

TCL Technology's Merger and Acquisition of Central Electronics: Analysis of Corporate M&A and Restructuring Strategies

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Abstract. Benefiting from national policy support and market economy, China's semiconductor industry has made significant progress in technological innovation, especially in the context of 5G, smart Internet and big data era, the center of gravity of the industry is shifting from South Korea and Taiwan to mainland China. Through the acquisition of Azeus, which is equipped with profound semiconductor packaging and testing technology, TCL Technology aims to enhance its competitiveness in the semiconductor field, optimize supply chain management and improve product quality control capability. This paper examines TCL's acquisition of Azeus and discusses six aspects of the acquisition: overview of the two parties, industry background, progress of the acquisition, performance evaluation (including financial and non-financial), risk analysis, and characteristics of the acquisition. The results show that the acquisition has had a positive impact on TCL's development in semiconductors and related fields.

Keywords: TCL Technologies, Business Combination, M&A Performance, M&A Risks.

1. Introduction

Thanks to the national policy support and the development of market economy, our semiconductor industry has made great progress with continuous innovation in technology. In recent years, with the advent of 5 G, smart Internet and big data era, our semiconductor industry is gradually shifting from Korea and Taiwan to mainland China and has launched a rapid and comprehensive layout in several aspects. Influenced by the development trend of the industry, China has become the world's largest semiconductor market, and its scale is still expanding. The semiconductor industry has a very important significance to the level of technological development of a country, through technology mergers and acquisitions, companies can quickly obtain the technology patents of the target company in a relatively short period of time, so that their own technology level to get a breakthrough. At the same time, it can also take full advantage of the synergistic effect brought about by the cross-relationship of technologies to improve their own related technology level, and thus promote the upgrading of the semiconductor industry.

TCL Technologies, a leading global manufacturer of consumer electronics products, has further expanded its business in the semiconductor industry through the acquisition of Central Electronics Corporation. This acquisition will enable TCL Technologies to leverage Azeus' advanced technology and expertise to strengthen its competitiveness in the semiconductor industry chain. Azeus Electronics is a company dedicated to the development and production of semiconductor processes, with deep technology accumulation in chip packaging and testing. By acquiring Central Electronics, TCL Technologies will not only have more semiconductor process technologies, but also further optimize its supply chain and product quality management system to improve the company's overall comprehensive strength. In addition, the acquisition will help TCL Technologies further expand its market share in consumer electronics and accelerate its development in smart home and smart manufacturing. In summary, by acquiring Zhonghuan Electronics, TCL Technologies will further strengthen its core competitiveness in the semiconductor industry and related fields, and lay a more solid foundation for future development.

This paper selects TCL Technologies' M&A of Central Electronics as a case study to specifically analyze the performance, risks and M&A features brought by the M&A. The first part introduces the basic information of both parties, the second part introduces the background of the M&A industry, the third part introduces the detailed progress of the M&A, the fourth part analyzes the financial and non-financial performance of TCL Technologies after the M&A of Azeus, the fifth part analyzes the risks arising from the M&A of Azeus, and the sixth part analyzes the characteristics of the M&A and summarizes them. By analyzing the relevant data of TCL Technologies and Central Electronics, we find that this merger has brought some positive impact to TCL Technologies in general and provided a more solid development space for its semiconductor business.

2. Profiles of the merging parties

2.1. TCL Technology Company Profile

TCL Group Corporation, once known as Group Corporation, is a globalized intelligent product manufacturing and Internet application service enterprise group. TCL is the acronym of the initial letters of the three English words of the creative life, which means creativity touches life. TCL Corporation was founded in 1981, formerly known as TTK Home Appliances (Huizhou) Co. TCL Group takes the market as a guide, and has devoted itself to the construction of marketing network in the past ten years, and has established more than 300 marketing outlets supported by IT network and a marketing team of nearly 10,000 people all over the country, and has set up sales companies or commercial representative offices in more than ten countries and regions around the world, and has set up manufacturing bases for color TVs in Vietnam and India, vigorously exploring the overseas market and laying the foundation for TCL's internationalization. Based on science and technology, TCL has continuously increased its investment in scientific research and set up an enterprise technology center in 1998, which was recognized as a "State-approved Enterprise Technology Center" in January 2000 and was selected as one of the first batch of "National Model Enterprises for Technological Innovation" in 2011 and was awarded as one of the "National Model Enterprises for Technological Innovation". In 2011, TCL Group was selected as one of the first batch of "National Technology Innovation Model Enterprises".

