

Application Research on Performance Evaluation of Three Squirrels Based on the Balanced Scorecard

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Abstract. This paper selects Three Squirrels as the case company and uses the Balanced Scorecard to integrate financial and non-financial indicators for performance evaluation. The findings reveal that, from a financial perspective, Three Squirrels has a good capacity for debt repayment and operational capabilities, but there is a need to focus on improving profitability and development potential. From the customer perspective, the company enjoys high brand recognition. Internally, the management aspect shows that expense ratios during the period need control, and the product structure is relatively concentrated. In terms of learning and growth, Three Squirrels focuses on talent development, yet the investment in research and development is insufficient. Based on these findings, the paper provides targeted optimization suggestions: first, to improve the logistics system; second, to optimize the product structure; third, to increase research and development investments; and fourth, to enhance sales channels.

Keywords: balanced scorecard, Three Squirrels, performance evaluation

1. Introduction

In the increasingly competitive current market, enterprises urgently need to conduct more accurate and scientific performance evaluations to fully understand their own conditions and, based on this, take targeted improvement measures for optimization. The bonus period for e-commerce has largely passed, impacting the snack food industry correspondingly. Three Squirrels, a representative company in the snack food industry, originated from e-commerce and adopts a combined online and offline business model. As a leading and well-known company in the snack food industry, it faces both opportunities and challenges. While seizing development opportunities, it also confronts a challenging market environment.

Robert Kaplan and Norton first introduced the Balanced Scorecard method for performance evaluation in 1992, assessing corporate performance across four dimensions: financial, customer, internal operations, and learning and growth [1]. Subsequent scholars have continuously researched this method and proposed enhancements. Firman (2014) suggested that the selection of indicators in the Balanced Scorecard should be continuously adjusted according to environmental changes when evaluating the performance of case companies [2]. Park (2017) noted that the Balanced Scorecard indicators vary across different industries and should be adjusted according to specific circumstances in application [3]. Compared to traditional performance evaluation methods, the Balanced Scorecard integrates financial and non-financial indicators, providing a more comprehensive approach. The case company selected for this paper, Three Squirrels, has notable operational characteristics within the e-commerce sector and is among the leaders in performance, making it highly representative. By applying the Balanced Scorecard and analyzing Three Squirrels from the financial, customer, internal operations, and learning and growth dimensions, a more comprehensive, scientifically rigorous performance evaluation can be conducted, helping to better identify the company's issues. Providing development suggestions for Three Squirrels can also serve as a reference for other companies in the industry.

2. Introduction to Three Squirrels

Three Squirrels Co., Ltd., established in 2012, is a multi-brand company focused on nuts and committed to health and digitalization. After a decade of effort, Three Squirrels has grown into a publicly-listed company with annual sales exceeding ten billion yuan. Leveraging a nationwide brand advantage, it has developed a multidimensional sales network that includes e-commerce, distribution, and physical stores. It is known as the "first stock of internet leisure snacks" and is gradually transitioning towards a digital supply chain platform enterprise. Praised by Xinhua News Agency as a "reform business card" of the new era, Three

Squirrels has topped the national e-commerce channels' snack sales charts for several consecutive years due to its advantages in brand, product, logistics, and service. The company's mission is "to popularize nuts and healthy foods among the masses," continually innovating its products to better serve consumers and achieve the goal of becoming a "hundred-billion-level squirrel."

3. Application of the Balanced Scorecard at Three Squirrels

3.1. Financial Dimension

The financial dimension is crucial within the Balanced Scorecard. This paper analyzes this dimension using data from 2018 to 2022 concerning Three Squirrels, focusing on debt repayment capacity, operational capability, profitability, and development capability.

3.1.1. Debt Repayment Capacity

The current ratio, which is the ratio of current assets to current liabilities, and the quick ratio both reflect the company's short-term debt repayment ability. The debt-to-asset ratio is an important indicator of long-term debt repayment capability.

