

The Efficiency of Horizontal Mergers: Evidence from Mengniu Dairy's Merger with Milkground

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Abstract: Contemporarily, the dairy industry is a compulsory industry that relevant to the daily life of human beings. In particular, the dairy industry is a signature industry for the modernization of Chinese agriculture. Local production in China's dairy industry holds a huge market potential. In this paper, the efficiency of the horizontal mergers is investigated of Chinese dairy industry. To be specific, the case of Mengniu Dairy's Merger with Milkground is selected. Mengniu Group is the leading company in China's dairy industry and Milkground is the number one brand of domestic cheese. In recent years, there have been more and more cases of horizontal mergers and acquisitions. The value of horizontal mergers and acquisitions to the development of a company lies in making up for the lack of asset allocation. This paper will analyze the effectiveness of Mengniu's horizontal merger with Milkground through three financial indicators. According to the analysis, the corresponding suggestions will be given accordingly. Overall, these results shed light on guiding further exploration of horizontal merger.

Keywords: merger and acquisition efficiency, horizontal merger, financial indicators

1. Introduction

Since the Civil War, there have been at least five major waves of mergers and acquisitions in the West [1]. Five waves of mergers and acquisitions, driven by the technological revolution, have disrupted traditional industries. The emerging industries have transformed their investment philosophy from "discovering value" to "restructuring value". In contrast, Chinese corporate mergers and acquisitions started relatively late, first appearing in 1984. On this basis, it was proposed to clarify the relationship between property rights, their mobility and restructuring. Property rights reform has become an important part of corporate reform [2].

The global M&A market has also seen explosive growth since 2002. Since 2007, the emergence of the global financial crisis and the subsequent two years of M&A and market consolidation has had a serious impact. Over the past decade, M&A trends in China have been characterized by a large proliferation of businesses concentrated in a few sectors and a very clear focus on M&A [3]. Nowadays, with the increasing number of mergers and acquisitions of "powerful alliances", the diversified development model has become the main driving factor for mergers and acquisitions among enterprises in the industry. With the increasing number of 'strong-alliance' M&A, diversification has become the main driving factor of M&A for companies in the industry. Horizontal

M&A refers to mergers and acquisitions between companies in the same industry in order to expand the size of the company and increase its market share.

Yan and Yan used the case of joint shareholding between Didi Chuxing and Uber Global [4]. Initially, the two companies lost out on price competition. In 2016, the two companies merged to consolidate their entire vehicle and data resources, expand their scale and market share, and enhance their competitive advantage, resulting in a benign merger. Liu and Zhang examine the financial risks of horizontal mergers and acquisitions [5]. Taking the horizontal merger between Jiangte Electric and Jiulong Electric as an example, the entropy method is applied to analyze the outcome of the merger failure due to the unreasonable financing structure and the sharp drop in the proportion of R&D investment ratio after the merger. The efficiency of mergers and acquisitions is affected by several factors, such as the ability of firms to merge, managerial behavior, executive compensation incentives and the quality of internal controls. Braid studied horizontal mergers of two firms in the same industry using a simple model of spatial competition, mainly taking efficiency effect and price effect as influencing factors, and concluded that horizontal mergers could improve efficiency [6]. Chen et al. took the listed companies with mergers and acquisitions and those without mergers and acquisitions as samples, double difference is used to test the impact of economies of scale brought by mergers and acquisitions [7]. They conclude that the M&A behavior of Chinese firms does contribute to higher returns to scale and higher economic efficiency.

In the case of Mengniu and Milkground, the existing research analysis is an analysis of the motivation for the merger. Whether mergers and acquisitions are effective has not been studied before. M&A is the spontaneous choice of enterprises to pursue profit maximization, which affects both the performance of enterprise and the dairy industry. In this paper, financial indicators are taken as the reference basis to observe the financial situation before and after the horizontal merger to analyze whether the merger is effective. The rest part of the paper is organized as follows. Section 2 will give the background of the two companies, Mengniu and Milkground. Section 3 deals with the motivation and process of the merger between the two companies. Section 4 is an analysis of the effectiveness of this M&A through several financial indicators.

