into controllable and uncontrollable categories. This article will reveal the potential challenges faced by high-risk enterprises from the perspective of controllable risks.

2.2 Overview of Z-score Model

The Z-score model is a model proposed by American scholar Edward Altman to measure the financial health of a company[6]. This model mainly analyzes the financial indicators of crisis enterprises and normal enterprise samples by grouping them, identifies variables that can effectively predict whether the enterprise will fall into financial crisis, and then uses statistical discriminant analysis to establish a linear or nonlinear model.

The Z-score model function is:

$$\mathrm{Z} = 1.2\mathrm{X1} + 1.4\mathrm{X2} + 3.3\mathrm{X3} + 0.6\mathrm{X4} + 0.999\mathrm{X5} \tag{1}$$

This model uses X1-X5 (five financial ratios) to comprehensively analyze and predict the likelihood of a company's financial failure or bankruptcy. These five variables are:

X1=working capital/total assets, generally calculated as (current assets - current liabilities)/total assets. It reflects the liquidity and distribution of the company's assets, and the higher it is, the better the company's liquidity and ability to repay debts in the short term.

X2=(undistributed profit+surplus reserve)/total assets. This ratio reflects the company's level of accumulation. A higher index indicates a higher cumulative level of undistributed profits for the company, indicating a relatively stable financial condition.

X3=(total profit+interest expenses)/total assets. This ratio is an indicator of a company's profitability, and the higher the indicator, the better the company's profitability and financial condition.

X4=owner's equity/total liabilities, which refers to the ratio of a company's owner's equity (or net assets) to its liabilities.

X5=operating revenue/total assets, which reflects the turnover speed of the company's total assets, that is, its operational capacity.

Use the Z-score model function to calculate the Z-value from 2019 to 2023, and use the Z-score model discrimination table (Table 1) to visually evaluate whether the enterprise is facing financial risks or the possibility of bankruptcy.

Table 1: List of Z-score model discrimination criteria

Z-value	Probability of Enterprise Bankruptcy	Interval evaluation
Z<1.81	The financial risk is high, and there is a high possibility of bankruptcy for the enterprise	Bankruptcy Zone
1.81≤Z<2.67	The financial risk is at a moderate level, and the enterprise belongs to the gray area	Grey Zone
Z≥2.67	The financial situation is good, and the possibility of bankruptcy for the enterprise is low	Safe Zone

3. Explanation of Case Company Selection

3.1 Overview of Yangtze River Health

The company was established on September 9, 1999, mainly engaged in research, development, production, and sales of pharmaceutical products. At the same time, the company provides specialized medical services in obstetrics and gynecology, and also sells mechanical products such as elevator guide rails. The company, formerly known as Changjiang Runfa, acquired Zhangjiagang Bonded Zone Pharmaceutical Investment Co., Ltd. (now renamed Changjiang Health) in 2016, marking the company's transformation into the field of big health.

3.2 Explanation of Yangtze River Health Case Selection

3.2.1 Merger and Acquisition Events

Changjiang Health acquired 60% equity of Shandong Huaxin Pharmaceutical Group Co., Ltd. for 930 million yuan in 2018 and injected an additional 60 million yuan to expand its pharmaceutical business and enhance competitiveness. However, the merger encountered multiple challenges. In April 2020, Changjiang Health announced that the audit work was hindered mainly due to opposition from directors and former shareholders of Huaxin Pharmaceutical, and the company had lost control over Huaxin Pharmaceutical. In addition, although Changjiang Health's pharmaceutical performance in 2018 exceeded expectations, Changjiang Health failed to pay the full equity transfer price in a timely manner, further exacerbating the differences between the two parties.

3.2.2 ST Events

As of the release of the 2023 annual report, the non operating funds occupied by the controlling shareholder Changjiang Runfa Group and its affiliated companies have increased to 3.625 billion yuan[7]. Since the opening of the stock market on May 6, 2024, due to risk warnings, the company's stock name has been changed from "Changjiang Health" to "ST Changkang", and the stock code "002435" remains unchanged. The daily limit up has been adjusted to 5%.