TCL Group has also successfully combined product management and asset management to carry out integrated management, giving full play to the two major advantages of the brand and network, and following the expansion of the TCL brand from telephones to audio-video products and electrical products represented by "TCL Ace" color TVs, the Group merged with Hong Kong-based Luk's color TV project in 1996, pioneering the merger of state-owned enterprises with Hong Kong-based Luk's color TV project. In 1996, TCL Group merged the color TV project of Hong Kong Luk's Company in one go, creating a precedent for state-owned enterprises to merge with Hong Kong-funded enterprises. In 1998, TCL Group began to enter the information industry, the production and sale of TCL brand information products, and expand the Internet access equipment business, the establishment of Internet service capabilities, enhance the function of the distribution network for the e-commerce era to prepare for the 1999, TCL entered the white goods and air-conditioning field, and achieved remarkable results.

TCL Group was listed on the main board of the Shenzhen Stock Exchange in January 2004, and in April 2019, it divested its terminal products business and reorganized into "TCL Technology Group", which retains the semiconductor display industry, industrial finance and investment, and the O2O business of Squire Sanders; all other businesses have been divested and sold. TCL Technology Group is transformed into the semiconductor display industry and materials business; the main body of this business is the semiconductor display industry and materials business; the main body of this business is the semiconductor display business. Industry and materials business; the main body of the business "TCL Huaxing Optoelectronics" has invested in the completion of two G8.5, a G11 LCD plant, a G6 LTPS and a G6 flexible AM-OLED plant, a G11 LCD plant under construction; at the same time, there are also investment in the display materials, parts and components of the layout; the industry's

total investment of 180 billion. 180 billion. Its products include telephones, TVs and washing machines.

The main business of TCL Technologies is based on semiconductor display technology and materials business, supplemented by industrial finance and investment business. The company's main products are LCD TVs, smart TVs, 3D TVs, smartphones, LCD panels, air conditioners, refrigerators and washing machines. It is also worth noting that TCL technology is also a global black power giant, LCD TV sales of 2.37 million units, the global market share ranked third, the curved surface occupancy rate to maintain the domestic brand ranked one.

TCL was founded in 1981, the company started with the home appliance business, before the reorganization of the company has four listed companies: huaxian photoelectric, tongli electronics, hanlin sinks and TCL electronics, in 2018, the company's multimedia and electronics industry revenue accounted for up to 30% of the revenue, mobile communication and home appliance business revenue accounted for 24% of the revenue, engaged in the production of the panel of huaxing photoelectric revenue accounted for 22% of the revenue, the size of the reorganization of the revenue is reduced by 60% or so. On April 15, 2019, TCL Technologies has received the full consideration for the major asset reorganization, the intelligent terminal and supporting business is officially out of the table, and the company has completed the transformation from a diversified business focusing on home appliances to a specialized business in semiconductor display and materials.

As a state-controlled enterprise group, after the merger of the three major professional groups at the end of 1996 and the authorization of state-owned assets in 1997, TCL Group has further standardized its internal management structure and formed a governance structure with no basic framework for the board of directors, the president, departments and subsidiaries. Up to now, TCL Technologies, Inc. has no controlling shareholders and actual controllers, the enterprise's largest shareholder is the chairman and CEO Mr. Li Dongsheng and a number of concerted actions together, a total of 1.159 billion shares, accounting for 8.30% of the total share capital.

The top management of this organization is a collective that combines the decision-making level and the management level. The top decision-making level, i.e. the board of directors of the TCL Group of Companies, includes 15 directors, all of whom are the company's middle and senior management backbone, including the group's president, vice presidents, the head of each major department, the head of major subsidiaries, and other key persons in charge. on Feb. 1, 2020, TCL Group (000100) announced the latest business and organizational structure since its restructuring. the TCL Group consists of the Semiconductor TCL Group consists of semiconductor display and materials business group, industrial finance business group, emerging business group, three business segments, eight headquarters functional departments, and a number of independent operation and service platforms, the company's organizational chart from the original "positive pyramid" structure adjusted to "inverted pyramid" structure. The three business segments include semiconductor display and materials business group, industrial finance business group, and emerging business group. The semiconductor display and materials business group includes Shenzhen Huaxing Optoelectronics Technology Company Limited (including Huaxian Optoelectronics Technology Holdings Company Limited (0334.HK)), Guangdong Juhua Printing and Display Technology Company Limited and Guangzhou Huarui Optoelectronic Materials Company Limited; the industrial finance business group includes TCL Financial Holding Group (Guangzhou) Co. Ltd., TCL Education Network Ltd., Huizhou TCL Environmental Resources Ltd. and TCL Medical Holdings Ltd.

