

Analysis of the Profitability of Tianrun Dairy Based on DuPont Analysis System

Chenyue Zhu¹

¹ School of Business, Xi'an International Studies University, China

Correspondence: Chenyue Zhu, School of Business, Xi'an International Studies University, Shaanxi, China.

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Abstract

With the development of China's social economy and the continuous improvement of people's living standards, dairy products with high nutritional value are deeply loved by people, and the dairy industry has ushered in new opportunities and challenges. The upgrading trend of dairy consumption in China is obvious. Consumers pay more and more attention to the quality of dairy products, pay more attention to nutrition, health, function, taste and so on, and promote the intensification of industry competition. Tianrun Dairy Co., Ltd. (referred to as "Tianrun Dairy") as the largest dairy producer, how to expand market share, improve their profitability is particularly important. This paper uses DuPont analysis method to analyze the five-year financial data of Tianrun Dairy Industry from 2019 to 2023, and puts forward relevant suggestions on the problems existing in its profitability, aiming to help Tianrun Dairy Industry improve its profitability, better cope with market competition, and also provide reference for the development of dairy products.

Keywords: DuPont analysis, Profitability, Tianrun Dairy

1. Introduction

Dairy industry is an important industry to ensure national health and improve national physique. Dairy products are an important source of high-quality protein and calcium in the human body. Governments at all levels have successively issued various policies to support and encourage the development of the dairy industry. In 2019, the Ministry of Agriculture and Rural Affairs issued the "Implementation Plan for Dairy Brand Promotion", pointing out that the construction of dairy brand should be closely integrated with the revitalization and development of dairy industry, forming a brand development mechanism of creating brand, promoting brand and protecting brand, and cultivating a number of influential product brands, enterprise brands and regional public brands, so as to make domestic dairy brands deeply rooted in the hearts of the people. Strong incentives in investment and financing, supply of production factors, policy support and other aspects: Strengthen technical guidance, carry out brand creation technical consultation and on-site guidance, and improve the brand management level of dairy enterprises. In 2020, the State Administration of Market Supervision and Administration formulated the "Action Plan for Improving the Quality and Safety of Dairy Products", pointing out that it is necessary to improve the quality and safety of dairy products and promote the high-quality development of the dairy industry. China Dairy Industry Association proposed to change the development model, optimize the product structure, carry out domestic and international cooperation and collaboration, and promote the sustainable and stable development of the industry in the '14th Five-Year' development ideas. In 2022, the Ministry of Agriculture and Rural Affairs issued the "14th Five-Year Plan of Action for Improving the Competitiveness of the Dairy Industry", which proposed to enhance the competitiveness of the dairy industry and ensure the safety of dairy supply. With the change of residents' consumption concept and shopping behavior, people are more and more inclined to choose healthier and higher quality dairy products. In order to adapt to the new consumption trend, dairy companies continue to develop new products, from upstream milk sources to production and processing to logistics storage and sales, forming quality supervision and control of the entire industrial chain, and creating high-end products with higher protein content, richer nutrients, and better milk sources to meet consumer demand. With the development of economy, the level of per capita income has been continuously improved, and the consumption consciousness of residents has gradually changed. The demand for dairy products has gradually expanded from a single room temperature pure milk to room temperature yogurt, sugar-free yogurt, room temperature fresh milk, skim milk and other kinds of products, and more and more attention has been paid to the quality of products and whether they are healthy. Under the background of the improvement of national policies and the change of residents' consumption consciousness, the dairy industry has great potential for development, but there are also many problems. Leading enterprises in

the dairy industry have a huge impact. Most consumers still pay more attention to brands when choosing products, which limits the development of small and medium-sized enterprises. The local dairy enterprises represented by Tianrun Dairy Co., Ltd. (hereinafter referred to as "Tianrun Dairy") are relatively small in scale, and the operating area is only part of the province and surrounding areas. In the face of the fiercely competitive dairy market, Tianrun Dairy needs to observe the market environment, analyze its own advantages, fit more consumption scenarios and consumer demand, and improve its profitability. This paper analyzes and studies the financial indicators of Tianrun Dairy from 2019 to 2023, and puts forward suggestions for its development.