Table1. Solvency of Three Squirrels from 2019 to 2023

	2019	2020	2021	2022	2023
Current ratio	153.60%	169.44%	159.90%	179.71%	156.77%
Quick ratio	57.57%	97.34%	88.08%	117.30%	102.28%
Asset liability ratio	60.85%	52.37%	55.13%	48.34%	54.65%

Data source: Three Squirrels Annual Report from 2019 to 2023

According to Table 1, the current ratio of Three Squirrels fluctuated from 2018 to 2023, reaching a low of 153.60% in 2019 and peaking at 179.71% in 2022. The relatively stable current ratio, consistently above 1, indicates strong short-term debt repayment capacity. The quick ratio generally showed an upward trend from 2019 to 2022, increasing from 57.57% to 102.28%, indicating enhanced ability to repay short-term debts.

From 2019 to 2020, the debt-to-asset ratio of Three Squirrels decreased from 60.85% to 52.37%, showing a reduction in the percentage of total liabilities against total assets, hence an improved long-term debt repayment capacity. It then stabilized around 50% from 2020 to 2023, which is considered reasonable.

3.1.2. Operational Capability

The inventory turnover ratio reflects the speed of inventory turnover, showing the company's sales capacity. The total asset turnover ratio reflects the overall asset operational capability.

Table 2. Operating Capacity of Three Squirrels from 2019 to 2023

	2019	2020	2021	2022	2023
Accounts receivable turnover rate	36.08	40.94	47.55	24.85	14.40
Inventory turnover rate	3.95	3.85	4.51	3.90	4.44
Asset turnover	2.56	2.12	2.07	1.52	1.41

Data source: Three Squirrels Annual Report from 2019 to 2023

Three Squirrels operates with a light asset model, demonstrating strong operational capabilities. According to Table 2, the accounts receivable turnover ratio of Three Squirrels rose from 36.08 in 2019 to 47.55 in 2021 but then displayed a yearly decline, falling to 14.40 by 2023, indicating a decrease in accounts receivable management efficiency. The inventory turnover ratio from 2019 to 2023 generally trended upward, from 3.95 in 2019 to 4.44 in 2023, suggesting robust inventory liquidity and smooth product sales. The total asset turnover ratio, however, showed a downward trend from 2019 to 2023, decreasing from 2.56 to 1.41, indicating a slight decline in sales capability but still maintaining within a reasonable range.

3.1.3. Profitability

The return on equity ratio reflects the level of return on shareholders' equity, while the net profit margin indicates how much net profit each yuan of sales revenue generates, directly showing the company's profitability.

Table 3. Profitability of Three Squirrels from 2019 to 2023

	2019	2020	2021	2022	2023
ROE	15.88%	15.10%	18.88%	5.61%	9.05%
Net profit margin	2.35%	3.08%	4.21%	1.77%	3.09%

Data source: Three Squirrels Annual Report from 2019 to 2023

The return on equity for Three Squirrels generally trended downward from 2019 to 2022, falling from 15.88% in 2019 to 9.05% in 2023, mainly due to increased costs and expenses, indicating a need to focus on enhancing profitability. The net profit margin showed fluctuations from 2019 to 2023, reaching its lowest in 2022 at 1.77%, a decrease of 2.57 percentage points compared to 2019. The consistently low net profit margin, always below 5%, is related to Three Squirrels' sales model, which primarily uses online channels, incurring high logistics and transportation costs. It is essential for Three Squirrels to focus on improving profitability.

3.1.4. Development Capability

The main business revenue growth rate reflects the company's revenue status. The total asset growth rate can be used to assess the company's development stage and trend.

Table 4. Development Ability of Three Squirrels from 2019 to 2023

	2019	2020	2021	2022	2023
Increase rate of main business revenue	45.30%	-3.72%	-0.24%	-25.35%	-2.45%
Total Assets Growth Rate	56.36%	-9.10%	14.35%	-9.87%	22.21%

Data source: Three Squirrels Annual Report from 2019 to 2023

As shown in Table 4, the main business revenue growth rate of Three Squirrels generally declined from 2017 to 2019 and showed negative growth from 2020 to 2023, necessitating continued monitoring of revenue status. The total asset growth rate showed significant fluctuations from 2019 to 2023, rebounding to 22.21% in 2023. Although there was a rebound, it is noteworthy that the total asset growth rate remains much lower than the 56.36% of 2019, indicating that Three Squirrels needs to focus on enhancing its development capabilities.

