

Analysis of the Listing Effect of Liancheng Numerical Control after Moving from the New Third Board to the Beijing Stock Exchange

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Abstract: *With the promotion of a series of "combined fists" in the Beijing Stock Exchange market, the combined CNC ushered in a leap in growth. The company was listed on the New Third Board in 2016, landed on the select tier in 2020, and was listed on the Beijing Stock Exchange in November 2021. This paper takes Liancheng Numerical Control Company as a case, studies its development, discusses the changes of its performance after moving to Beijing Stock Exchange, and explores the path suitable for SMEs to list on Beijing Stock Exchange. Firstly, the paper describes the background and significance of the research, reviews the relevant literature at home and abroad, and points out the content and methods of the research. Secondly, using case analysis and comparative analysis method, this paper analyzes the listing effect of Liancheng NC after moving to Beijing Stock Exchange from two perspectives of capital and company. Finally, the paper summarizes the full text and suggests that small and medium-sized enterprises should be listed on the Beijing Stock Exchange. At the same time, relevant suggestions are put forward for SMEs, Liancheng CNC and Beijing Stock Exchange to promote the construction of China's capital market and promote the better and faster development of SMEs.*

Keywords: *New Third Board; Beijing Stock Exchange; Small and medium-sized enterprises*

1. Introduction

Examining NEEQ enterprises' financing and market changes after BSE listing is significant for China's capital market development. It provides insights into SME financing effects across different market environments, offering valuable strategies for other SMEs. The research also assists policymakers in understanding market mechanisms for more effective policies, benefiting both SMEs and the capital market's health. This study is impactful both theoretically and in practice, aiding China's capital market's further development and improvement.

2. Liancheng CNC case introduction

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2.1.1. Rapid development of downstream industries

The downstream photovoltaic and semiconductor industries have grown rapidly in recent years. In 2022, China's new installed photovoltaic capacity of 87.41GW, the cumulative installed capacity of 392.6GW, photovoltaic power generation accounted for 4.9%, the total export of 51.25 billion US showing the strong development of the photovoltaic industry and global competitiveness. The semiconductor industry market size grew from \$131.5 billion in 2017 to \$182 billion in 2022, with accounting for 31.7% of the global market, and the semiconductor equipment market size is expected continue to grow, reflecting domestic demand and technological advances. Liancheng CNC will benefit from the continued growth of downstream industries^{[1][2]}.

2.1.2. Cost increase in upstream industry

Liancheng CNC focuses on crystal silicon growth and processing equipment for the photovoltaic semiconductor industries^[3]. As a key equipment supplier of global photovoltaic giant Longi Shares, its upstream business chain includes raw material supply, parts manufacturing and technology research

development. The quality and stability of raw materials are crucial to the company's product quality and production efficiency, and the fluctuation of raw material costs is directly related to the cost control of the company^[4]. Component quality and R&D investment have a significant impact on the long-term competitiveness of products, although they may increase cost pressures in the short term^{[5][6]}. In the fierce market competition, the company may adopt a price reduction strategy to maintain market share, which may affect profit margins and the overall cost structure.

2.1.3. General situation of the industry

Focusing on photovoltaic and semiconductor equipment manufacturing, Liancheng CNC provides key high-end equipment, such as monocrystalline silicon growth equipment and silicon wafer processing equipment, which has a direct impact on the performance of photovoltaic cells and semiconductor devices^{[7][8]}. The company is located in the upstream of the PV industry chain, providing key equipment such as single crystal furnaces and multi-line cutting machines, while the production of photovoltaic cells and modules is the core of the industry chain. The semiconductor industry is highly competitive, especially in the United States, China and the European Union, and governments are increasing investment in supply chain security. Sino-us trade frictions affect the semiconductor industry, and market uncertainties pose challenges. The semiconductor industry demands high-end manufacturing equipment, with emerging technologies such as 5G, artificial intelligence and the Internet of Things driving demand growth^{[9][10]}.