The case of Changjiang Health is a typical case of loss of control and financial management problems after mergers and acquisitions. Through in-depth analysis of this case, we can understand the potential risks and challenges it faces during the M&A and ST processes, as well as the importance of strengthening internal control and financial stability of the enterprise. Therefore, choosing Yangtze River Health as the case study object in this article has certain representativeness and warning significance.

4. Risk Identification and Analysis of Financial Data in Pharmaceutical Enterprises

This article selects two companies, Changchun High tech and Zhejiang Pharmaceutical, as well as the average of eight comparable pharmaceutical companies (Hengrui Pharmaceutical, Yunnan Baiyao, Tongrentang, Tianshili, Huarun Sanjiu, Shiyao Group, Huadong Pharmaceutical, and Mindray Medical Liao) as the industry average, and compares them with the financial data of Changjiang Health for identification and analysis. In order to effectively and timely identify the financial risks of Changjiang Health, the financial data risks of Changjiang Health are summarized through comparative analysis of the control group companies.

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4.1 Debt paying ability analysis

Debt paying ability intuitively reflects the financial stability of a company, indicating that a company can pay interest and debts within the prescribed time, enhancing investors' confidence in the company's business development, and enabling the company to better raise funds for production and operation [8]. Due to their high investment demand and debt ratio, the analysis of debt paying ability is particularly crucial for pharmaceutical companies to intuitively reflect their financial situation and operating results. Therefore, this article will focus on analyzing the debt paying ability from three aspects: current ratio, quick ratio, and asset liability ratio, in order to reveal the level of financial risk faced by enterprises.

Table 2 shows the debt repayment ability indicators of Changjiang Health from 2019 to 2023. According to the table data, it can be seen that the current ratio and quick ratio of Changjiang Health showed a significant downward trend from 2019 to 2023: the current ratio decreased from 2.28 to 1.26, and the quick ratio decreased from 1.86 to 1.12. This indicates that the company's current assets and quick liquidation assets have been decreasing year by year, resulting in a weakened ability to cover its short-term debt and increasing the debt repayment pressure faced by the company.

At the same time, the asset liability ratio of enterprises has been increasing year by year from 31.34% in 2019 to 56.76% in 2023. According to a search on Dongfang Wealth Network, the debt amount of Changjiang Health has increased from 2.361 billion yuan in 2019 to 4.948 billion yuan in 2023, indicating an increase in the company's debt level and a weakening of its long-term solvency.

Table 2: Financial Indicators Related to Debt Repayment Ability of Changjiang Healthfrom 2019 to 2023

financial index	2019	2020	2021	2022	2023
Current ratio	2.28	2.20	2.08	1.65	1.26
Quick ratio	1.86	1.81	1.63	1.38	1.12
Asset liability ratio (%)	31.34	28.53	35.75	37.25	56.76

Data source: Changjiang Health Annual Report 2019-2023

4.1.1 Current Ratio

The current ratio, which is the ratio of a company's current assets to its current liabilities, is one of the key indicators for evaluating the company's ability to repay its current liabilities with current assets when short-term debts mature [9]. Table 3 shows the current ratios of Changjiang Health, Changchun High tech, Zhejiang Pharmaceutical, and industry averages from 2019 to 2023. From the data in the table, it can be observed that compared to Zhejiang Pharmaceutical, Changjiang Health's current ratio has remained above 2 from 2019 to 2021. This indicates that during this period, the healthy flow ratio of the Yangtze River was relatively stable. However, from 2019 to 2023, compared with Changchun High tech and the industry average, the overall current ratio of Changjiang Health is relatively low. Especially in 2023, the current ratio of Changjiang Health is 1.26, which is more than twice as high as Changchun High tech's 3.79 and the industry average 3.85. This indicates that Changjiang Health has relatively poor short-term debt repayment ability, high financial risks, and is prone to debt crises.