3.2. Customer Dimension

The customer dimension explicitly concerns the customers' attitudes towards the company. To survive and thrive, a company must promptly understand customer needs and ensure a sufficient customer base. Brand recognition is a key indicator in the customer dimension. Three Squirrels has established a national brand through e-commerce, utilizing various promotional methods including the "Three Squirrels' Adventures in China" animated series, engaging merchandise, advertising, short videos, and celebrity endorsements, continuously injecting new vitality into the company and expanding its brand recognition. The "Three Squirrels" series has achieved high viewership online, attracting a large audience, with a total of 7.5 billion views for its short videos. Additionally, in January 2022, Three Squirrels was awarded the title of "CCTV's Leading Brand of Artisan Nuts" by China's central state broadcaster. The company has consistently ranked at the top in the snack category across major national e-commerce channels, enjoying high brand recognition.

3.3. Internal Operations Dimension

The internal operations dimension focuses on key processes that affect the level of business management, which is also critical in the Balanced Scorecard.

3.3.1. Management Expense Ratio

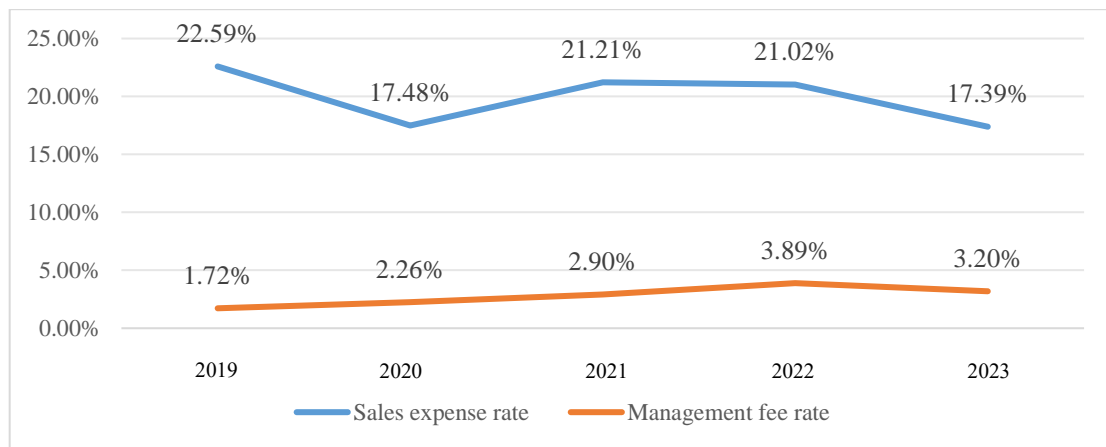


Figure 1. Cost Rate of Three Squirrels from 2019 to 2023 (Data source: Three Squirrels Annual Report from 2019 to 2023)

As indicated in Figure 1, except for an increase to 21.21% between 2020 and 2021, the sales expense ratio of Three Squirrels has been trending downward in other years, maintaining an overall rate of around 20%, which is relatively high. There is still a need for Three Squirrels to focus on controlling sales expenses. Its management expense ratio continued to rise from 2019 to 2022 and slightly decreased in 2023, overall showing an upward trend. Three Squirrels needs to control related expenses and continue to optimize internal processes.