1.1 Introduction of Tianrun Dairy Industry

Tianrun Dairy was established in 2002. Since its establishment, it has been successively rated as 'National Excellent Milk Source Management Demonstration Enterprise', 'National Key Leading Enterprise of Agricultural Industrialization', and 'China Dairy Social Responsibility Model Enterprise'. The company is based on the dairy industry, covering the three major industries of planting and breeding, dairy processing, and market services. At present, it has 9 dairy cattle breeding enterprises and 26 large-scale pastures. The scale of dairy cattle breeding has reached 70,000, and its own milk source has reached 70%. Enterprises strengthen market construction, develop traditional channels, establish e-commerce platforms, innovate marketing models, and achieve full coverage of the county-level market in XJ. The market share has reached 40%, and the daily sales volume is more than 680 tons. It has opened up the market of 30 provinces and cities in the mainland, established a market network system, and successfully upgraded by regional dairy enterprises. Tianrun Dairy's main business is dairy manufacturing and animal husbandry production, and its operating income and operating profit mainly come from dairy sales. Tianrun Dairy has an independent and complete dairy farming, dairy research and development, procurement, production and sales system. It adheres to the industrial development policy of 'building factories around the market and building pastures around factories', and constantly increases the industrial strategic layout. The large-scale dairy demonstration pasture project in XJ and the dairy processing project of Tianrun Qiyuan Dairy Co., Ltd. are officially put into operation, form a more complete layout of the whole industrial chain. According to its own actual situation, according to the market rules and operation mechanism, Tianrun Dairy Co., Ltd. independently operates, adheres to market-oriented, takes original innovation as the main body, adheres to the principle of differentiation, continues to increase investment in scientific and technological research and development of new products, and continuously introduces new products, with high-quality taste, health concept and novel packaging. Continue to increase market share. At present, Tianrun dairy industry comprehensively focuses on the market, consolidates the market position in XJ, and enhances the market share in XJ. At the same time, it will increase the market development efforts outside XJ, dynamically adjust the market management structure outside XJ, and do a solid job in channel penetration sinking, and gradually promote the national business layout.

2. Overall Profitability

All data are from Tianrun Dairy Enterprise Annual Report.

2.1 Profit Statement

In 2023, Tianrun Dairy achieved operating income of 2.714 billion yuan, an increase of 12.62% year-on-year. Despite a decline in net profit, the company's net cash flow and total assets have achieved significant growth.

The operating cost accounts for 87.98% of the total operating cost, which is the main component of the total operating cost. This reflects the higher cost of direct input in the production process of Tianrun Dairy, such as raw materials, labor, etc., enterprises may need to seek cost optimization opportunities in the production process.

Sales costs account for 5.89% of the total operating costs, accounting for a relatively high proportion, indicating that Tomorrow Run Dairy has invested a lot in market promotion and sales channel construction, which is of great significance for expanding the market and improving product popularity, but it also needs to pay attention to its input-output ratio.

