A Financial Assessment on TCL Technology's Acquisition of Zhonghuan Group

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Abstract. In recent years, supply-side structural reform has become an important strategy to promote China's economic development, and the mergers and acquisitions have become important measures to enhance corporate competitiveness and achieve high-quality development. However, existing research on the impact of mergers and acquisitions on corporate performance is controversial. This paper takes TCL Technology's acquisition of Tianjin Zhonghuan Electronic Information Industry Group as a case study to explore the effectiveness of mergers and acquisitions and their importance to the high-quality development of enterprises. Through financial analysis and comparative analysis, the financial changes from 2018 to 2020 and 2021 to 2023 were studied, and the impact of market changes on corporate development was analyzed. The results show that after TCL Technology acquired Zhonghuan, its return on net assets and return on total assets increased significantly, indicating that mergers and acquisitions have improved the company's profitability and market competitiveness. Through industrial chain collaboration and resource integration, TCL Technology's core competitiveness in the field of photovoltaic new energy has been enhanced. This case provides experience for other corporate mergers and acquisitions, showing that mergers and acquisitions can not only optimize financial structure, but also enhance the company's competitiveness in emerging industries through strategic synergy.

Keywords: Mergers and acquisitions; supply-side structural reform; financial performance; TCL Technology; Zhonghuan.

1. Introduction

Since 2015, China has focused on promoting supply-side structural reforms while maintaining a steady growth in total demand, in order to promote sustained and healthy economic development and deepen enterprise reforms. As a key measure of supply-side structural reform, mergers and acquisitions have a significant impact on reducing excess capacity and improving economic structure [1].

There have been a large number of research results in the field of corporate merger and acquisition performance evaluation. For example, Bhabra and Huang found that mergers and acquisitions have a positive impact on corporate performance by studying the changes in stock returns of the main companies in the three years before and after the merger [2]. Hackbarth and Morellec conducted a performance analysis based on 1,000 merger and acquisition cases in the US market between 1985 and 2002, showing that the performance of companies did not improve after mergers and acquisitions [3]. Ismail and Krause found that mergers and acquisitions can promote the average profit growth of target companies by analyzing the changes in the profits of the main companies and target companies after mergers and acquisitions, but caused losses to the main companies [4]. At the same time, domestic scholars have also conducted in-depth research on corporate merger performance. Cao and Yang evaluated the performance of 475 A-share listed companies acquired from 2012 to 2013 and found that the performance of enterprises first increased and then decreased in the short term after the acquisition [5]. Liu et al. conducted a comprehensive evaluation of the M&A performance of 150 A-share listed companies in 2014. The results showed that the performance of M&A was not obvious in the short term, but in the long run, its earnings performance was significantly improved [6]. Qi and Zhang used the 2008 telecommunications industry M&A event as a case study in 2016 to evaluate the performance of corporate M&A from the two dimensions of profitability and operational capacity. They found that China Mobile's performance before and after the acquisition did not change much, China Telecom's operating efficiency dropped significantly after the merger, and China Unicom's profitability and operational capacity both declined significantly after the merger [7].

This paper takes TCL Technology's acquisition of Zhonghuan as a case study, and uses financial analysis to analyze the entire M&A process and effects. By comparing the changes in the main items in the balance sheet, income statement, and cash flow statement before and after the M&A, the reasons for the changes in the items with large changes are explored, and the comparative analysis method is used to analyze the changes in the market before and after the M&A to show the changes in corporate operations and profitability. Finally, the effectiveness of corporate M&A results and the recognition and importance of M&A activities in promoting high-quality development of enterprises are concluded.

