

Analysis of the Synergies Caused by M&A: Evidence from Midea's Acquisition of Little Swan

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Abstract. Since the reform and opening-up, China's household appliance industry has become quite competitive in the world. The penetration rate of domestic household appliances is relatively high, the market has turned to the stock market, the industry has entered a relatively mature stage, and the industry concentration has increased significantly. In the first half of 2018, Haier Exhibition, China's leading washing machine brand, had a market share of 30.50%, Little Swan accounted for 17.20%, and Midea Group accounted for 9.30%. In order to enhance its overall competitiveness, Midea Group merged with Little Swan in 2018 by means of A-share issuance for share exchange absorption and partial offer. This article will first explain the research background, i.e., the competition in the home appliance industry in 2018. This is followed by a brief introduction to the development status of the acquirer, Midea Group, and the target Wuxi Little Swan before the acquisition. Afterwards, it focused on the analysis and evaluation of the synergy effect after the acquisition of Little Swan from Midea Group. It is found that Midea did improve the corporate value of Midea Group, and its development methods were used for reference by relevant enterprises. Midea Group and Little Swan are both listed companies, and this merger is the first private enterprise to merge with an A+B share listed company in China. These results shed light on guiding further exploration of mergers and acquisitions in the same industry.

Keywords: Merger and acquisition, financial synergies, operating synergies, enterprise value.

1. Introduction

In 2008, the global economy began to decline gradually due to the effects of the financial crisis around the world. Against this economic backdrop, outbound M&A activity has cooled significantly, and in contrast to the downturn in the global M&A market, China's M&A market remains strong [1]. Li Xiaojuan believes that Midea's acquisition of Little Swan business has become a model for successful mergers and acquisitions by Chinese companies during the financial crisis. The motives for the marriage between Midea Electric and Little Swan are multifaceted, such as achieving strong alliances, expanding the market share of enterprises, achieving economies of scale, and enabling enterprises to achieve a dominant position in the competition [2]. In 2018, Midea Group completed the complete acquisition of Little Swan. Midea's motivation for the two acquisitions of Little Swan is inseparable from its strategic plan, and is one of the means for Midea to carry out strategic expansion [3]. Most of the existing literature explains the M&A behavior of enterprises from the theory of resource base, transaction cost, synergy effect and market power [4], among which the theory of synergy effect is mostly adopted by scholars [5]. Synergy effect refers to the complementary advantages of enterprises through mergers and acquisitions, resulting in "1+1>2" economic effects. Most companies want to gain technical or complementary strategies through M&A [6]. However, some scholars have found that mergers and acquisitions do not bring performance or value to enterprises [7].

Midea strengthens its competitiveness through mergers and acquisitions, integrates resources, realizes synergies, and improves corporate performance. By analyzing the synergies generated by mergers and acquisitions in finance, management and operation [8], this paper constructs different financial indicators (working capital turnover, total asset turnover, return on assets, total net asset profit margin, return on net assets, P/E ratio and price-to-book ratio, as well as market competitiveness indicators) and calculates their changes. Subsequently, this paper judges the performance of Midea Group M&A. From the perspective of the cumulative excess return after the merger, the merger

brought significant short-term performance to Little Swan, but the short-term performance brought to the acquirer Midea Group was not obvious enough. From the stock price before and after the announcement of the merger, it can be seen that in the short term, the merger is more beneficial to the target company Little Swan, and the impact on Midea Group is more neutral. In the long run, mergers and acquisitions are undoubtedly conducive to the development of Midea Group's own development, the two enterprises can achieve complementary main businesses, reduce capital costs to a certain extent, and the leverage of the company's funds is also amplified [2], but for Little Swan, it is still unknown. Eventually, some advice is given to companies that are also in the mature stage to encourage them to actively pursue mergers and acquisitions. The process of mutual learning and co-evolution between the mergers and acquisitions from mutual independence to reducing dependence asymmetry and increasing joint dependence is a process of joint learning and co-evolution [9]. Knowledge sharing and value creation after M&A are the strategic focus of post-M&A integration [9]. Besides, the impact of executive characteristics, incentive mechanisms and behaviors on the value creation of M&A enterprises should also be analyzed [10].