The organizational structure was adjusted from the original "positive pyramid" structure to an "inverted pyramid" structure, TCL Group said that such an adjustment is to reflect the user-oriented and business-oriented, but also to reflect the top management team to serve users and support the business of the role adjustment. Role adjustment. In terms of the division of labor among executives, with the adjustment of the organizational structure, the division of labor is also further clarified: Chairman and CEO Li Dongsheng, is responsible for the overall management of the company, in charge of Huaxing Optoelectronics, TCL Capital, the Group Headquarters Strategy and Structure

Department, the Human Resources Department, and TCL University; COO and CFO Du Juan, is responsible for the company's business operation and management and financial management, in charge of the TCL Finance, TCL, Qixiang and Group Headquarters Financial Operations Department; CTO and Industrial Management Department; CTO and Industrial Management Department, in charge of the TCL Finance, TCL, Qixing, and Group Headquarters Financial Operations Department; CTO and President of Industrial Research Institute, also the chief scientist of Huaxing Optoelectronics Yan Xiaolin, responsible for technology strategy and R & D related management, directly in charge of Industrial Research Institute, in charge of Juhua Printing Display, Huarui Optoelectronics business; Senior Vice President Huang Wei, responsible for the management of government relations, auditing and supervision, party affairs, and other related work, and responsible for the management of its environmental protection business; Senior Vice President Kim Dawn Shik, continues to serve as CEO of Huaxing Optoelectronics, responsible for the management of its environmental protection business; Senior Vice President Jin Yunsik, continues to As the CEO of Huaxing Optoelectronics, responsible for the overall management of Huaxing Optoelectronics; Vice President and Secretary Liao Qian, responsible for the management of the company's strategic planning and capital market-related work directly under the management of the Strategy and Structure Department, in charge of the business of Hanlin Hui.

Compared with before the reorganization, the number of statutory senior management personnel of the company was adjusted from 8 to 6, and the number of vice president personnel not belonging to statutory senior management personnel was adjusted from 12 to 9. Since 2018, TCL Group has launched a series of actions in order to promote the planning of major asset reorganization, and vigorously divest all the intelligent terminal business and related ancillary businesses. On January 7, 2019, TCL Group held the first extraordinary shareholders' meeting of 2019, and considered and passed the relevant motions of this major asset reorganization. A comparison of the previous business structure shows that the semiconductor display and materials business group occupies a relatively central position in the business structure. This is also consistent with the previous TCL reorganization ideas, that is, strategic focus on semiconductor display and new materials business. And the structure of the adjustment of ideas, reflecting the reduction of the listed company level and core business segments of the departments of the management level, streamlining and optimizing the characteristics of the upper management organizations and personnel.

2.2. Introduction to Azeus Electronics

Ltd., formerly known as Tianjin Zhonghuan Electronic Information Group Co., Ltd. was established in 1959, is a wholly state-owned enterprise in Tianjin, the scope of business operations, including semiconductor photovoltaic and semiconductor materials and other products, research and development, production and operation, in 1996, was renamed as the Tianjin Electronic Instrumentation Industry Corporation; in 2000, the CPC Tianjin Municipal Committee and Tianjin Municipal People's Government to implement the restructuring system, the establishment of Tianjin Zhonghuan Electronic Information Group Co. In 2000, the CPC Tianjin Municipal Committee and Tianjin Municipal People's Government implemented the restructuring system and established Tianjin Zhonghuan Electronic Information Group Co., Ltd. with a registered capital of RMB 1,673.75 million; in 2007, it was formally listed on the Shenzhen Stock Exchange (SZSE) under the stock code of 002129; and in 2008, Zhonghuan Group's capital stock of RMB 3,538.83 million and surplus stock were converted to paid-in capital, with the Tianjin State-owned Assets Supervision and Administration Commission (SASAC) as a capital contributor, and the shareholding structure was not changed. In the following ten years, Azeus completed five capital increases. 2019, Jinzhi Capital acquired 51% of the equity interest in Azeus without changing the control relationship, controlling shareholders and actual controller of the Group, and the remaining 49% of the equity interest remained owned by Tianjin SASAC.

