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A Study on the Impact of the Light Asset Operation Model on Corporate Performance in the Home Appliance Industry: A Case Study of Gree

Jin Xiong[1,a,*]

[1]*Guizhou Center for Disease Control and Prevention, Guiyang City, Guizhou Province, China*
a. jinxiong1210@163.com
**corresponding author*

Abstract: This paper analyzes the impact of Gree's light asset operation model on its corporate performance. The study examines the impact pathways from four perspectives: the application of the "quasi-financial" model, the effective use of bank-pledged accounts receivable bills, technological innovation and control over the industry chain, and brand value creation. It is found that after adopting the light asset operation model, Gree significantly improved its corporate performance. The paper also discusses the shortcomings of Gree's choice of the light asset operation model and provides improvement suggestions. It is hoped that this research can offer insights for Gree's future light asset operation strategy and for the stable development of other companies in the home appliance industry.

Keywords: Light asset operation model, financial performance, value management

1. Introduction

The domestic home appliance market in China has become increasingly saturated, and the industry itself faces the issue of serious product and profit model homogeneity. Continuous price wars and blind expansion of scale have made market competition more intense. In the 21st century, which advocates for "soft manufacturing," how the home appliance industry can enhance its competitive advantage has led to reflections on constructing a sustainable profit model that suits the industry. Gree, as a leader in China's home appliance industry, has been striving to transform into a light asset operation model for many years. The company has worked to enhance its soft power by continuously exploring and creating differentiated solutions, thereby forming a light asset operation model that suits its needs. A complete industry chain includes research and development, design, production, manufacturing, marketing, and services. Gree has gradually exited the lower-margin segments of this chain and, through its brand effect and other forms of soft power, has integrated high-quality internal and external resources with minimal fixed assets and capital costs. This approach has allowed Gree to create a unique competitive advantage and corporate value.

2. Literature Review

The light asset operation model, as a relatively "new" business model, is still in the exploratory stage of research. International studies mainly focus on industries such as hotels, semiconductors, hospitality, and telecommunications, while domestic research covers industries such as real estate

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and internet companies. However, there has not been in-depth research on the impact of the light asset operation model on corporate performance in international studies. In 1980, Nike outsourced its non-core business to economically underdeveloped countries, which promoted the company's healthy development and led other companies and scholars to start focusing on light asset operations. This marked the beginning of related theoretical exploration. U.S. telecommunications companies, by adopting the light asset operation model, gained significant competitive advantages [1]. Over the past two decades, a large number of Japanese semiconductor companies have transitioned to light asset operation models, and after in-depth studies, it was found that companies adopting the light asset model saw significant improvements in both business performance and operational efficiency [2]. Other studies have designed a financial strategy-driven profit model and analyzed the changes in company profits under Apple's financial strategy, concluding that financial strategies can support companies in light asset operations [3]. Another study found that the light asset operation model improves corporate profit margins [4].

3. Case Analysis

Zhuhai Gree Electric Appliances, Inc. (hereinafter referred to as "Gree") was listed in 1996 and has a top-tier research and development (R&D) center. The first step in Gree's journey toward a light asset operation model was the integration of sales channels, establishing regional equity sales companies, and aligning interests with large distributors. This move unified regional pricing and improved after-sales services. The second step was a large-scale investment in R&D, with a focus on innovative technologies and breaking free from dependence on foreign technologies. Through these two steps, Gree's light asset operation model began to take shape.

Characteristics of Gree's Light Asset Operation Model: 1.“Light” asset forms and “small” asset scale: As shown in Table 1, the proportion of Gree's inventory and fixed assets in total assets is very low. 2.Low "financial input": The company emphasizes the liquidity of cash and cash reserves. According to Table 1, the proportion of receivables to total assets is consistently low, around 2% annually. The ratio of cash to total assets is relatively high, with the company's cash scale increasing by 30 times over a 10-year period, from an initial 3.7 billion yuan. Over the 10 years, current assets have consistently accounted for more than 70% of total assets. These characteristics indicate that Gree has been progressively moving toward a light asset operation model.