3.3.2. Product Structure

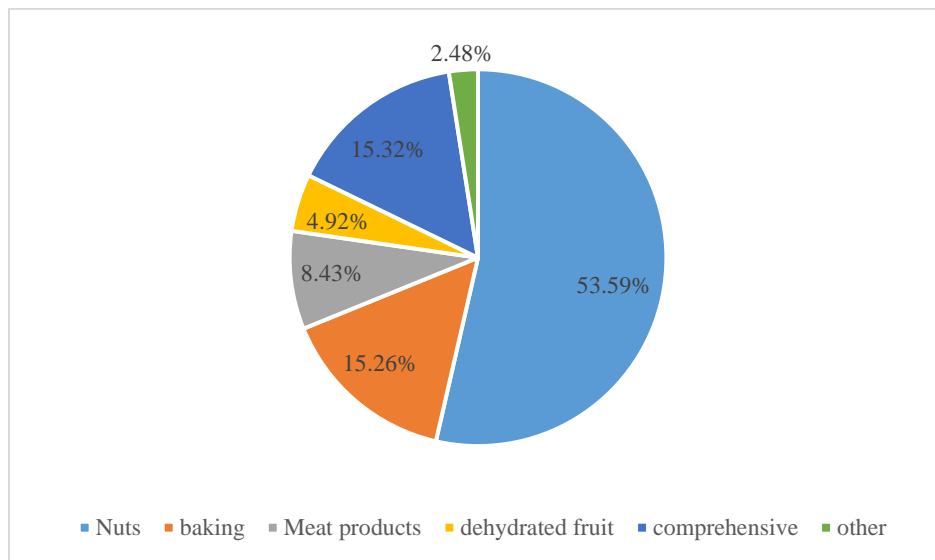


Figure 2. Composition of Operating Income of Three Squirrels in 2023 (Data source: Three Squirrels Annual Report from 2019 to 2023)

Three Squirrels offers a wide range of products including nuts, baked goods, meat products, dried fruits, and mixed categories. However, as shown in the figure, nuts account for the highest proportion of business income, representing 53.59% of it. More than half of its business income comes from nuts, indicating a high dependence on a single product line. Any reduction in nut revenue due to factors like climate conditions could significantly impact the entire company.

3.4. Learning and Growth Dimension

The learning and growth dimension provides the foundation and support for the other three dimensions and can be used to analyze whether the company can continue to create value.

3.4.1. Talent Development

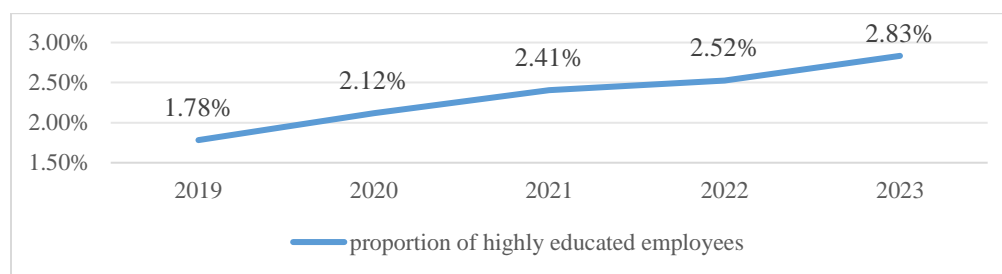


Figure 3. The Proportion of Highly Educated Employees in Three Squirrels from 2019 to 2023 (Data source: Three Squirrels Annual Report from 2019 to 2023)

As shown in the figure, the proportion of highly educated employees at Three Squirrels has been increasing yearly from 2019 to 2023, indicating that the company places significant emphasis on attracting high-level talent. According to Three Squirrels' annual report, the company is committed to building a "high culture, high performance, and high motivation" workforce. In 2021, it used 174.62 million yuan of its own funds to buy back shares for equity incentive plans, etc. This enhances the employees' sense of mission and motivation and is beneficial for building a core team of talents.

3.4.2. Innovation Capability

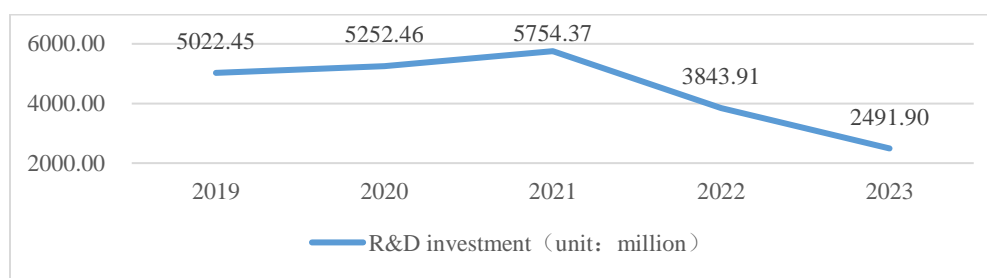


Figure 4. R&D Investment of Three Squirrels from 2019 to 2023 (Data source: Three Squirrels Annual Report from 2019 to 2023)

R&D investment can reflect a company's capacity for innovation to some extent. R&D investment at Three Squirrels showed an upward trend from 2019 to 2021, increasing from 50.22 million yuan to 57.54 million yuan. However, there was a significant drop in R&D investments from 2021 to 2023, falling to 24.91 million yuan in 2023, indicating that Three Squirrels has weaker investment in R&D and lacks sufficient emphasis on innovation.