(hereinafter referred to as "Azeus") is committed to the semiconductor and photovoltaic new energy industry and has a unique dual industry chain of semiconductor and photovoltaic new energy. With

silicon materials as the foothold, the company focuses on the research, development and production of monocrystalline silicon, takes monocrystalline silicon as the starting point and foundation, positions itself as a strategic emerging industry, extends itself vertically in the manufacturing of semiconductors and new energy sources, integrates the upstream and downstream of the industry chain, and occupies a core position in the industry chain. The enterprise has self-developed core zone melting straightening technology, which can reduce production costs and improve the performance of silicon wafers. By the end of 2019, China's monocrystalline silicon wafer production capacity was 115GW, accounting for 97.6% of the world. With the completion of China's monocrystalline silicon projects, China's monocrystalline silicon wafer production capacity will significantly increase to approximately 235.3GW in 2020, of which the capacity of LONGi is ranked first at approximately 85GW, and Zhonghuan, a subsidiary of Zhonghuan Electronics, is ranked second at approximately 55GW, and it is one of the leading semiconductor material suppliers in China. Azeus is one of the leading companies in the monocrystalline silicon wafer industry and is one of the leading companies in the industry.

3. Detailed progress on mergers and acquisitions

Starting stage: On May 20, 2020, Azeus publicly listed its shares for transfer at the Tianjin Equity Exchange and publicly solicited a transferee for the transfer in accordance with the statutory procedures. The reserve price of the transfer was RMB10.974 billion, totaling 100% of the equity.

Transaction stage: In mid-June of the same year, TCL Tech formulated relevant motions for the acquisition plan and held a board meeting for deliberation and discussion. After the motion was passed, TCL Tech officially announced its participation in the 100% equity transfer program of Central Group. The 100% equity interest of CAG is dispersed among two companies, Tianjin Jinzhi State-owned Capital Investment and Operation Company Limited and Tianjin Bohai State-owned Assets Operation and Management Company Limited, holding 51% and 49% of the shares respectively.

During the bidding process, by the time of payment of the transaction deposit for the transfer project, the eligible transferees screened by the Central Group were TCL Technology Company and Zhuhai Yunpei Management Consulting Company Limited. After evaluation, Tianjin Property Rights Trading Center announced TCL Technology as the final transferee.

In July of the same year, TCL Science and Technology Company and Central Group signed the Property Rights Transaction Contract and stipulated that 30% of the total transfer price would be paid within 5 working days and the remaining 70% would be paid in one lump sum within 5 working days from the effective date of the Property Rights Transaction Contract. Upon completion of the above conditions, Tianjin Equity Exchange Center will issue the "Certificate of Transaction of State-owned Property Rights". Central Group is transferred to TCL Technologies by way of equity transfer and TCL Technologies pays cash as consideration.

Determination stage: On September 8, 2020, the State Administration for Market Supervision and Regulation and Tianjin State-owned Assets Supervision and Administration Commission were completing the approval process of this transaction, the Property Rights Transaction Contract formally came into effect, and the final transaction amount of this merger and acquisition was RMB12.5 billion. In order to promote the Central Group can maintain a virtuous cycle of development, promote the development of domestic semiconductor, integrated circuits and other aspects of the development of the Central Group's monocrystalline silicon wafers to play the exhibition of Central Group's strengths, TCL Technologies, Inc. committed to the next three years will be invested in the next three years at least \$ 6 billion of capital as a follow-up to the support of the Central Group.

4. Performance Analysis of TCL Technology's Merger and Acquisition of Azeus Electronics

In order to find out whether TCL Technology's acquisition of Azeus substantially fulfills expectations, this part applies the financial indicator method to analyze the financial performance of TCL Technology after the merger, and also focuses on the non-financial performance of the company after the merger.