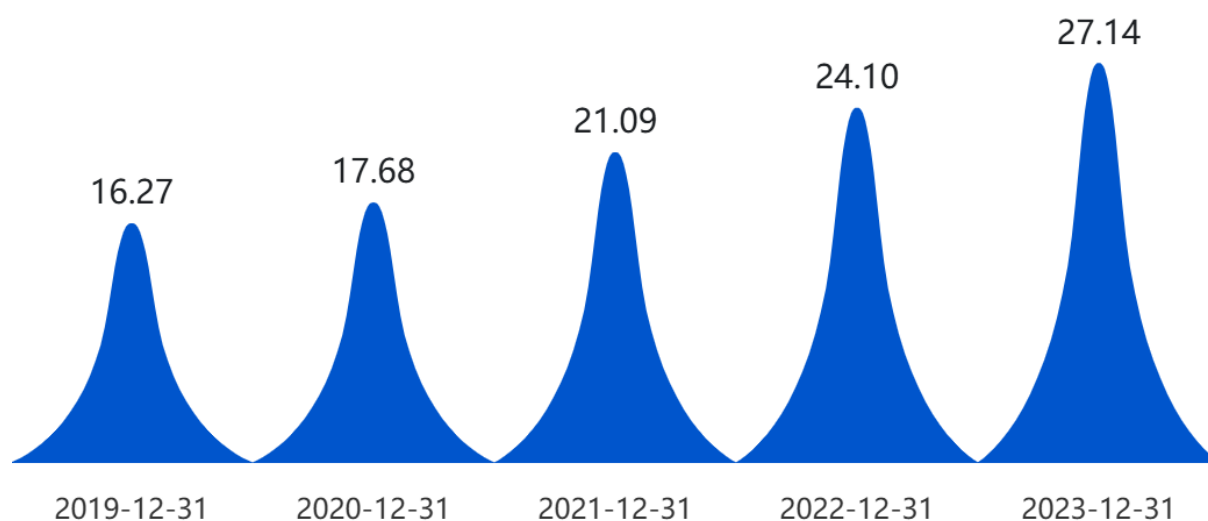


Figure 1. Operating income (Unit : 100 million yuan)

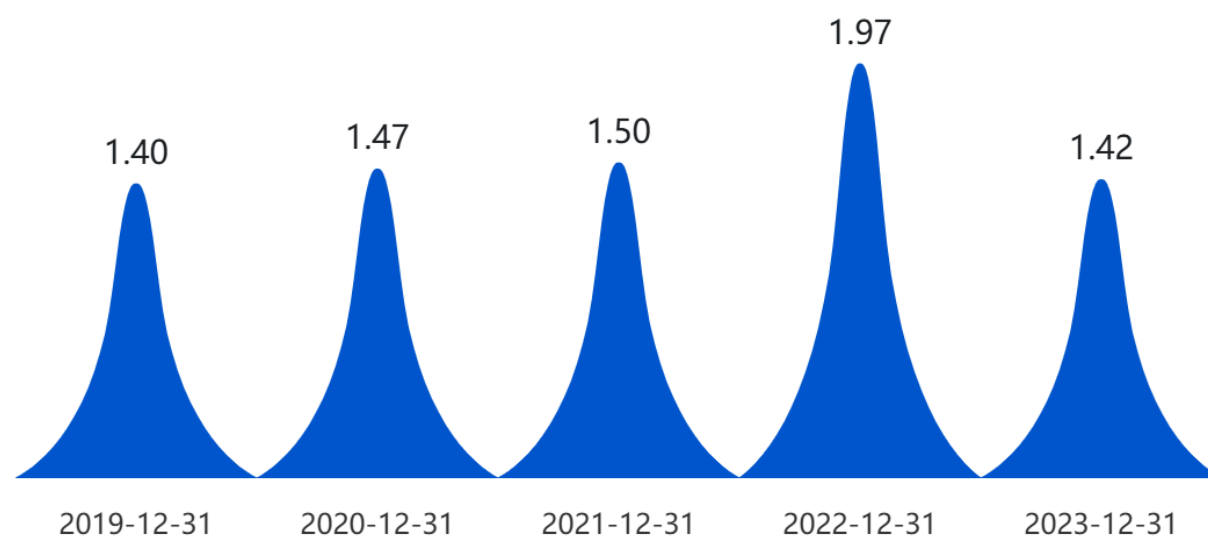


Figure 2. Net profit (Unit: 100 million yuan)

2.2 Balance Sheet

The proportion of non-current assets is relatively large, indicating that the assets of enterprises are mainly concentrated in long-term assets, which may be related to the dairy industry's need for a large number of production equipment, milk base and other fixed assets and productive biological assets. Monetary funds account for 32.83 % of current assets. Higher monetary capital holdings indicate that enterprises have better liquidity and short-term solvency, but it may also mean that the efficiency of capital use needs to be improved.