2. Case Analysis

TCL Technology's acquisition of Zhonghuan Group marks its strategic transformation. In 2019, TCL Technology completed its asset restructuring and focused on the semiconductor display and smart terminal industries. Faced with industry pressure and the rise of photovoltaic new energy, TCL decided to enter the photovoltaic industry through mergers and acquisitions. In July 2020, TCL acquired 100% of Zhonghuan Group's equity through its subsidiary TCL Huaxing for 11.5 billion yuan and completed the transaction in September [8]. After the acquisition, Zhonghuan was renamed "TCL Zhonghuan" and quickly became the world's leading photovoltaic silicon wafer manufacturer. This acquisition has enhanced TCL Technology's core competitiveness in the new energy field and achieved a diversified strategic layout.

2.1. Financial Analysis

This paper will conduct a financial analysis of TCL Technology from three aspects: profitability, debt-paying ability, and operating ability. The return on net assets (ROE) and the return on total assets (ROA) are selected for profitability analysis, the debt-to-asset ratio is selected for debt-paying ability analysis, and the total asset turnover rate is selected for operating ability analysis.

2.1.1. Profitability

As Figure 1 shown, TCL Technology's return on net assets (ROE) increased during 2020-2021. The acquisition of Zhonghuan Group is one of the reasons for the increase in ROE, which can be analyzed from the following aspects:

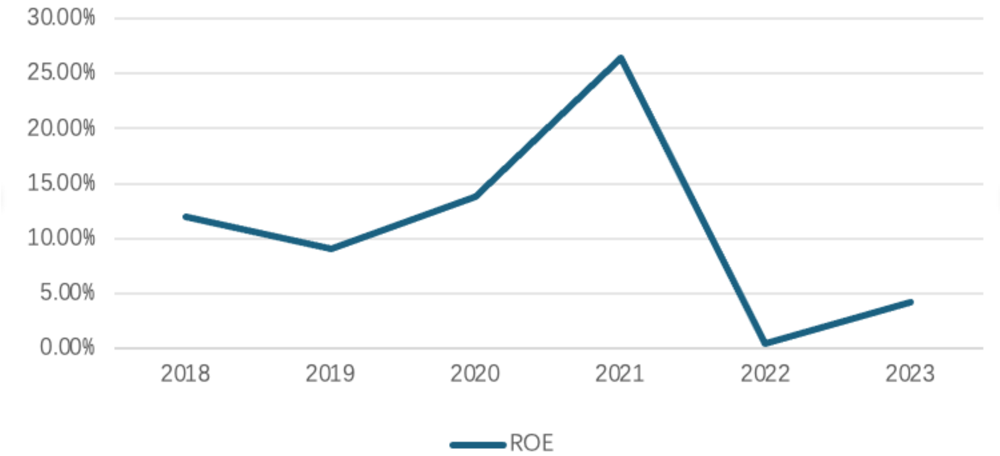

Fig 1. ROE of TCL Technology from 2018 to 2023.

Industrial Chain Synergy: TCL Technology acquired Zhonghuan Group mainly because it was interested in Zhonghuan Group's business in the fields of photovoltaics and semiconductor materials, which has a close industrial chain synergy with TCL Technology's main business, the panel industry. Zhonghuan Holdings, a subsidiary of Zhonghuan Group, is mainly engaged in the research and development and production of monocrystalline silicon. Its products include solar silicon wafers, solar cells, semiconductor materials and devices, etc. These businesses have synergistic effects with TCL Technology's panel industry in the upstream semiconductor materials and semiconductor device fields, which is in line with TCL Technology's strategic route to enter the upstream industry and promote TCL Technology's transformation and upgrading.

Industry Opportunities: TCL Technology pointed out in the announcement that this acquisition will help both parties to give full play to their advantages in funds, technology, experience, etc., and make breakthroughs through collaborative integration, industrial landing, demand guidance, etc., to seize the historic opportunity of semiconductor transfer to China.

Financial Performance: According to data from Eastmoney, TCL Technology's ROE increased significantly in 2020 and 2021 (13.7% and 26.1%, respectively). This growth may be related to the company's vertical extension and horizontal integration in the semiconductor display industry, accelerating the layout in basic materials, next-generation display materials, and key equipment in new process manufacturing.