2. Descriptions of Mengniu and Milkground

2.1. Descriptions of Mengniu

Mengniu Dairy's subsidiaries include China Mengniu International Company Limited, Plant Base Limited and Mengniu Investment Company Limited. In addition to producing and selling star-selling products (e.g., Deluxe Milk, Kuan Yi Milk and You Yi C). Besides, Mengniu Dairy also produces and sells a range of plant-based beverages through its subsidiaries such as China Mengniu International Limited, including outstanding brands such as Kuan Yi Milk and Rui Niu En. In recent years, Mengniu Dairy has produced milk powder, liquid milk and ice cream, which have become quite popular with the Chinese.

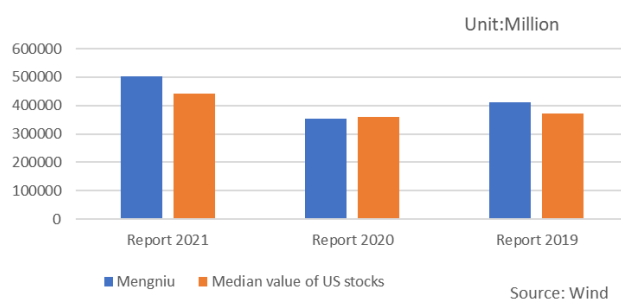


Figure 1: Comparison of Mengniu Dairy's annual reports for the past three years

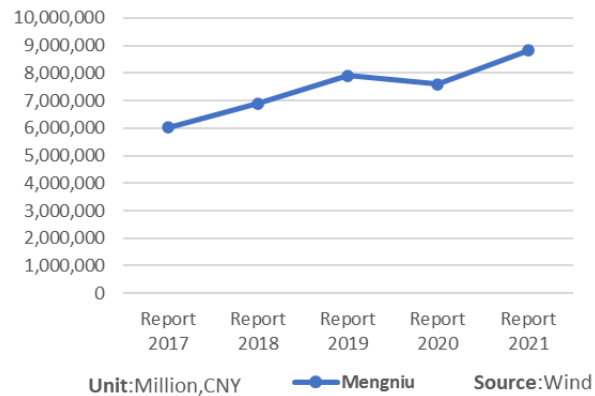


Figure 2: Mengniu Dairy's operating revenue for the past five years

Comparative data based on the food processing industry as presented in Fig. 1, Mengniu's annual reported net profit figures for 2019 to 2021 are above the median of the top 20 US stocks in the same industry. As shown in Fig. 2, according to the operating revenue data of Mengniu Dairy in the past five years, the overall trend of operating revenue is up, with an average year-on-year growth rate of about 10.3%. In the first half of 2022, Mengniu grew against the backdrop of short-term shocks such as the epidemic and the international situation and rose two places in the global dairy rankings. At the same time, it continued to grow its brand value to the number one position in the domestic industry, upholding the sustainable development of the dairy industry.

2.2. Descriptions of Milkground

Milkground is a listed company in China with cheese production as its main business, and is currently the most abundant producer of cheese in China. It has a wide range of high quality dairy products, including cheese sticks, hand-rolled cheese, mozzarella and cheese slices. The company has a wide range of brands such as "Milkground", "Guangze" and "Aussie Ranch", and its brand awareness is growing in China. According to Euromonitor's report on the market share of the top 10 brands in China's cheese market in 2021, Fig. 3 exhibits Milkground is in first place with a share of 28%.