Non-current liabilities account for 43.40% of total liabilities, accounting for a relatively high proportion. Enterprises may face certain short-term debt repayment pressure. Current liabilities such as short-term loans account for a large proportion, and enterprises need to have sufficient current assets to ensure the repayment of short-term debts.

Undistributed profits account for a relatively high proportion, indicating that Tomorrow Run Dairy has more accumulated profits, reflecting its profitability.

2.3 Cash-Flow Statement

The cash received from selling goods and providing services accounts for 92.24% of the cash inflows from operating activities. This is the main source of cash inflows from operating activities, reflecting the good cash recovery of the company's core business. The cash of purchasing goods and accepting labor services is the main

part of the cash outflow of business activities, accounting for 74.92% of the cash outflow of business activities, reflecting the large capital expenditure of enterprises in purchasing raw materials and accepting labor services. The net cash flow generated by the business activities is CNY 344 million, indicating that Tianrun Dairy has generated positive cash flow in its business activities. The core business has strong cash creation ability and can provide stable financial support for the development of the enterprise.

The net cash flow generated by the investment activity is -10.69 billion yuan, indicating that the cash outflow of Tianrun Dairy is greater than the inflow in the investment activity, mainly due to the large capital investment in the purchase and construction of fixed assets, intangible assets and other long-term assets and foreign investment.

The net cash flow generated by the financing activities is 531 million yuan, indicating that the cash inflow of enterprises in the financing activities is greater than the outflow, and more funds are obtained through borrowing and other financing methods.

3. Profitability Analysis

The DuPont analysis method was first created by DuPont Corporation of the United States. It mainly reflects the relationship between the following major financial ratios: The relationship between the rate of return on equity of shareholders and the rate of return on assets and the equity multiplier, the relationship between the net interest rate of assets and the net interest rate of sales and the total asset turnover rate, the relationship between the net interest rate of sales and the net profit and sales income, the total asset turnover rate and sales income and total assets. The core of the DuPont analysis method is the rate of return on net assets, the net profit margin of sales, the total asset turnover rate and the equity multiplier. The following will analyze the profitability of Tianrun Dairy from these main financial indicators.

3.1 Return on Equity

Table 1. Return on Equity

	2019	2020	2021	2022	2023
Return on Equity (%)	12.76	10.04	8.06	8.39	6.21

In the past five years, the return on net assets of Tianrun Dairy has been declining, from 12.76 % in 2019 to 6.21 % in 2023, a decrease of about 51.33 %, which indicates that the profitability of the enterprise has been declining in the past five years. This is mainly affected by the epidemic; secondly, the R & D cost of Tianrun Dairy has been greatly increased, which is caused by the increase of R & D investment in new products and the improvement of animal husbandry and breeding technology. In order to promote characteristic products, a large number of advertisements have been invested, and the cost of publicity has increased, which has aggravated the cost burden of Tianrun Dairy.

3.2 Sales Net Profit Ratio

Table 2 Sales Net Profit Ratio

	2019	2020	2021	2022	2023
Sales Net Profit Ratio (%)	8.73	8.69	7.63	8.33	5.16

In the past five years, the net profit margin of sales of Tianrun Dairy Industry has shown a fluctuating downward trend, with a slight increase in 2022 only, and a straight decline to 5.16% in 2023. From the annual report of Tianrun Dairy, it can be seen that the company's operating income has been rising in the past five years, but the fluctuation range of operating costs and expenses is greater than the fluctuation range of operating income, resulting in a large fluctuation of net profit, thus affecting the net profit margin of sales. The main reason is that the company has adjusted its industrial structure, and the sales revenue of low-temperature dairy products has reached its peak. Because normal-temperature dairy products have the advantage of low transportation costs, the company is using normal-temperature dairy products to continuously expand the market. However, due to the impact of the epidemic, the time period for transportation has become longer, and this advantage of normal-temperature dairy industry has been greatly reduced.