Table 3: Selected companies' current ratios from 2019 to 2023

Current ratio	2019	2020	2021	2022	2023
Yangtze River Health	2.28	2.20	2.08	1.65	1.26
Changchun High tech	2.72	3.20	3.72	4.01	3.79
Zhejiang Pharmaceutical	2.46	2.66	2.00	2.29	2.26
Industry average	3.50	3.15	3.61	3.38	3.85

Data source: Annual reports of selected companies from 2019 to 2023

4.1.2 Quick ratio

The current ratio is an important indicator for assessing a company's ability to repay its short-term debt with current assets when it matures. Current assets refer to the balance after deducting inventory, reflecting the company's ability to convert assets into cash more quickly due to the low liquidity of inventory. Generally speaking, a quick ratio of 1:1 indicates that the company's financial condition is good, ensuring sufficient liquid assets to repay short-term debts in a timely manner and maintain financial stability. Table 4 shows the average quick ratio of Changjiang Health, Changchun High tech, Zhejiang Pharmaceutical, and the industry from 2019 to 2023. According to the data in the table, the quick ratio of Changjiang Health was generally lower compared to the industry average from 2019 to

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2023, and the gap increased from 1.02 in 2019 to 2.11; Compared with Zhejiang Medicine, its quick ratio was 0.1 higher in 2019 and 0.33 lower in 2023, indicating that the quick ratio of Changjiang Health has changed significantly in the past five years. Due to the decline in asset liquidity, the company's risk of facing insufficient operating funds and weak short-term debt repayment ability will increase.

Table 4: Quick ratio of selected companies from 2019 to 2023

Quick ratio	2019	2020	2021	2022	2023
Yangtze River Health	1.86	1.81	1.63	1.38	1.12
Changchun High tech	2.17	2.33	2.56	2.79	2.75
Zhejiang Pharmaceutical	1.76	1.89	1.38	1.48	1.45
Industry average	2.88	2.62	3.03	2.84	3.23

Data source: Annual reports of selected companies from 2019 to 2023

4.1.3 Asset liability ratio

The asset liability ratio reflects the ratio of a company's total liabilities to its total assets, and is an important indicator for measuring a company's long-term debt paying ability. Table 5 shows the average asset liability ratios of Changjiang Health, Changchun High tech, Zhejiang Pharmaceutical, and the industry from 2019 to 2023. According to the data in the table, the asset liability ratios of Changchun High tech, Zhejiang Pharmaceutical, and the industry average from 2019 to 2023 are about 20% -30%, with small fluctuations in increase and decrease, maintaining a relatively stable state. The asset liability ratio of Changjiang Health has increased from 37.25% to 56.76% from 2022 to 2023, indicating a significant increase in the company's debt level and a clear growth trend. This suggests that its financial stability and debt paying ability have decreased, making the company more susceptible to external risks such as market fluctuations and competitive pressures. Managers need to take effective measures to enhance the company's ability to resist risks.

Table 5: Asset liability ratio of selected companies from 2019 to 2023

Asset liability ratio (%)	2019	2020	2021	2022	2023
Yangtze River Health	31.34	28.53	35.75	37.25	56.76
Changchun High tech	30.77	26.84	23.45	20.06	18.58
Zhejiang Pharmaceutical	20.36	23.53	26.73	21.90	21.86
Industry average	30.68	27.79	26.74	27.70	27.35

Data source: Annual reports of selected companies from 2019 to 2023

4.2 Profitability Analysis

Enterprise profitability is one of the core indicators for measuring the development of enterprises, and the level of profitability directly affects the long-term development of enterprises[10]. From the perspective of the enterprise, its core goal is to pursue maximum profit through business activities and ensure long-term stable development of the enterprise.