Table 1: Characteristics of Gree's Light Asset Operation Model

	Inventory/Total Assets	Fixed Assets/Total Assets	Cash/Total Assets	Current Assets/Total Assets	Accounts Receivable/Total Assets
2008	15.55%	13.97%	11.90%	75.57%	1.84%
2009	11.30%	8.94%	44.45%	82.69%	1.78%
2010	17.62%	8.43%	23.12%	83.12%	1.83%
2011	20.54%	9.05%	18.82%	84.21%	1.44%
2012	16.02%	11.81%	26.91%	79.10%	1.37%
2013	9.82%	10.50%	28.83%	77.59%	1.38%
2014	5.50%	9.56%	34.91%	76.90%	1.70%
2015	5.86%	9.54%	54.93%	74.80%	1.78%
2016	4.95%	9.70%	52.43%	78.36%	1.62%
2017	7.71%	8.13%	46.34%	79.80%	2.70%
2018	7.97%	7.32%	45.01%	79.49%	3.06%

Source: Gree Electric's Annual Financial Reports

3.1. Gree’s Light Asset Operation and Its Impact on Market Performance

The impact of Gree’s light asset operation model on market performance can be analyzed by looking at the changes in its stock price and market capitalization, reflecting the market and investors' responses. Since 2008, Gree's stock price has steadily increased, reaching its peak in early 2018, indicating that the market has responded positively to Gree's light asset approach. In 2008, Gree’s market value was only 30.8 billion yuan. By the end of 2019, Gree's market value had risen to 394.5 billion yuan, a tenfold increase compared to ten years ago. This indicates that investors and the market have greatly recognized Gree’s persistence in adopting the light asset operation model.

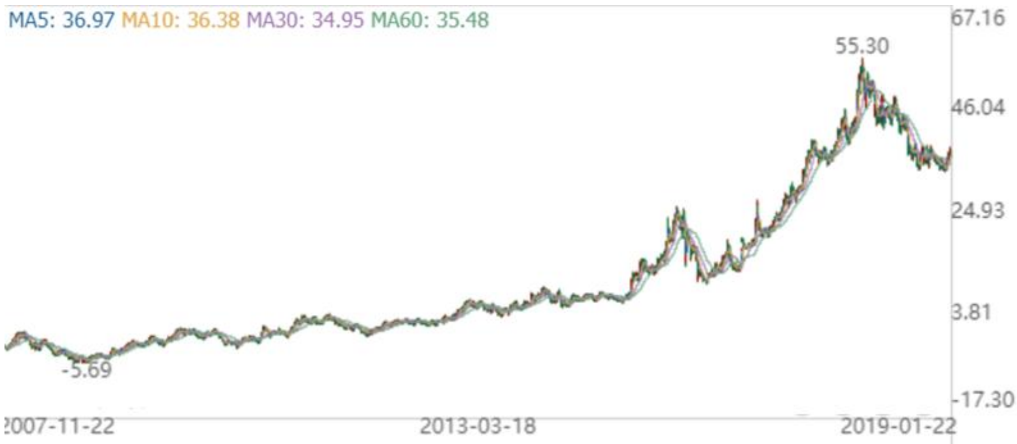

Figure 1: Gree’s Stock Price Trend (2007-2018)

3.2. Gree's Light Asset Operation and Its Impact on Financial Performance

3.2.1. Profitability

The profitability of a company is one of the most important concerns for its stakeholders. To reflect the impact of Gree’s light asset operation model on its profitability, the data in Table 2 shows that from 2008 to 2018, Gree’s revenue and net profit consistently grew. Total revenue increased nearly fivefold, and net profit increased by more than tenfold. Corresponding to this, the net profit margin has increased and remained around 15% in recent years, ranking among the best in the industry. This is a reflection of Gree’s brand influence and its bargaining power. Since 2008, Gree’s return on equity (ROE) has remained stable, and the return on total assets (ROA) has steadily increased, demonstrating strong profitability. These indicators suggest that under Gree’s light asset operation model, its profitability is very stable and continues to improve.

Table 2: Profitability Indicators

	Return on Equity (%)	Return on Total Assets (%)	Net Profit Margin (%)	Gross Profit Margin (%)	Total Revenue (Billion Yuan)	Net Profit (Billion Yuan)
2008	31.27	8.33	5.06	19.74	422.00	21.28
2009	31.59	7.98	6.90	24.73	426.37	29.32
2010	34.61	8.06	7.12	21.55	608.07	43.03
2011	33.04	8.00	6.37	18.07	835.17	52.97
2012	31.55	8.56	7.50	26.29	1001.10	74.46
2013	29.05	10.18	9.22	32.24	1200.43	109.36
2014	35.93	10.85	10.35	36.10	1400.05	142.53

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Table 2: (continued).