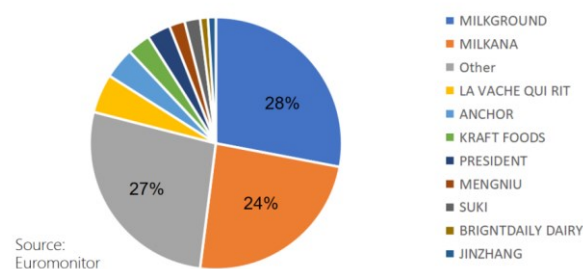


Figure 3: Market share of the top 10 brands in the Chinese cheese market in 2021

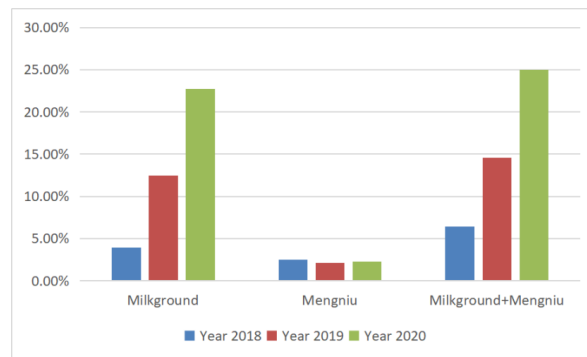


Figure 4: Market share of the top 10 brands in the Chinese cheese market in 2021.

3. M&A Procedure

3.1. Motivation for M&A

Milkground's cheese business has also more than tripled in the last five years, with gross profit rising to 90.40%. However, the proportion of revenue and gross profit from businesses other than the main business is rapidly declining (seen from Fig. 4). Mengniu's stake in Ai's Morning Sun is also competitive in the market, but its total market share and popularity are far less than that of Milkground. Mengniu Dairy can use the market position and scale of Milkground to fill the gap in the cheese business and realize the development process and plan for the cheese business. With Mengniu Dairy, the company will be able to optimize its industrial chain, further develop its products and expand its sales channels. The cheese business is popular at the moment, and Mengniu's own cheese-making capabilities and industry chain are too simple for Mengniu, which has liquid milk as its main business. Through the acquisition, Mengniu gave Milkground financial support and a larger sales platform to help it develop in all aspects. On the one hand, Milkground provides Mengniu Dairy cheese technology and industry chain, on the other hand, it can further optimize and improve its upstream cheese supply chain and technology.

3.2. Specific M&A Process

According to the announcement of 2020-005 released on the evening of January 6, 2020 (summarized in Table. 1), by Milkground, a wholly-owned subsidiary of Milkground, Jilin Guangze Dairy Technology Co., Ltd. intends to introduce strategic investors by way of the capital increase and share expansion. Mengniu intends to use cash close to ¥458 million to Jilin Technology to increase capital and expand shares. As presented in Table 2, Milkground has made Mengniu its strategic investor. Mengniu intends to take a 5% stake in the company for ¥287 million at ¥14 per share. Upon completion of the capital increase and the transfer of shares, Mengniu will become the second largest shareholder of Milkground. In March of the same year, Milkground released another announcement showing that Mengniu would be one of the subscribers to Milkground's pre-proposed increase. Mengniu contributed ¥315 million to subscribe to 20.78 million shares for ¥15.16 per share.

Table 1: Jilin Technology before and after value-added share expansion

Name of shareholder	Before the capital increase		After the capital increase	
	Contributed capital (Yuan, CNY)	Shareholding ratio	Contributed capital(Yuan, CNY)	Shareholding ratio
Shanghai Milkground Food Technology Co.	280,000,000	100.00%	280,000,000	57.12%
Mengniu	0	0.00%	210.196,078	42.88%
Total	280,000,000	100.00%	419,196,078	100%

Table 2: Milkground before and after value-added share expansion in 2020

Name of shareholder	Before the capital increase		After the capital increase	
	Contributed capital (Yuan, CNY)	Shareholding ratio	Contributed capital(Yuan, CNY)	Shareholding ratio
Inner Mongolia Mengniu Dairy Co.	0	0.00%	20,467,853	5%

In July of the same year, Milkground announced a non-public offering of A shares. Table 3 lists the data that the non-public offering was priced at ¥29.71 per share and the total amount of funds raised did not exceed ¥3 billion. Mengniu will subscribe to all the shares in the non-public offering in cash, a total of 100.98 million shares, holding 28.47% of the shares. In May this year, Milkground bought back a cumulative total of 9.8 million shares, raising Mengniu's shareholding to 30% and making it the single largest shareholder of Milkground.