3.3 Turnover of Total Assets

Table 3. Turnover of Total Assets

	2019	2020	2021	2022	2023
Turnover of Total Assets (%)	0.85	0.77	0.70	0.65	0.56

The total asset turnover rate of Tianrun Dairy showed a linear downward trend, from 0.85 in 2019 to 0.56 in 2023, a decrease of about 34.12%. The main factors affecting the total asset turnover rate are accounts receivable turnover rate and inventory turnover rate. The turnover rate of accounts receivable of Tianrun Dairy showed a downward trend, from 35.41 times in 2019 to 22.53 times in 2023, which indicated that the turnover rate of accounts receivable deteriorated, affecting the company's capital liquidity, thus affecting the normal operation of the company. The company's inventory ratio has been rising in the past five years. In order to reduce costs, the company has a large backlog of milk and grass, which leads to a large proportion of inventory, thus affecting the inventory turnover rate. In addition, inventory leads to the occupation of a large amount of funds, which increases the cost of using funds, and the occupied funds cannot be recovered in time, resulting in a continuous decline in asset turnover.

3.4 Equity Multiplier

Table 4. Equity Multiplier

	2019	2020	2021	2022	2023
Equity Multiplier (%)	1.72	1.50	1.51	1.55	2.15

From 2019 to 2021, the equity multiplier has fallen, but from 2022, the equity multiplier has increased to 2.15. This is because Tianrun Dairy has started multiple stock allotments and stock issuances in 2021 to raise funds to supplement cash flow. At the same time, short-term borrowing will increase in 2022, and Tianrun Dairy will bear more and more financial risks. The proportion of invested capital in total assets will decrease, and the possibility of corporate liabilities and risks will increase.

4. Problems and Suggestions

4.1 Control Costs and Reduce Unnecessary Investment

First of all, Tianrun Dairy is in the stage of continuous expansion. It can first open the market with its own characteristic product high-quality pure milk, and then develop new products after a certain market, so as to obtain higher profits.

The means of publicity should also be moderate, a large number of media publicity will not necessarily bring the ideal income, more important is to let some consumers know their products, with quality to win more consumers.

Strengthen cost control and management: Establish a perfect cost monitoring system, and carry out fine management of the cost of raw material procurement, production process, sales and other links.

Strengthen supply chain management and coordination : Establish a close strategic cooperative relationship with suppliers to jointly cope with the risk of raw material price fluctuations. Through the signing of long-term supply contracts, participating in the supplier's production plan, etc., to ensure the stable supply of raw materials and reasonable prices ; strengthen the quality control of suppliers, ensure the quality of raw materials, and reduce the cost increase caused by quality problems.

4.2 Did not Achieve a Small Profit and a Lot of Sales

The sales scale is small, and there is no small profit and fast sales. (For fast-moving consumer goods in dairy products, the key to profitability is to win by volume, and thin profits sell more)

First of all, Tianrun Dairy should optimize the logistics distribution system and occupy a larger consumer market. Due to its particularity, dairy products have a shorter shelf life than other products. It is necessary to quickly send products to the shelf of the terminal and then sell them quickly in a short time, which requires occupying a broad market. Only the capacity of the market is large enough to achieve this goal. The optimization of the logistics distribution system can also reduce labor costs to a certain extent, thereby further improving profitability.

Secondly, for Tianrun Dairy, its potential product Tianrun Milk Beer has been favored by consumers because of its early launch to seize the market and good taste, and its competitiveness is far stronger than that of competitive products. Tianrun Dairy should increase investment in the promotion of milk beer to further enhance its competitiveness.

4.3 Unreasonable Inventory Ratio

Reduce the proportion of inventory and improve the capital structure. In the inventory of Tianrun Dairy, raw materials account for the largest proportion. We can start from this aspect, reduce the procurement of raw materials, cooperate with local pastures and farms, and establish long-term partnerships. On the one hand, it can reduce inventory, avoid unnecessary inventory backlog, release financial pressure, and improve inventory turnover. At the same time, it can also ensure higher quality grass feed more suitable for dairy cows.