4.2.1 Return on Equity

The return on equity of a company refers to the ratio of its net profit to its net assets, which reflects its profitability and is a key financial indicator for evaluating the effectiveness of shareholder fund utilization. Generally speaking, the higher the return on equity, the higher the displayed investment return rate, indicating that the company's profit potential is more prominent. Table 6 shows the average net asset return rates of Changjiang Health, Changchun High tech, Zhejiang Pharmaceutical, and the industry from 2019 to 2023. According to the data in the table, in the past five years, Changjiang Health only had positive net asset return rates in 2020 and 2022, which were 4.99% and 1.44%, respectively. There is still a significant gap between the positive return on net assets of Changjiang Health and the selected control company and industry average. In 2020, the gap reached its maximum value of 26.23% compared to Changchun High tech, indicating that Changjiang Health's profitability is relatively weak and the probability of losses is relatively high. The return on equity for 2019, 2021, and 2023 were all negative, and reached its maximum negative value of -15.03% in 2023. After analysis, it was found that Changjiang Health intends to make a provision for impairment of goodwill assets for the acquired Hainan Hailing Chemical Pharmaceutical Co., Ltd. In the face of changes in supply and demand in the elevator parts manufacturing market, it failed to make a reasonable decision, resulting in a significant decrease in Changjiang Health's main operating gross profit margin in 2023 compared to the same period in 2022, and a significant decline in the company's main operating profit.

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Table 6: Net asset return rate of selected companies from 2019 to 2023

Return on equity (%)	2019	2020	2021	2022	2023
Yangtze River Health	-7.44	4.99	-0.09	1.44	-15.03
Changchun High tech	28.54	31.22	28.80	25.71	22.60
Zhejiang Pharmaceutical	4.44	9.26	12.64	5.99	4.54
Industry average	18.40	18.52	16.94	14.23	15.71

Data source: Annual reports of selected companies from 2019 to 2023

4.2.2 Return on Investment

Return on Investment (ROI) is the economic return that a company's investment should generate, and it is a comprehensive indicator for measuring the effectiveness and efficiency of the company's activities. Table 7 shows the average investment return rates of Changjiang Health, Changchun High tech, Zhejiang Pharmaceutical, and the industry from 2019 to 2023. According to the data in the table, Changjiang Health's average investment return rate from 2019 to 2023 was -3.202%, indicating that it was in a state of investment loss during these five years. The investment return rates of Changchun High tech, Zhejiang Pharmaceutical, and eight pharmaceutical companies are all positive and relatively stable, while the return rate of Changjiang Health drops significantly from positive to negative each time, from 4.72% to -5.76% between 2020 and 2021, and from 1.79% to -11.34% between 2022 and 2023, showing great instability. After analysis, it was found that significant problems or decision-making errors, poor management, and other factors occurred when the company invested in the "surplus raised funds to permanently supplement working capital" project in 2023, resulting in a decrease in the overall capital utilization efficiency and profitability of Changjiang Health.

Table 7: Investment return rate of selected companies from 2019 to 2023

Return on investment (%)	2019	2020	2021	2022	2023
Yangtze River Health	-5.42	4.72	-5.76	1.79	-11.34
Changchun High tech	28.79	28.00	23.40	20.11	19.14
Zhejiang Pharmaceutical	3.51	7.67	9.54	3.72	2.71
Industry average	16.59	16.95	15.83	13.34	14.51

Data source: Annual reports of selected companies from 2019 to 2023

5. Financial Risk Analysis of Yangtze River Health Based on Z-score Model

Table 8: The numerical values required for calculating X1-X5 in the Z-score model function

particular year	2019	2020	2021	2022	2023
current assets	39.20	33.78	39.97	37.17	52.66
current liabilities	17.22	15.33	19.19	22.52	41.89
working capital	21.98	18.45	20.78	14.65	10.77
Total assets	75.34	71.45	71.70	74.09	87.17
Undistributed profits	2.41	4.88	-1.58	-0.93	-8.61
Surplus reserve	0.90	0.91	0.91	0.91	0.93
Retained earnings	3.31	5.79	-0.67	-0.02	-7.68
Total profit	-3.32	2.91	-4.07	0.66	-7.84
interest expenses	0.63	0.63	0.68	0.74	0.92
Profit before interest and tax	-2.69	3.54	-3.39	1.4	-6.92
Owner's equity	51.73	51.07	46.07	46.50	37.69
Total liabilities	23.61	20.38	25.63	27.60	49.48
business income	50.38	42.41	43.70	34.70	32.38