2. M&A background

2.1. Acquirers

Founded in 1968, Midea Group is a multinational technology company that operates in five industry sectors: robotics and automation, smart homes, building technology, industrial technology, and digital innovation business. In 2013, Midea Group was listed on the Shenzhen Stock Exchange. In recent years, major appliances have entered a mature period, and Midea Group has become popular in small household appliances, especially kitchen appliances, and has achieved the first place in many household appliance industries. Meanwhile, Midea Group is still constantly looking for new growth points and continuously carrying out in-depth cooperation with the Internet industry. Throughout the development history of Midea Group in the past ten years, it has been developing in continuous mergers and acquisitions. In 2003, Midea acquired Yunnan and Hunan bus companies, officially entered the automobile industry, and entered diversified development; In 2004, Midea signed a cooperation agreement with Toshiba Carrier to acquire Rongshida and Hualing successively to improve the capabilities of the refrigeration industry, thereby opening the situation in the field of white electricity. In 2005, it acquired Jiangsu Chunhua again to achieve large-scale growth. In 2016, it issued a takeover offer to the German robotics company Kuka, and two months later, it officially owned Kuka's absolute controlling stake. In 2018, Midea completed the acquisition of Little Swan.

2.2. The Target Party

The predecessor of Wuxi Little Swan Co., Ltd. was founded in 1958. From the birth of China's first automatic washing machine in 1978 to the brand value of 15.016 billion yuan in 2010, it has become the world's third largest washing machine manufacturer that can manufacture all kinds of washing machines of automatic wave washing machines, drum washing machines and stirring washing machines at the same time. Little Swan has a national enterprise technology center and a national certification laboratory, relying on technology strategic alliance, adhering to independent innovation, and has international leading frequency conversion technology, intelligent drive control, structural design and industrial design and other core washing technologies. As of 2018, Little Swan and its subsidiaries have nearly 400 unique patents and more than 100 copyrights in China, making them a leading existence in the washing machine industry.

2.3. M&A process

In the early stage of development, Little Swan Group performed very well. In 2007, Midea acquired a 4.93% stake in Little Swan through its subsidiary TITONI; In 2008, Midea won the competition with Sichuan Changhong and obtained 24.01% of the shares of Little Swan in the hands of Guolian Group, becoming the largest shareholder of Little Swan. In 2018, Midea Group absorbed and merged

Wuxi Little Swan Co., Ltd. by issuing A shares, realizing the asset integration of the two listed companies, and simultaneously solving the problem of Little Swan B shares. Midea Group issues shares to all exchange shareholders of Little Swan except Midea Group and Midea Group subsidiary TITONI in exchange for Little Swan A shares and Little Swan B shares held by such shareholders. The A shares and B shares of Little Swan held by Midea Group and TITONI will not participate in the share exchange, and such shares will be cancelled after the merger of this share exchange. Midea Group will apply for listing and circulation on the main board of the Shenzhen Stock Exchange due to the additional A shares issued by the share exchange and merger.

3. Analysis of Financial Indicators

Midea Group completed the acquisition of Little Swan in June 2019, so this article selects financial data from March 2019 to December 2020. And compare and analyze Midea Group data with Gree and Haier Group in the same industry.