Tianrun Dairy should be product-centered, highly self-sufficient production model is not suitable for the development of modern enterprises, enterprise development is more important to seek high-quality low-price cooperation, to achieve mutual benefit and win-win situation.

To strengthen inventory management, Tianrun Dairy should reasonably determine raw material inventory and product inventory according to actual demand and economic benefits. Inventory regularly inventory, real-time monitoring of inventory changes, timely adjustment of inventory, in order to avoid inventory backlog or shortage, improve inventory turnover speed.

To strengthen the management of accounts receivable, Tianrun Dairy needs to closely combine product sales with capital recovery when formulating marketing policies. Sales personnel need to evaluate and analyze the credit of dealers and strengthen the awareness of refund. Tianrun Dairy should formulate scientific and reasonable accounts receivable management policies, formulate different credit policies for different enterprises and customers, and speed up the collection of accounts receivable.

4.4 Financial Leverage Ratio is Low

Appropriately increase financial leverage. Dairy products belong to FMCG products. The cash flow of related enterprises is generally good and the cash flow is fast. Tianrun Dairy can make use of the characteristics of good cash flow and fast cash turnover, increase financial leverage, use financial leverage to raise more debt funds, and create more wealth for shareholders.

From the perspective of risk, enterprises with good cash flow and fast cash flow will not cause large financial risks even if the debt level is high, because sufficient cash flow can pay off the due debt at any time. From this point of view, Tianrun Dairy's appropriate increase in financial leverage will not lead to financial risk problems. On the contrary, it can quickly increase the return on net assets of the company and create more wealth for shareholders.

Improve the gross profit margin of the main business: Optimize and analyze the existing product portfolio, eliminate products with low gross profit margin and small market demand, and concentrate resources to develop core products with high gross profit margin and good market prospects. According to the factors such as product cost, market demand and competitor price, a scientific and reasonable pricing strategy is formulated.

Optimize the debt structure : sort out the existing short-term liabilities in detail, and analyze the maturity time, interest rate level and capital use of various short-term liabilities; combined with the long-term development strategy and investment plan of the enterprise, the proportion of long-term debt is appropriately increased. When building new dairy processing plants, expanding the scale of pastures, etc., long-term debt financing is reasonably arranged according to the expected return and payback period of the project.

5. Conclusion

This paper uses DuPont analysis method to study and analyze the profitability of Tianrun Dairy. Firstly, by analyzing the relevant financial data of Tianrun Dairy from 2019 to 2023, it is found that the reasons affecting the profitability of Tianrun Dairy may be that the financial leverage has not been fully utilized and the cost has continued to increase. Then, in view of the problems found, some suggestions are put forward, such as optimizing logistics distribution, strengthening channel promotion, and appropriately increasing financial leverage. Although DuPont analysis is a systematic method to analyze the profitability of enterprises, it also has some limitations. For example, the 'total assets' and 'net profit' of the net interest rate of total assets do not match, there is no distinction between profit and loss of operating activities and profit and loss of financial activities, and there is no distinction between financial liabilities and operating liabilities. In short, through the DuPont analysis method, it is found that the profitability of Tianrun Dairy in the past five years is not optimistic. In view of the problems of the enterprise, it is proposed to control the cost to reduce unnecessary investment, reduce the proportion of inventory, improve

the capital structure, and increase the popularity outside XJ to expand the market, hoping to provide reference for the development of Tianrun Dairy. In general, in the face of the current economic situation and the increasingly fierce competition in the industry, dairy enterprises can no longer be limited to the regional pattern, but should be continuously transformed and upgraded by local enterprises. On the one hand, Tianrun Dairy needs to compete with the original leading enterprises in the industry, on the other hand, it also needs to pay attention to the continuous development of local enterprises, which requires its development strategy to be more stable, conform to the pace of the times, and meet consumer demand.

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