Based on the financial data in Table 8 and the Z-score model function, calculate the X1-X5 and Z-values under the Z-score model of Changjiang Health from 2019 to 2023 as shown in Table 9. According to the Z-value results in Table 9, it can be seen that the financial risk range determination and Z-value trend of Changjiang Health from 2019 to 2023 are determined annually. The Z-value increased from 2.28 to 2.69 in 2019-2020, reaching its highest value in 2020 and being classified as a safe zone, indicating that the financial situation of Changjiang Health was good and the financial risk was low during this year. The Z-value decreased from 2.69 to 1.87 in 2020-2021, indicating that Changjiang Health has transitioned from a safe zone to a gray zone. This suggests that the company's financial performance has shown an unfavorable trend and financial risks have increased during this

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year. Both 2019 and 2021 are in a gray zone, and the financial situation still needs to be further strengthened to avoid entering the bankruptcy zone. During the period of 2022 and 2023, the X1-X5 of Changjiang Health has experienced a significant decline, resulting in a significant decrease in Z-value from 1.78 to 0.59. The financial situation of the enterprise is in the bankruptcy zone, indicating that the financial risks it is currently facing have significantly increased, and the financial situation is continuously deteriorating, putting it in a high-risk state. In order to effectively avoid bankruptcy, enterprises should promptly analyze the reasons that led to this situation and actively take appropriate response measures.

Table 9: X1-X5 and Z values under the Z-score model of Yangtze River Health from 2019 to 2023

particular year	2019	2020	2021	2022	2023
X1=working capital/total assets	0.292	0.258	0.290	0.198	0.124
X2=retained earnings/total assets	0.044	0.081	-0.009	-0.0003	-0.088
X3=pre tax profit/total assets	-0.036	0.05	-0.047	0.019	-0.079
X4=owner's equity/total liabilities	2.191	2.506	1.798	1.685	0.762
X5=operating revenue/total assets	0.669	0.594	0.609	0.468	0.371
Z-value	2.28	2.69	1.87	1.78	0.59
Interval determination	Grey Zone	Safe Zone	Grey Zone	Bankruptcy Zone	Bankruptcy Zone

6. Financial risk control measures for Changjiang Health

As a listed company specializing in the health industry, Changjiang Health has faced significant financial risk challenges in recent years. The background of the company is mainly affected by the continuous deterioration of its financial situation and changes in the market environment. From the perspective of the company's financial situation, the current ratio and quick ratio of Changjiang Health have shown a significant downward trend in the past few years. The current ratio decreased from 2.28 in 2019 to 1.26 in 2023, and the quick ratio also decreased from 1.86 to 1.12. This indicates that the company's ability to cover its current liabilities with its current assets has weakened when dealing with short-term debt, seriously affecting its short-term solvency. In addition, the asset liability ratio has increased year by year from 31.34% in 2019 to 56.76% in 2023, indicating that the company's debt burden has increased and its long-term solvency is also facing challenges. Based on this, this article studies the financial risk management of Yangtze River Health and proposes some measures to control financial risks.

6.1 Strengthen the debt paying ability of enterprises

6.1.1 Enhance liquidity and liquidity

Target current ratio: Set a reasonable current ratio target, such as recovering to 2.0 or above. To achieve this goal, the company can plan to optimize accounts receivable and inventory management in the next two years to increase the current ratio by at least 0.2 per year, reaching 1.46 in 2024 and 1.66 in 2025, gradually recovering to 2.0 or above.

Target quick ratio: The goal of setting the quick ratio is to recover to 1.5 or above. Enterprises should focus on improving the efficiency of accounts receivable collection, reducing inventory backlog, and plan to increase the quick ratio by at least 0.15 per year in the next two years, reaching 1.30 in 2024 and 1.45 in 2025, and continue to move towards the goal of 1.5.