4.1. Long-term Performance Analysis of TCL's Acquisition of Azeus Electronics

Profitability refers to the ability of an enterprise to obtain profits, also known as the enterprise's capital or capital appreciation ability, usually expressed as the amount of the enterprise's earnings in a certain period of time and its level of high and low. We mainly choose the two indicators of return on net assets and total return on assets to analyze the profitability of TCL Technology after the acquisition of Central Electronics. Regardless of the industry and development stage of the enterprise, the ultimate purpose of mergers and acquisitions is to obtain profits. The return on net assets is the ratio of a company's net profit and investors' equity, which represents the amount of shareholders' equity and reflects the efficiency of the enterprise's use of this part of the capital. The higher the value of the indicator, the greater the income from investment. As can be seen from Table 1, the net profit margin of TCL Technology has been in a growth trend from 2017 to 2021, however, the growth of the three years before the merger and acquisition is not very obvious, and it has not been able to exceed 5%, but in the year of the enterprise merger and acquisition reached 6.61%, and in the year afterward, it even soared to 9.15%, which is almost twice as much as the average net profit margin in the three years before the merger and acquisition. Gross profit margin and return on total assets showed a trend of decline and then rise, the three years before the merger and acquisition has been a downward trend, while the year of the merger and acquisition and the year after the merger and acquisition of a rising trend. tcl science and technology's return on net assets in the year before the merger and acquisition of a year before the lowest point, but after the merger and acquisition of the return on net assets grew rapidly, and in 2021 to reach the highest level. This shows that the significant increase in profitability of TCL Technologies in 2020 and 2021 is highly related to the corporate mergers and acquisitions. This is due to the fact that Central Group itself has good profitability, and the NAV of its subsidiary, Central, reaches 9.80% in 2021, which contributes to the whole TCL Tech.

The current ratio is a representative indicator of the short-term solvency of the enterprise, and the size of the current ratio figure and the strength of the enterprise's solvency is directly proportional. As shown in table 2, TCL science and technology in 2020 mergers and acquisitions in the year of the current ratio relative to the merger and acquisition of the year is a decline, which is mainly due to mergers and acquisitions consume a large amount of funds to make the enterprise's current assets to reduce the enterprise's current ratio, making the enterprise's current ratio on the low side, and even the enterprise's current ratio fell to 1 below. While the data of TCL Technology in 2021 is an upward trend relative to 2020, even the current ratio in 2021 is better than the performance in 2018, which indicates that the overall trend of the current ratio develops to be better after a short period of adjustment after the M&A. On the other hand, the cash flow ratio declined in the year of merger and acquisition in 2020 relative to the year before the merger and acquisition, but the cash flow ratio in 2021 reached the highest point in 2017-2021, which also confirms from another aspect that the merger and acquisition behavior of TCL Technology on Central Group has a bad impact on the solvency of the enterprise in the short term, and may even lead to certain Financial risk.

The operating capacity of an enterprise can measure the overall management effectiveness of the enterprise's assets and show the health of the enterprise. Accounts receivable turnover, inventory turnover, fixed asset turnover and total asset turnover are selected here to analyze the impact of TCL Technology's acquisition of Azeus on the enterprise's operating capacity. Fixed asset turnover ratio and total asset turnover ratio have some fluctuation situation, in the year of merger and acquisition in 2020 both indicators have decreased, and the overall value is at a low level. Therefore, for TCL Technology, the level of fixed asset and total asset turnover is low, and the utilization efficiency of the assets is low, which leads to the low profit brought by the enterprise's assets. However, from

2020-2021, these two ratios have increased, on the other hand, the enterprise accounts receivable turnover ratio and inventory turnover ratio have increased in the year of M&A and one year after M&A, and even far exceeded the level before M&A in 2021, which reflects that the enterprise's operating ability has been improved after a short period of adjustment after M&A and elimination of the adverse effects of M&A integration. Improvement. It can be seen that TCL Technology's operating ability is improved after the acquisition of Azeus, and this improvement is related to the merger and acquisition.

Since the merger and acquisition of TCL Technology, the enterprise's operating income, total assets, net profit and net assets have increased greatly compared with the year before the merger and acquisition and maintain a good development trend. As for the balance sheet, there is an overall upward trend after the year of merger and acquisition compared to the three years before merger and acquisition, and the total assets of the enterprise are expanding. Compared with 2020, the growth rate of total assets in 2021 is relatively low, mainly due to the fact that after TCL Tech's acquisition of Azeus Group, the balance sheet of Azeus Group in the year of merger and acquisition in 2020 was consolidated into TCL Tech's financial statements for the first time. As for the income statement, the growth rate of operating income and net profit of TCL Technology both reached the maximum in 2021 and far exceeded other years, reflecting the relatively obvious stretching effect of the merger and acquisition on the growth of the enterprise's operating income and net profit.