Performance Growth: TCL Technology mentioned in its 2021 annual report that the company achieved operating income of 163.54 billion yuan, a year-on-year increase of 113.3%. Net profit of 14.96 billion yuan, a year-on-year increase of 195.3%. TCL Zhonghuan's annual operating income was 41.1 billion yuan, a year-on-year increase of 115.7%, and its net profit was 4.44 billion yuan, a year-on-year increase of 200.6% [9].

In summary, one of the reasons for the increase in TCL Technology's ROE during 2020-2021 was the acquisition of Zhonghuan Group. This acquisition achieved the synergy of the industrial chain, seized the opportunities of industrial development, increased the scale of assets and revenue, and effectively improved the company's profitability and market competitiveness.

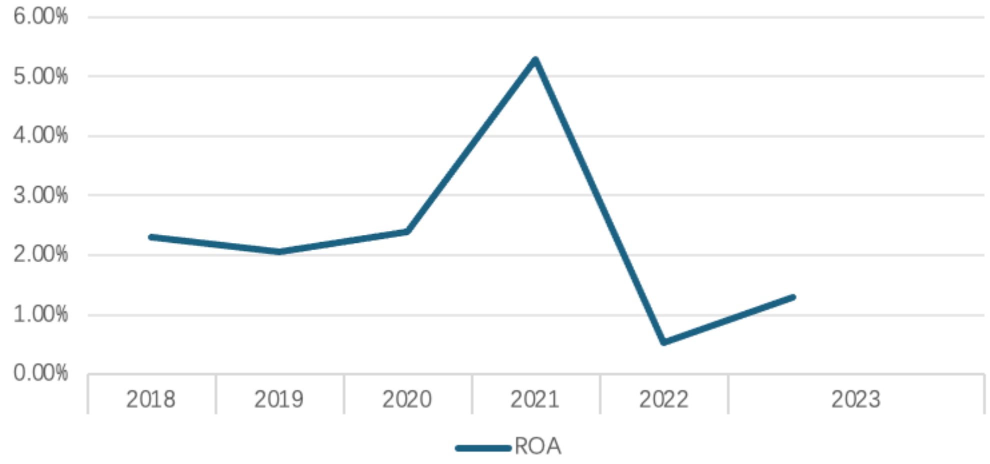

Fig 2. ROA of TCL Technology from 2018 to 2023.

As Figure 2 shown, ROA showed a significant increase in 2020-2021, which may be closely related to the acquisition activities in 2020. The reasons for the increase in ROA caused by the company's acquisition activities mainly include the following aspects: (1) Scale effect brought by mergers and acquisitions: Through mergers and acquisitions, companies can integrate resources, achieve economies of scale, reduce unit costs, and thus improve ROA. (2) Business synergy effect: After the merger and acquisition, the businesses of the two companies can complement each other, form synergy, and improve overall operational efficiency. (3) Management improvement: After the merger and acquisition, the new management team may bring more effective management methods and improve asset utilization efficiency. (4) Improved market position: Through mergers and acquisitions, companies may gain a larger market share and enhance bargaining power, thereby improving profitability. (5) Cost Control: After the acquisition, the company may reduce costs by integrating the supply chain and reducing duplicate investments.

TCL Technology's ROA increased during 2020-2021, mainly due to the company's rapid development and performance growth in semiconductor display, new energy photovoltaic and semiconductor material businesses. According to the summary of TCL Technology's 2021 annual report released by the Shenzhen Stock Exchange, the company achieved significant growth in operating income and net profit during this period, with operating income increasing by 113.28% year-on-year and net profit attributable to shareholders of listed companies increasing by 129.20% year-on-year [10]. This growth reflects the company's enhanced competitiveness in core industries and effective business development strategies.