Table 3: Milkground before and after value-added share expansion in 2021

Name of shareholder	Before the capital increase		After the capital increase	
	Contributed capital (Yuan, CNY)	Shareholding ratio	Contributed capital(Yuan, CNY)	Shareholding ratio
Mengniu	20,467,853	5%	8,229,440,000	28.47%

4. Analysis

In this paper, the changes before and after the merger will be analyzed through market share, production capacity and solvency financial indicators to determine whether this acquisition by Mengniu of Milkground is effective.

4.1. Market Share

Market share reflects a large extent a company's competitive position and profitability and is an indicator to which companies attach great importance. There are generally two types of

representation: one is expressed as a percentage of a firm's sales to overall market sales, and the other as a percentage of a firm's sales to competitors' sales. The method analyzed in this article is the latter.

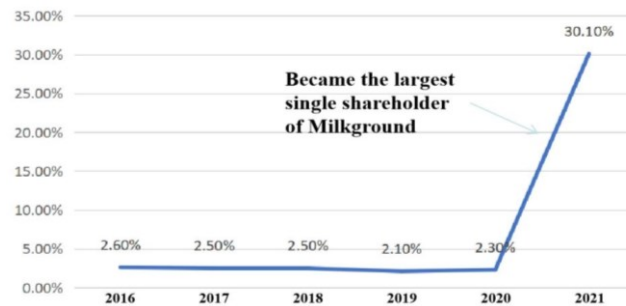


Figure 5: Mengniu's market share of cheese in China.

According to a survey by Euromonitor in Fig. 5, Mengniu's market share in the cheese sector will be generally maintained at around 2.5% until 2021. After 2021, Mengniu and Milkground start to make equity deals. From the initial 5% to the current 30% share, Mengniu becomes the largest single shareholder of Milkground. Mengniu's share of the cheese industry has also grown sharply to 30.1%.

4.2. Capacity

In recent years, sales of Milkground cheese have increased. In 2019, capacity utilization exceeded 100%. This has led to problems such as saturated factory capacity and oversupply. As presented in Fig. 6, the increase in Mengniu's shareholding has financially supported the construction of an additional factory and the renovation of the production line to expand cheese production capacity. With reference to the company's current under-construction plans, the various production line conversions and new construction projects will release an additional 53,000 tons of capacity. This will provide greater assurance of increased market demand and future new product roll-outs. With the opening of the second plant in Shanghai in 2021, the company's total cheese production capacity will increase to 78,000 tons, thus alleviating the shortage of capacity. This makes Milkground the company with the largest number of cheese production lines among foreign and Chinese companies in China.



Figure 6: Milkground capacity growth and utilization.

Solvency is the ability of a business to repay all debts previously owed with the relevant earnings generated from its day-to-day production and sales and other business activities. The balance sheet ratio and long-term solvency are usually inversely proportional, i.e., the lower the former, the stronger the latter.

Table 4. Mengniu gearing ratio for the last five years

Year	Total assets (Yuan, CNY)	Total liabilities (Yuan, CNY)	Gearing ratio (%)
2022	10,517,430.10	6,121,283.80	58.20
2021	9,810,134.40	5,610,191.20	57.18
2020	8,014,624.00	4,289,868.10	53.53
2019	7,853,740.50	4,519,006.80	57.54
2018	6,645,725.70	3,599,297.80	54.16

Seen from Table. 4, the financial data from Wind shows that Mengniu Dairy's gearing ratio has increased after the acquisition of Milkground, from 53.53% to 57.18%, with no significant change in gearing ratio, which shows that Mengniu Dairy's acquisition of Milkground has little impact on its gearing ratio. Mengniu's long-term debt capacity is comparatively strong, and the long-term debt capacity after the acquisition is not bad either. As a result, Mengniu's assets are relatively well safeguarded.