6.1.2 Reduce asset liability ratio

In response to the increasing trend of the company's asset liability ratio year by year, the company should develop a clear debt reduction plan. For example, the plan is to reduce the asset liability ratio by at least 5% annually over the next three years through debt repayment, increased equity investment, and other means. Specifically, the target for 2024 will be reduced to 51.76%, 46.76% in 2025, and further reduced to 41.76% in 2026, gradually approaching the industry average or even better.

6.1.3 Optimizing Capital Structure and Debt Structure

Adjusting debt structure: Reasonably arranging a ratio of long and short-term liabilities to ensure that short-term liabilities can account for a relatively low proportion, thereby avoiding the concentration of debt pressure. For example, the plan is to reduce the proportion of short-term debt from the current level to below 30% within the next year, and correspondingly increase the proportion of long-term debt to over 70%.

Increase equity investment: Increase equity investment by issuing new shares, converting retained earnings into equity, and reducing the debt ratio.

6.2 Strengthening the profitability of enterprises

6.2.1 Optimize product structure and business layout

Focus on core business: Changjiang Health should concentrate resources on developing research and development, production, and sales of pharmaceutical products, as well as core businesses such as obstetrics and gynecology specialized medical services. By enhancing the market competitiveness of these core businesses, revenue sources can be increased.

6.2.2 Strengthen R&D innovation and technology investment

Changjiang Health should increase research and development investment and launch more innovative drugs and medical service projects. According to the latest data, the company's R&D investment in 2023 is 164 million yuan, a year-on-year increase of 175.59%. This trend should continue to be maintained and strengthened.

7. Conclusion

In order to study the financial risks of pharmaceutical companies, this article takes Changjiang Health as an example and uses the Z-score model to compare and analyze the debt paying ability and profitability of Changchun High tech, Zhejiang Pharmaceutical, and industry average levels. It is believed that the financial situation of Changjiang Health is in a state of weak debt paying ability and profitability, and the financial situation has been deteriorating year by year from 2019 to 2023, with Z-values of 1.78 and 0.59 in 2022 and 2023, respectively, indicating bankruptcy risk. Changjiang Health should adjust its capital structure reasonably, continuously strengthen internal regulation and management, optimize product structure and business layout, and ensure that the company's financial situation enters a safe zone.

References

[1] Guo Yue. Research on Financial Risk Identification, Assessment, and Response Strategies of Private Enterprises in PPP Model [D]. Inner Mongolia University of Finance and Economics, 2024

[2] Wang Fang. Research on Financial Risk Analysis and Control of Enterprise Mergers and Acquisitions [J]. Modern Marketing (Volume 1), 2024, (06): 79-81

[3] Yang Xuting. Research on Internal Control Risk Assessment of K University in Inner Mongolia [D]. Inner Mongolia University of Science and Technology, 2022

[4] Sun Xinyu, Yu Shanbo. Analysis and Prevention of Enterprise Financial Risks Based on Internal Control [J]. Modernization of Shopping Malls, 2020, (6): 143-144

[5] Shi Bin, Zhang Shuxin. Research on Financial Risk Analysis and Control of Pharmaceutical Enterprises - Taking Fosun Pharma as an Example [J]. Chinese Market, 2023, (30): 93-96

[6] Tong Linchen. Empirical study on the causes of reverse financing in technology-based enterprises [J]. China Business Review, 2021, (20): 118-121

[7] Su Hao, Cao Xueping. The major shareholder of Changjiang Health has been registered for occupying a huge amount of funds [N]. China Business News, May 13, 2024 (B14)

[8] Fang Xiaolong. Analysis of Enterprise Performance Evaluation Based on Debt Repayment Ability [J]. Finance and Economics, 2023, (33): 57-59

[9] Hui Yingxin. Analysis of Debt Repayment Ability of New Energy Enterprises and Countermeasures Suggestions - Taking Company A as an Example [J]. Hebei Enterprise, 2023, (08): 114-116

[10] Tan Yuan. Profitability Analysis of Listed Companies -- Taking the Coal Industry as an Example [J]. Journal of Mount Huangshan University, 2023,25 (05): 6-10