2.1.2. Solvency

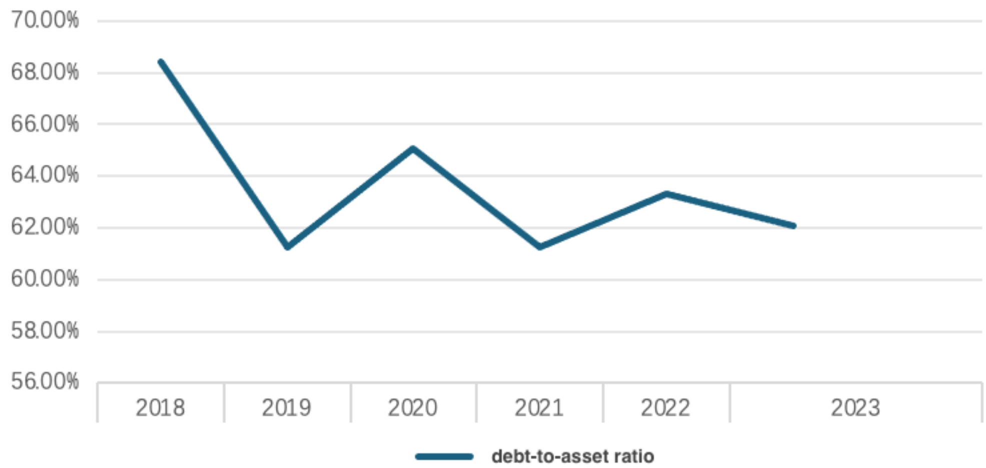

Fig 3. Debt-to-asset ratio of TCL Technology from 2018 to 2023.

Based on Figure 3, the following conclusions can be drawn. The decline in TCL Technology's debt-to-asset ratio during 2020-2021 is closely related to the acquisition of Zhonghuan Group. The following are several key factors:

Business growth and improved profitability: According to the summary of the 2021 annual report, TCL Technology achieved significant business growth and improved profitability during this period. The company's operating income and net profit both achieved significant growth, with operating income increasing by 113.3% year-on-year, net profit increasing by 195.3% year-on-year, and net profit attributable to shareholders of listed companies increasing by 129.2% year-on-year [11]. This shows that the company's holistic profitability and market competitiveness have been enhanced.

Asset integration and debt structure optimization: After acquiring Zhonghuan Group, TCL Technology has carried out effective asset integration, which may include measures such as optimizing asset structure and improving asset utilization efficiency. At the same time, the company's debt-to-asset ratio decreased from 65.1% in 2020 to 61.2% in 2021, showing the company's effectiveness in debt management.

Growth of new energy photovoltaic and semiconductor materials business: Through the acquisition of Zhonghuan Group, TCL Technology successfully entered the new energy photovoltaic field and achieved rapid business growth. In 2021, the new energy photovoltaic and semiconductor materials business achieved operating income of 41.1 billion yuan. The growth of this business has brought new sources of income and profit to the company, helping to reduce the overall debt-to-asset ratio.

In summary, the decline in TCL Technology's debt-to-asset ratio during 2020-2021 was mainly due to the rapid growth of the company's business, the optimization of asset integration and liability structure, and the growth of new energy photovoltaic and semiconductor materials businesses.