4.2. Short-term Performance Analysis of TCL Technology's Acquisition of Azeus Electronics

The excess return (CAR) from the event study method was chosen to evaluate the short-term performance of this merger and acquisition event. The excess return is the difference between the actual return of the stock and its normal return, where the normal return is the return that would have been expected if the event had not occurred. The event announcement date of the completion of the acquisition of Central Group by TCL Technologies is selected (since the announcement date of the merger is the evening of July 23, 2020, July 24, 2020, is set as the event announcement date for the estimation period. The same below) The trading days from 9 to 105 days before are used as the estimation period, and the daily individual stock return (R_{it}) and market return (R_{mt}) are calculated respectively.

In the 9 trading days before TCL Technology announced the completion of the merger and acquisition, the excess return (AR) varied greatly, with the lowest value of -3.570357% on the day before the announcement day; in the days after the announcement day, the excess return (AR) varied steadily and showed a gradual upward trend in the following days, reaching the highest value of 6.839448% on the 9th trading day. Cumulative Excess Return (CAR) was positive for 12 out of 19 trading days, reaching a peak of 4.712276% on the last trading day. Overall, the excess return (AR) fluctuated positively and negatively during the event window, but ultimately achieved more positive than negative returns. This shows that the market is more optimistic about the company's merger with Central Electronics, and the merger has also brought positive market effects for the company in the short term.

4.3. Analysis of non-financial performance of TCL Technology's acquisition of Azeus Electronics

In terms of non-financial performance, this paper mainly focuses on the three levels of operating mechanism, human resources, and technology research and development. TCL started from the restructuring of Huizhou state-owned enterprises and developed all the way to become an excellent privately listed company, which can fully help Central unshackle the state-owned system and realize the transformation of market-oriented operating mechanism. Before the merger and acquisition, the Central shares are limited by the shackles of the state-owned system, in the management, investment, research and development, it is difficult to realize the real market-oriented, difficult to fully compete with the same type of enterprises in the market, labor productivity is bound. In addition, under the traditional state-owned enterprise control mechanism, it is difficult to promote the technological

innovation of Central shares, and the original management mechanism has a very low tolerance for corporate innovation, and in the absence of fault-tolerant mechanism, the failure of innovation may be regarded as a loss of state-owned assets. After this M&A, TCL, as a shareholder, will create a better soil for Azeus to carry out technological innovation, and the management and governance levels will be rapidly integrated to harmonize management objectives. Accelerated integration process after the completion of the merger and acquisition, focusing on the protection of the stability of the original talent team of both sides, before the merger and acquisition, the Central Group level did not implement employee shareholding and other equity incentive programs. In view of the weighting system announced in this listing information, after the mixing and reform, Central Group or with the rich experience of TCL Technology, the implementation of employee incentive programs within three years. Through the implementation of equity incentives, Central Group will build a “co-creation, sharing, sharing” mechanism, so that employees with the mentality of entrepreneurs, into the common cause of enterprise development, creating and distributing incremental benefits, and ultimately realize “the same boat, value co-creation, sharing of benefits, risk sharing The ultimate goal is to realize the medium- and long-term interest bundling of “working together, value creation, benefit sharing and risk sharing”. Azeus and TCL Tech belong to the upstream and downstream business of the industry chain, forming a layout of complementary advantages and synergistic development in the industry chain. After the merger and acquisition, the R&D personnel of TCL Tech increased by 2001 compared to 2020. At the same time, year-on-year 2020, TCL Science and Technology's undergraduate people increased by 39.97%, master's talent increased by 23.35%, and doctoral talent increased by 5.81%. The personnel structure of TCL Tech has changed after the M&A, with the proportion of high-end talents accounting for about 80%, providing the overall R&D capability of the enterprise. Therefore, the M&A has enabled TCL Technologies to acquire new R&D capabilities, which will promote the overall R&D investment of the enterprise, which will be translated into operating income in the future, improve the enterprise's risk resilience in response to technological changes, and improve the enterprise's future growth.

5. Analysis of non-financial performance of TCL Technology's acquisition of Azeus Electronics

In terms of non-financial performance, this paper focuses on three levels: operating mechanism, human resources, and technology research and development.