5. Suggestions

Lei proposes that the period of rapid growth in China's dairy industry has come to an end [8]. In terms of consumption, it also shows a slowdown in growth and low consumption and is in an adjustment period spiral. In the meantime, China's reliance on imported dairy products has increased year on year, with imported raw. The proportion of imported raw materials in China's domestic commercial milk supply has exceeded 45%. Refinement and expansion of the dairy business are imminent.

The M&A model is not as effective as the 'big eat small' model of M&A for the same type of dairy industry to achieve better growth through M&A. The current type of M&A that is a "strong combination" can have a positive cumulative market effect. In contrast, Wang et al. found that the cumulative abnormal returns for Bright Dairy during its acquisition of Tnuva Group were more volatile and negative, with a negative market impact [9]. Mengniu's cumulative abnormal returns were positive and stable during its acquisition of Milkground, generating a positive market effect.

At the same time, horizontal M&A require sufficient financial support. Mengniu has always had a high level of profit in the highly competitive domestic dairy market. The company's net profit in the first two years was RMB 3.52 billion and RMB 4.1 billion respectively, with a book of nearly RMB 100 million. The sufficient capital and stable cash flow ensured the financial needs of the acquisition. The frequent mergers and acquisitions of Chinese company New Dairy require a large amount of capital, and large-scale borrowings have also led to a high gearing ratio for New Dairy. In September 2019, New Dairy's gearing ratio was 62.42%, which is at a high level compared to peer-listed companies. The higher debt ratio has stalled the growth rate of M&A.

6. Limitations & Outlook

This study has certain shortcomings due to the constraints of time, research perspective and resource conditions. Firstly, the data source is relatively homogeneous. Most of the data for this study comes from the Wind database, a dataset base that has limitations of its own, such as relatively old data. In addition, the data from the annual reports of the two companies are not well referenced. Secondly, the financial indicators are not innovative enough. Yuan and Zhou suggest that examining the effectiveness of M&A restructuring is also about the effectiveness of the securities market and the desirability of financial indicators [10]. This study uses three financial indicators, namely market share, capacity, and solvency. It does not integrate and extend the underlying analysis methods.

Finally, in terms of empirical research, the focus of this paper is on whether M&A behavior is effective, without over-analyzing the environment, multiple drivers [11] and synergies of M&A.

The dairy industry is a landmark industry in agricultural modernization and a strategic industry that drives the coordinated development of primary, secondary and tertiary industries. China's dairy consumption is expected to grow by 38%, which means that there is a huge market potential for indigenous production in China's dairy industry. Horizontal mergers and acquisitions in the dairy industry are intended to upgrade dairy processing technology and process formulations and develop new products with high added value such as cheese. Based on this horizontal M&A analysis, many new issues need to be addressed in this study, which need to be built upon and refined in practical application. Further research and development are required in adopting the event study method and model selection.

7. Conclusion

In summary, this paper uses three financial indicators, namely market share, capacity, and solvency, to analyze the financial position before and after the horizontal merger. The paper concludes that Mengniu's horizontal merger with Milkground was effective. In terms of market share, Mengniu's market share in the cheese industry increased significantly after the merger. Regarding production capacity, Mengniu doubled its production capacity after the merger, although its capacity utilization rate decreased by 30%. In the aspect of solvency, Mengniu's gearing ratio did not change significantly before and after the M&A, indicating that the M&A did not put much financial pressure on Mengniu. The rising gearing ratio of Milkground indicates an increase in long-term debt servicing capacity. Nevertheless, this paper still has limitations in terms of data sources, the innovativeness of the financial indicators and the focus of the study. The factors and methods of financial indicators and models can be further improved to increase the completeness of the analysis. Overall, these results offer a guideline for analyzing the horizontal merger efficiency.

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