2.1.3. Operational capacity

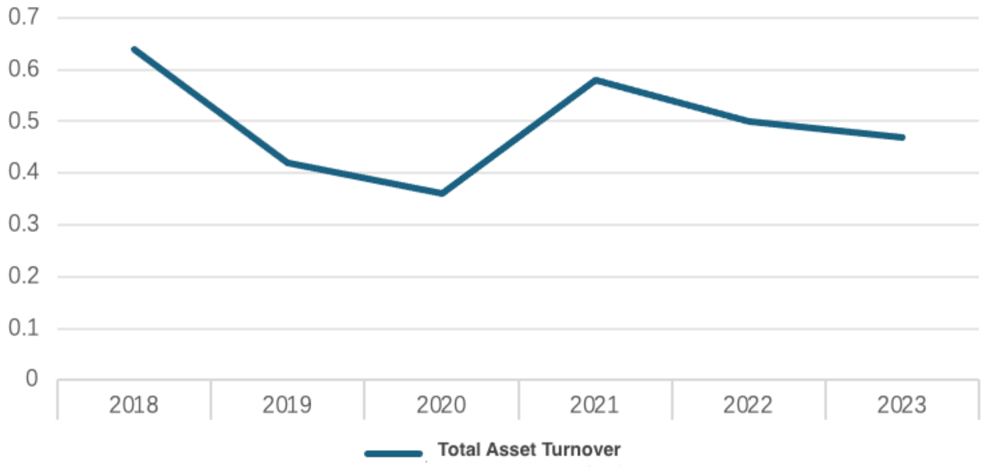

Fig 4. Total asset turnover of TCL Technology from 2018 to 2023.

As Figure 4 shown, the reason for the increase in TCL Technology's total asset turnover rate during 2020-2021 is mainly closely related to the strategic decision to acquire Zhonghuan Group and the company's holistic performance growth. The specific analysis is as follows:

Performance growth: After the acquisition, TCL Technology's operating income and net profit both achieved significant growth. In 2020, TCL Technology's operating income reached 76.7 billion yuan, a year-on-year increase of 34%. Net profit attributable to shareholders of listed companies was 4.4 billion yuan, a year-on-year increase of 68% [11]. This performance improvement directly promoted the increase in total asset turnover.

Asset structure optimization: After the acquisition of Zhonghuan, TCL Technology's asset structure has been optimized, and the proportion of fixed assets has increased, which has improved the company's efficiency in asset utilization, thereby improving the total asset turnover rate.

Industrial chain integration and synergy effect: Through the acquisition, TCL Technology can better integrate upstream and downstream resources, improve production efficiency, reduce costs, and further enhance the company's profitability and asset utilization efficiency.

In summary, the increase in TCL Technology's total asset turnover rate is closely related to factors such as performance growth, asset structure optimization and industrial chain integration after the acquisition of Zhonghuan Group.

In 2022, the semiconductor display industry experienced a global industry winter. Affected by multiple factors such as geopolitical conflicts, inflation, and the impact of the epidemic, global economic growth was weak, consumption continued to be weak, demand for display terminals in major markets fell sharply, and product prices fell, resulting in insufficient growth momentum, and the panel industry suffered operating losses. TCL Huaxing, which mainly engages in semiconductor business, suffered a net loss of 8.35 billion yuan in 2022, mainly due to the impact of panel cyclicality. At the same time, TCL Zhonghuan contributed 6.819 billion yuan in profits to TCL Technology. Without TCL Zhonghuan’s profits and non-operating gains and losses, it means that TCL Technology’s other businesses have lost nearly 10 billion yuan. Therefore, the various financial indicators of TCL Technology analyzed in this article showed a significant decline in 2022. This has nothing to do with TCL Technology’s acquisition of Zhonghuan, but is due to relatively obvious external influences.

2.2. Market Analysis

According to the annual reports of TCL Technology found on the Shenzhen Stock Exchange, some of TCL Technology's businesses had problems and losses before the acquisition of Zhonghuan, but this problem has been effectively improved through acquisition and reorganization. The author will list the market data of TCL Technology from 2017 to 2023 to illustrate the conclusion.