2015	26.86	8.95	12.91	32.46	1005.64	126.24
2016	30.77	10.09	14.33	32.70	1101.13	155.25
2017	35.44	12.70	15.18	32.86	1500.20	225.09
2018	32.60	12.85	13.31	30.23	2000.24	263.79

Source: Gree Electric's Annual Financial Reports

3.2.2. Operational Capability

Operational capability evaluation mainly refers to assessing how well a company utilizes its assets. Gree's choice of the light asset operation model has enhanced the liquidity of the company's funds, but this does not necessarily mean that asset utilization efficiency is optimal. As shown in Table 3, Gree's inventory turnover, accounts receivable turnover, and fixed asset turnover rates have continuously improved under the light asset operation model. Even though these indicators showed a downward trend in 2014 due to the impact of price wars, they quickly stabilized and began rising again. This can be attributed to Gree's strategy with its distributors, where the company uses a "pay first, deliver later" model, which is similar to a cash-on-delivery approach. This strategy allows accounts receivable to be converted into cash flow in the shortest amount of time, and it has become one of Gree's signature strategies.

Table 3: Operational Capability Indicators

	Inventory Turnover (Times)	Accounts Receivable Turnover (Times)	Fixed Asset Turnover (Times)	Total Asset Turnover (Times)
2008	5.61	3.81	12.04	1.50
2009	6.02	3.32	9.57	1.04
2010	5.45	3.45	12.00	1.04
2011	4.69	2.86	12.62	1.11
2012	4.21	2.81	9.81	1.04
2013	5.30	2.83	8.98	1.00
2014	8.12	2.72	9.66	0.97
2015	7.31	2.76	6.62	0.63
2016	7.88	4.27	6.65	0.64
2017	7.78	4.18	8.54	0.76
2018	7.56	4.85	11.16	0.86

Source: Gree Electric's Annual Financial Reports

3.2.3. Solvency

In the analysis of Gree's solvency, as shown in Table 4, the ratio of cash flow to liabilities and the company's ability to repay maturing debts are positively correlated. However, a higher ratio is not always beneficial, as too high a ratio means a significant portion of the company's liquidity is left idle. Gree's debt-to-asset ratio has generally been high. For most companies, a debt-to-asset ratio between 40% and 60% is considered optimal. However, Gree has maintained a debt-to-asset ratio of over 70% for many years, although this ratio has been showing a downward trend in recent years. For the current ratio, a value around 2 is considered appropriate. If the current ratio falls below 1.25, the company should be cautious of solvency risks. Regarding the quick ratio, Chinese scholars generally

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believe that it should remain above 1. Since Gree began depleting its inventory and recovering funds in 2015, its current ratio has been trending upward. The company has already proposed policies to address this issue. The quick ratio faces a similar challenge. Currently, Gree's solvency is considered moderate, but it is heading in a positive direction. However, Gree needs to introduce a series of relevant policies to ensure the company's long-term, stable development.

Table 4: Solvency Indicators

	Cash Flow to Liabilities Ratio (%)	Debt-to-Asset Ratio (%)	Current Assets/Total Assets (%)	Current Ratio (%)	Quick Ratio (%)
2008	1.60	74.91	75.58	1.01	0.80
2009	23.12	79.33	82.69	1.04	0.90
2010	1.19	78.64	83.12	1.10	0.87
2011	5.02	78.43	84.21	1.12	0.85
2012	23.01	74.36	79.10	1.08	0.86
2013	13.20	73.47	77.58	1.08	0.94
2014	17.05	71.11	76.90	1.11	1.03
2015	39.23	69.96	74.80	1.07	0.99
2016	11.66	69.88	78.36	1.13	1.06
2017	11.04	68.91	79.80	1.16	1.05
2018	17.00	63.10	79.49	1.27	1.14

Source: Gree Electric's Annual Financial Reports

3.2.4. Growth Ability

The evaluation of growth ability, as shown in Table 5, indicates that Gree's operating revenue and operating profit have generally been in a state of growth, suggesting that the company's development ability is strong. The total asset growth rate is significant, which means the company's scale is expanding. According to Table 5, although the overall trend of Gree's total asset growth rate has been downward, it has always remained positive. This indicates that the company's scale has been consistently growing. Through analysis, it is evident that even though some of Gree's financial indicators are showing a downward trend, the company's expansion and growth rate are very rapid, with its asset scale increasing every year. Despite the impacts of market conditions, Gree has continued to expand, which demonstrates the company's strong risk resistance and excellent growth ability.