5.1. Operating Mechanism Level

Starting from the restructuring of Huizhou state-owned enterprises, TCL has developed all the way to become an excellent private listed company, which can fully help Azeus to lift the shackles of the state-owned system and realize the transformation of market-oriented operation mechanism. Before the merger and acquisition, Azeus was limited by the shackles of the state-owned system, and it was difficult to realize real marketization in management, investment, R&D, etc., and it was difficult to fully compete with the same type of enterprises in the market, and the labor productivity was bounded. In addition, under the traditional state-owned enterprise control mechanism, it is difficult to promote the technological innovation of Central shares, and the original management mechanism has a very low tolerance for corporate innovation, and in the absence of fault-tolerant mechanism, the failure of innovation may be regarded as a loss of state-owned assets. After this M&A, TCL, as a shareholder, will create better soil for Azeus to carry out technological innovation, and the management and governance levels will be rapidly integrated to harmonize management objectives.

5.2. Human Resource Level

In the process of accelerated integration after the completion of the merger and acquisition, attention is paid to guaranteeing the stability of the original talent team of both parties. Before the merger and acquisition, Azeus did not implement any equity incentive plan such as employee shareholding at the level of Azeus Group. In view of the weighting system announced in this listing information, after

the hybridization, Central Group may implement employee incentive plans within three years with the help of the rich experience of TCL Technologies. Through the implementation of equity incentives, Central Group will build a “co-creation, sharing, sharing” mechanism, so that employees with the mentality of entrepreneurs, into the common cause of enterprise development, creating and distributing incremental benefits, and ultimately realize “the same boat, value co-creation, sharing of benefits, risk sharing Ultimately, it realizes the purpose of “creating value together, sharing benefits and risks” in the medium- and long-term interest bundling.

5.3. Technology R&D Level

Azeus and TCL Technology belong to the upstream and downstream business of the industry chain, forming a layout of complementary advantages and synergistic development in the industry chain. After the merger and acquisition, the R&D personnel of TCL Technology increased by 2001 compared to 2020. At the same time, year-on-year 2020, TCL Science and Technology's undergraduate people increased by 39.97%, master's talent increased by 23.35%, and doctoral talent increased by 5.81%. The personnel structure of TCL Tech has changed after the M&A, with the proportion of high-end talents accounting for about 80%, providing the overall R&D capability of the enterprise. Therefore, the M&A has enabled TCL Technologies to acquire new R&D capabilities, which will promote the overall R&D investment of the enterprise, which will be translated into operating income in the future, improve the enterprise's risk resilience in response to technological changes, and improve the enterprise's future growth.

6. Research Conclusion and Outlook

By analyzing the case of TCL Technology's merger and acquisition of Azeus Electronics, this study reveals the rapid development of China's semiconductor industry with policy support and how TCL Technology strengthened its position in the semiconductor industry through its merger and acquisition strategy. The study shows that TCL Tech not only enhanced its competitiveness in the semiconductor materials and photovoltaic industry chain through the M&A of Azeus Electronics, but also provided strong support for TCL Tech's development in semiconductor display panels and photovoltaic new energy by utilizing the technological advantages of Azeus Electronics. In addition, TCL Tech has realized technical synergies and created new value growth points for the company by leveraging the technical reserves and production capacity of Azeus Electronics.

From the perspective of the M&A process, the combination of TCL Technologies and Azeus Electronics took place against the backdrop of the rapid development of China's semiconductor industry and fierce competition within the industry. The Chinese government has introduced a series of policies aimed at promoting the development of the semiconductor industry and enhancing the innovation capability and international competitiveness of local enterprises. Against this backdrop, TCL Tech's acquisition of Azeus is seen as a strategic choice, which helps TCL Tech to quickly cut into the fast-growing fields of semiconductor materials and new photovoltaic energy, while also providing Azeus with financial security and technical support for further development.

Looking ahead, the importance of semiconductor materials is becoming more and more prominent with the growth of demand in emerging markets such as 5G and new energy vehicles, etc. TCL Tech is expected to strengthen its technological strength in the field of semiconductor materials and further consolidate its leading position in the industry through this merger. At the same time, with the domestic substitution opportunities brought about by the trade friction between China and the United States, TCL Tech is also expected to win more space for development in the international market by virtue of its increasing technical capabilities and market influence. However, TCL Tech will also need to face post-merger integration challenges, including issues such as corporate culture integration and technological co-innovation, which are key factors in ensuring the success of the merger. Therefore, in the future, TCL Tech needs to continue to pay attention to market dynamics, increase

R&D investment and improve management level to ensure that the long-term benefits brought by the M&A can be realized.

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