Affected by the cyclical downturn of the global industry, the semiconductor display industry has seen a sharp drop in product prices since the second quarter of 2017, sales revenue has fallen year-on-year, gross profit margins have narrowed significantly, and the smart terminal business group has suffered huge losses in 2017. In 2018, in order to solve problems such as low business profits, fast product technology upgrades and iterations, small business scale, and insufficient profitability and growth momentum, TCL Technology carried out strategic reorganization and significantly improved its main operating indicators. TCL Electronics' global TV shipment market share in 2018 was 11.6%, ranking second in the world. TCL Electronics' TV sales in overseas markets were 18.214 million units, a year-on-year increase of 29.5%. In 2019, due to the concentrated release of supply and the slowdown in demand growth, the global semiconductor display industry entered a cold winter, and the industry faced huge profit pressure. According to data from market research firm IHS Markit, in September 2019, the average price of 55-inch LCD TV panels had dropped to US$102, a 6% month-on-month decrease from August, and an annual decline of 30.6%. In 2020, TCL Technology's operating income in overseas regions fell by 14.97% year-on-year compared with 2019.

In 2021, due to the completion of the acquisition of Zhonghuan (later renamed TCL Zhonghuan) in July 2020, all indicators of the group have been greatly improved. In the global TV market, TCL's market share continues to increase. In 2021, TCL Smart Screen's global market share increased to 11.5%, ranking third in the world. In addition, TCL TV's full-year sales market share in 2022 increased by 0.2 percentage points to 11.7%, surpassing LG and jumping to second in the world.The production capacity of the Ningxia Zhonghuan Phase VI project has been increased, and the chip projects in Tianjin and Yixing have been put into production one after another. The advantageous production capacity has increased rapidly. TCL Zhonghuan photovoltaic crystal production capacity has increased to 140GW, becoming the world's largest silicon wafer shipment company. In the e-sports display market, TCL Technology's market share has reached the world's top 1. In 2023, the financial environment will tighten, geopolitical conflicts will intensify, the global industrial chain and supply chain will accelerate reconstruction, and the world economic growth rate will slow down. Challenges also breed opportunities. The adjustment of economic structure has brought new momentum to the transformation and upgrading of the science and technology industry. In the field of new energy photovoltaic materials, the production and sales volume of TCL Zhonghuan photovoltaic products continued to grow, with an overall market share of 23.4% for photovoltaic silicon wafers, a global industry-leading market share for G12 silicon wafers, and a global market share for N-type silicon wafer exports.

It can be seen that TCL Technology's acquisition of Zhonghuan has effectively made up for the company's development shortcomings in the short term, optimized the business and product structure, effectively integrated the company's resources, improved operating efficiency, and brought new momentum to TCL Technology's transformation and upgrading.

2.3. Performance Evaluation

Based on the above information, it can be preliminarily concluded that TCL Technology's acquisition of Zhonghuan is successful in the short term. Through a series of studies such as case selection, background investigation, data search, and analysis, it can be found that after TCL Technology acquired Zhonghuan in 2020, the overall financial data and market data are developing in a good direction, and the company's profitability and market share have been improved. Therefore, it can be considered that TCL Technology's acquisition of Zhonghuan is beneficial to promoting the development of TCL Technology itself.

3. Conclusion

This paper, through the case analysis of TCL Technology's acquisition of Zhonghuan Group, reveals the significant impact of mergers and acquisitions on corporate diversification strategies and financial performance. After the acquisition, TCL successfully entered the photovoltaic new energy field, promoted business diversification and coped with the cyclical downward pressure of the semiconductor display industry. Financial indicators, such as return on net assets and return on total assets, improved significantly after the acquisition, showing the enhancement of profitability and risk resistance. Zhonghuan's technological advantages in the photovoltaic and silicon wafer fields have formed a strong synergy with TCL's panel industry, promoting market layout and resource integration. At the same time, the acquisition optimized TCL's asset-liability structure and improved its debt repayment ability and financial stability. Effective business integration and management improvement, especially the rapid development of photovoltaic business, further enhanced the company's overall performance. In short, TCL's M&A case shows that through strategic transformation, industrial integration and risk management improvement, enterprises can achieve dual improvement in financial performance and market competitiveness, which has important reference significance for the M&A strategies of other enterprises.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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