Table 5: Growth Ability Indicators

	Operating Revenue Growth Rate (%)	Operating Profit Growth Rate (%)	Total Asset Growth Rate (%)
2008	10.58	70.15	20.56
2009	1.01	27.16	68.59
2010	42.33	-7.66	27.31
2011	37.6	65.37	29.89
2012	19.43	76.70	26.24
2013	19.44	52.79	24.30
2014	14.75	31.21	16.84
2015	-29.04	-15.99	3.50

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Table 5: (continued).

2016	10.80	29.15	12.78
2017	36.92	49.26	17.87
2018	33.61	18.65	16.86

Source: Gree Electric's Annual Financial Reports

4. Conclusion and Recommendations

Gree Electric places significant emphasis on product technological innovation, brand image, and investment in research and development, resulting in numerous patents. Under the light asset operation model, Gree's market and financial performance have been excellent. The company's market value has doubled, its brand value has been increasing year by year, and its profitability and solvency are outstanding. Gree's rational transformation has led to improvements and optimization in financial performance, enhancing the company's core competitiveness and promoting the growth of corporate value, ensuring the company's continuous and stable development.

The light asset operation model presents both advantages and disadvantages for a company's development [5]. For companies in the home appliance industry, if they possess independently developed technologies and continually innovate, the light asset operation model is highly suitable. Especially in the early stages of smart home development, as long as a company has a core business foundation, the light asset operation model can have a positive impact on corporate performance and should be scientifically applied. For other home appliance companies adopting the light asset operation model, they should learn from the strengths and weaknesses of this model. Home appliance manufacturers can use Gree's experience as a reference for their own strategic planning and policy development. The following three suggestions are made:

First, appropriately select business segments: For traditional products and businesses that have low profits and are about to be discarded by the market and consumers, the company should identify the right time to innovate or divest from these business lines, adjusting the business structure to improve the gross profit margin. For businesses that have market demand and higher product profit margins, but contribute little to sales revenue and are non-core, outsourcing can be considered. At the same time, the company can provide timely value-added services to customers, focus on the future, and boldly develop new products and business lines, as well as new technologies.

Second, focus on Brand Marketing: Brand value is a symbol of consumer recognition of a company's brand and also influences the company's bargaining power. Gree established "regional sales companies with shareholding" to improve the efficiency of operating capital utilization. If a company's hardware scale is suitable, it can learn from Gree's marketing model by reaching agreements with distributors to share risks and rewards. This approach also helps prevent retailers from controlling market prices, stabilizing the market, and achieving direct sales of products. Additionally, strengthening cooperation with e-commerce platforms enables the simultaneous and continuous development of both online and offline sales, allowing the company to stay aligned with market trends and improve its ability to withstand market fluctuations. Companies can collaborate with celebrities to launch special products, maintain official social media accounts like Weibo and WeChat, allowing users to place orders directly on the official website. Moreover, establishing specialty product experience stores and integrating resources from various areas can help achieve high-value brand marketing.

Third, strengthen Quality Management and Supervision in Outsourcing: Outsourcing brings certain risks to companies. To avoid product quality issues in the outsourcing process, companies can take the following measures: Establish evaluation criteria to comprehensively assess contractors based on their industry position, equipment, and personnel management. Reach agreements with partner companies to ensure the stable, long-term production of quality products. If the products produced by the partner company have inconsistent or substandard quality, Gree should detect such issues early, address them promptly, or terminate the agreement if necessary to minimize losses. Maintain efficient and rapid communication between companies. Dedicated personnel can be sent to supervise the outsourcing process and regularly report to the company, strengthening management over outsourced operations.

References

[1] *Liou, F. M. (2011). The effects of asset-light strategy on competitive advantage in the telephone communications industry. Technology Analysis & Strategic Management, 23(9), 951-967.*

[2] *Wen, H. C., Huang, J. H., & Cheng, Y. L. (2012). What Japanese semiconductor enterprises can learn from the asset-light business model for sustainable competitive advantage. Asian Business & Management, 11(5), 615-649.*

[3] *Dai, T. J., Zhang, R., & Tang, G. L. (2012). Financial strategy-driven business profit models: A case study of Apple's asset-light model. Accounting Research, (11), 23-32.*

[4] *Wang, Z. B., & Li, C. H. (2015). The impact of asset-light operation on corporate profitability: An empirical study based on data from Chinese industrial enterprises. China Industrial Economics, (6), 108-121.*

[5] *Yang, L., & Tang, G. L. (2017). Financial strategy transformation in Chinese real estate enterprises: A case study of Vanke Group and Greenland Hong Kong's "asset-light" model. Finance & Accounting Monthly, (4), 76-80.*