3.1. Financial Synergies

As shown in Table 1, there is the company's quarterly financial report. This paper analyzes the solvency of the enterprise by calculating the current ratio, quick ratio and asset-liability ratio. From the perspective of 2019-2020, Midea Group's current ratio has always been in a better position in the industry. Little Swan was acquired by Midea through the share exchange absorption technique, therefore there was no major cash flow following the transaction. However, because Little Swan had reasonably steady liquid assets, its current ratio had increased dramatically, as had its solvency. After the merger, the quick ratio of Midea Group briefly increased, but soon returned to the normal level, so the acquisition of Little Swan had little impact on Midea's quick ratio, which may have caused a short-term impact, but the overall impact was not large, and its quick ratio was still in a high position in the same industry. From the perspective of long-term solvency, Gree has always been in a better position, and the long-term solvency of Midea has not changed much before and after the merger, so the acquisition of Little Swan has basically no impact on the long-term solvency of Midea. This paper analyzes the changes in profitability before and after Midea's acquisition of Little Swan by calculating the net profit margin, return on net assets and return on total assets of Midea and companies in the same industry.

Table 1. Solvency evolution.

	firm	2020 Q4	2020 Q3	2020 Q2	2020 Q1	2019 Q4	2019 Q3	2019 Q2	2019 Q1
liquidity ratio	Midea	1.31	1.33	1.31	1.54	1.50	1.55	1.49	1.48
	Haier	1.04	1.08	1.07	1.07	1.05	1.05	1.08	1.11
	Gree	1.35	1.33	1.26	1.27	1.26	1.26	1.22	1.26
Quick ratio	Midea	1.14	1.20	1.19	1.37	1.28	1.36	1.31	1.30
	Haier	0.78	0.82	0.82	0.76	0.76	0.78	0.81	0.84
	Gree	1.17	1.20	1.10	1.11	1.12	1.15	1.11	1.13
Gearing ratio (%)	Midea	65.53	65.72	66.43	63.01	64.40	63.42	65.29	64.34
	Haier	66.52	65.85	66.42	64.84	65.33	66.93	67.95	67.79
	Gree	58.14	57.57	59.27	58.26	60.40	64.93	66.81	63.97

Among the three enterprises, as shown in Table 2, Gree's net profit margin on sales is significantly higher than that of the other two, and as an indicator based on sales revenue, Gree Electric has strong profitability. After the merger, the net profit margin of Midea Group's sales reached a peak of 10.44%, indicating that in a short period of time, the profitability of Midea Group has been greatly improved, but in the long run, there is still much room for improvement. From 2019 to 2020, Midea's return on equity has always been at a high level, and after the acquisition of Little Swan, there has been a significant increase. Owing to the impact of the epidemic, Gree and Haier have significantly reduced their return on net assets and return on total assets from the end of 2019 to the beginning of 2020,

while Midea has obtained Little Swan's technical advantages in washing machines through mergers and acquisitions, expanded its share in the washing machine market, and enhanced its ability to resist risks, so the impact of the epidemic is relatively small. Return on total assets as an important indicator to measure profitability, Midea Group has maintained a high and stable level, indicating the improvement of its profitability (seen from Table. 3).

Table 2. Profitability

	firm	2020 Q4	2020 Q3	2020 Q2	2020 Q1	2019 Q4	2019 Q3	2019 Q2	2019 Q1
Net profit margin on sales (%)	Midea	9.68	10.24	10.12	8.29	9.09	10.12	10.44	8.70
	Haier	13.25	10.96	9.24	7.74	12.53	14.33	14.2	14.05
	Gree	5.4	5.19	3.77	3.11	6.14	7.57	6.3	5.55
Return on equity (annualized) (%)	Midea	24.84	27.37	26.96	18.53	26.21	31.35	34.58	28.39
	Haier	19.68	16.24	11.37	5.59	24.52	30.7	29.93	24.55
	Gree	15.48	17.09	11.56	8.87	18.8	24.59	25.25	21.24
Return on total assets (annualized) (%)	Midea	8.85	12.09	9.65	8.72	9.55	14.68	12.56	10.67
	Haier	8.43	6.78	4.34	1.50	10.20	12.46	11.59	9.71
	Gree	7.37	7.16	4.95	3.66	8.94	10.76	9.08	7.99