4. Optimization Suggestions

4.1. Enhance the Logistics System

From the analysis of Three Squirrels' profitability, it was found that the online sales model, as the primary sales channel, results in substantial logistics costs. To address this, Three Squirrels should continue to strengthen the construction of distribution centers and actively explore optimizing supply chain management to achieve proximate distribution from various production regions. Three Squirrels could also introduce advanced logistics technologies such as the Internet of Things to enhance distribution efficiency, and build intelligent warehousing systems to increase the speed of goods sorting and reduce error rates. By further enhancing the logistics model, Three Squirrels can improve transportation efficiency and address the issue of high costs due to transportation, thereby reducing costs and enhancing efficiency to improve the company's profitability.

4.2. Optimize Product Structure

As previously mentioned, Three Squirrels has a concentrated product structure, mainly relying on nut products, with other products constituting a smaller proportion of business income. In a highly competitive market, relying solely on nut products does not meet the diverse needs of consumers. Three Squirrels urgently needs to diversify its products. The company should find its precise market positioning, and while ensuring the continuous development of nut products, learn from the successful experiences of domestic and international food companies to actively explore and launch new products, such as organic foods and healthy snacks. By expanding its product range, Three Squirrels can broaden its product line to capture market share across different categories, gradually increasing its market share. Additionally, Three Squirrels could also promote its products through cross-promotions,

enhance multi-platform advertising, and collaborate with well-known brands to launch co-branded products, thereby further enhancing its competitiveness.

4.3. Increase R&D Investment

Although Three Squirrels has achieved tremendous success in e-commerce, its lack of substantial R&D investment is a potential issue. Innovation is a fundamental driver of business development, directly impacting its market position and influence, and R&D investment is a critical factor in innovation. Three Squirrels should increase its R&D investments, focus on cultivating and attracting technical talent, value the technical skills and innovative capabilities of its employees, and actively encourage the presentation of creative ideas to invigorate the company's research and development efforts. Moreover, it should prioritize innovative research and actively cooperate and exchange ideas with relevant scientific research institutions, continually strengthening technological innovation, adopting new technologies and processes, and introducing advanced equipment and technology to enhance its innovative capabilities. This approach can help Three Squirrels reduce product homogeneity, thus strengthening its core competitiveness and achieving sustainable development in a fiercely competitive market.

4.4. Improve Sales Channels

As the e-commerce market becomes increasingly saturated, relying solely on online sales can no longer fully meet the growing consumer demand; offline channels also play an indispensable role. As a seasoned e-commerce enterprise, Three Squirrels has already perfected its online sales approach but needs to pay more attention to offline operations and improve its sales channels. Currently, there is room for improvement in Three Squirrels' offline sales, which mainly rely on physical stores. In response, Three Squirrels should further explore offline partners and distribution networks, find retailers or supermarkets with similar value philosophies to collaborate with, gain more display space, and reach more consumers, thereby enhancing brand recognition. Additionally, Three Squirrels could attract consumers by organizing offline events such as snack festivals and tasting sessions, providing a better consumption experience, enhancing consumer interaction, and increasing brand loyalty through such engagement.

5. Conclusion

The analysis using the Balanced Scorecard indicates that, from a financial perspective, Three Squirrels has enhanced both its short-term and long-term debt repayment capabilities, and it possesses strong operational abilities. However, its profitability has been weak in recent years and needs further enhancement. Overall, the company's development capabilities are weak, with room for improvement; from the customer dimension, it enjoys high brand recognition, which needs to be maintained; in terms of internal operations, Three Squirrels has a high sales expense ratio and rising management costs, and its product structure is quite concentrated, mainly reliant on nut products; from the learning and growth perspective, while the company places emphasis on team development, its investment in research and development is insufficient. This paper provides optimization suggestions based on these identified issues.

The case study of Three Squirrels reveals insights into the development of e-commerce businesses. Firstly, given the unique nature of the e-commerce industry, where online sales play a crucial role in the sales model, companies should focus on adopting advanced logistic technologies and continuously improve their logistics systems to reduce costs and enhance efficiency. Secondly, in the face of fierce market competition and growing consumer demands, the management of offline sales channels and diversification of products cannot be overlooked. Additionally, maintaining innovation is essential for sustainable development; companies should prioritize investment in research and development.

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