Table 3. Operating capacity

	firm	2020 Q4	2020 Q3	2020 Q2	2020 Q1	2019 Q4	2019 Q3	2019 Q2	2019 Q1
Year-over-year growth rate of operating income (%)	Midea	2.16	-1.88	-9.56	-22.86	7.14	7.37	7.82	7.84
	Haier	4.46	2.78	-4.29	-11.09	9.05	8.68	10.54	11.26
	Gree	-14.97	-18.64	-28.21	-49.01	0.24	4.42	6.89	2.45
Year-over-year growth rate of net profit (%)	Midea	8.82	-0.74	-12.41	-26.46	16.75	17.13	16.55	15.86
	Haier	-8.15	-27.80	-41.60	-50.22	24.59	40.62	5.41	10.60
	Gree	-10.26	-37.92	-53.49	-65.18	-7.54	12.91	7.38	17.00

3.2. Business Synergies

This paper analyzes whether Midea's operating conditions have improved by comparing the changes in its operating conditions before and after Midea's acquisition of Little Swan, and comparing them with the year-on-year growth rates of operating income and net profit of Haier and Gree, as shown in Table 3. Compared with Haier, from 2019 to 2020, Midea Group's operating income growth rate has always been at a low level. In 2019, the growth rate of Gree and Haier's operating income is constantly fluctuating, and due to the acquisition of Little Swan, Midea Group has remained stable during this period. Due to the impact of the epidemic, at the beginning of 2020, the operation of the entire household appliance industry was seriously affected, and the operating income growth rate of the three companies became negative, reflecting that the ability of the three enterprises to resist market risks needs to be improved. In terms of net profit growth rate, Midea has expanded the market scale through mergers and acquisitions, significantly improved market competitiveness, and has good operating effects.

4. Suggetions & Implication

After rapid growth in the past few years, the household appliance industry has entered the stock market from an incremental market. With the decline in the growth rate of the retail market of household appliance companies, the growth of many electrical appliance companies has entered a bottleneck, and enterprises need to find new profit growth points. Not only enterprises in the household appliance industry, but also saturated industries should continue to carry out horizontal mergers and acquisitions and vertical mergers and acquisitions, expand market share and broaden business scope. On this basis, they can usher in more opportunities and challenges. When M&A

enterprises, they should choose the appropriate M&A method based on their own financial status. Examples include share exchanges, cash payments, or share payments. When analyzing the value of an enterprise, financial indicators should be combined with non-financial indicators, focusing on whether the merger and acquisition is in line with the strategic development goals of the enterprise.

5. Conclusion

In summary, this paper investigates synergies based on Midea's acquisition of Little Swan. Through the acquisition of Little Swan Group, Midea Group's market share has increased significantly, and its market share has rapidly approached Haier compared with 2018. Besides, it has produced significant synergies, realized the increase of enterprise value, ushered in an increase in stock prices, and enhanced its competitiveness in the industry. The third quarter of 2019 financial report showed that the net profit margin on sales reached 9.1%, indicating that financial synergies have been generated. In terms of operating synergies, Midea's revenue growth rate and net profit growth rate were stable before 2019. In 2020, when Midea faced the downward pressure of the industry, it performed better, with the smallest decline in net profit growth and an increase in brand value. Before the share exchange merger, as a leading brand of washing machines, Little Swan has a global strategic customer network, and through mergers and acquisitions, Midea can achieve synergies with Little Swan in terms of brand effect, R&D ability, bargaining power, etc., which coincides with Midea's innovation and development strategy.

Nevertheless, this study has some shortcomings, there are many factors that affect the value creation of the acquired company that are not taken into account, e.g., the profitability of the acquired enterprise, its own ability to resist risks, and its own operational ability. For further study, When conducting M&A case analysis, it is necessary to take into account the financial status of both parties to the merger and the degree of correlation between the two parties to determine the risk of the merger. Overall, these results offer a guideline for future research on M&A cases, and improves the success rate of M&A by analyzing various data and adopting different M&A methods.

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