2.2. Liancheng CNC overview

2.2.1. Introduction of development history

Liancheng CNC, established in 2007, is a national high-tech enterprise in photovoltaic and semiconductor equipment with global R&D and a strategic acquisition to expand its market. It was listed on the New Third Board in 2016 and the selected layer in 2020, which bolstered its capital and R&D, leading to substantial financial growth in 2022^[11]. With a strong R&D team and multiple subsidiaries, the company aligns with industry trends and has seen its market value jump significantly since the Beijing Stock Exchange's launch.

2.2.2. Main product introduction

Liancheng CNC has become a key equipment supplier in the field of high-end photovoltaic and semiconductor equipment manufacturing, providing cutting-edge technology products such as single crystal furnace, wire cutting equipment, automatic cleaning and etching equipment and semiconductor film growth equipment. The company's single crystal furnace uses advanced lifting technology, silicon wafer processing equipment uses diamond wire cutting technology, automatic cleaning and etching equipment to improve the efficiency of photovoltaic cells, and semiconductor film growth equipment supports integrated circuit manufacturing. Liancheng CNC also introduced industrial microwave heating and argon purification and recovery systems to improve production efficiency while focusing on environmental protection. The company demonstrates its technological innovation capabilities by enhancing product automation and quality control through customized software and machine vision technology.

2.3. The development of Liancheng CNC

2.3.1. Financing effect

In 2020, Liancheng CNC successfully entered the select layer and raised funds, which are mainly used to expand the production scale of single crystal furnace and slicer and build a research and development center to promote technology and production capacity. However, due to the slow progress of project investment, changes in the market industry and possible adjustment of internal management strategy, the financing effect did not meet expectations. Especially in the expansion project of single crystal furnace and slicer, the actual investment has not reached the planned schedule. The market volatility caused by the COVID-19 outbreak is also having an impact on the company's operations and funding plans. The actual investment in the construction of the R&D center was also lower than expected, reflecting the challenges encountered in technology development, such as the high complexity of new product development and the need for more time and resources to optimize.

2.3.2. Financial support

As a leading enterprise in photovoltaic and semiconductor equipment manufacturing, Liancheng

CNC continues to expand its business scale and steadily improve its profitability. The company supports production expansion, technological upgrading and market strengthening through external financing. Government support for the new energy and semiconductor industries has provided Liancheng with additional funding to address the growing global demand for these technologies. Despite the accumulation and support of funds, Liancheng CNC still needs a lot of funds to cope with business growth and market demand, especially in terms of production scale expansion, technology upgrading and market promotion. Increased competition in the industry requires companies to constantly innovate and improve product performance, which further increases the need for research and development and capital expenditure, which may not be fully met by existing funds.

2.3.3. Capital structure

The company has an asset structure dominated by light assets, and the inventory and receivables account for a relatively high proportion of current assets, indicating that the company's operation depends on the turnover of working capital. Despite its robust capital structure, the company needs to optimize its capital structure to ensure sufficient investment in R&D and technological innovation to maintain its market competitiveness in the face of rapidly updating technology in the photovoltaic and semiconductor industries. Global supply chain uncertainty requires companies to respond quickly to market changes and risks, and to scale up production as market demand grows. A reasonable capital structure helps to reduce financial costs, improve earnings and shareholder returns, enhance financial soundness and attract investment.

2.3.4. Customer concentration

The high concentration of customers in Liancheng CNC is a significant risk factor for the company. In the past three years, the company's top five customers accounted for more than 80% of sales. This highly concentrated customer structure means that if there is a negative change in the operating conditions of major customers, or a decrease in order demand, Liancheng CNC's performance may be significantly affected. Specifically, Longi Green Energy, as one of the main customers of Liancheng CNC, accounts for an important proportion of the company's revenue. The problem of high customer concentration in recent years still exists. The company's inventory balance is high, and if downstream customers' orders are delayed or canceled, they may face the risk of inventory stagnation and falling prices. At the same time, the company's accounts receivable balance is large, and if the business conditions of downstream customers are adversely changed, it may not be able to recover or recover accounts receivable on time, which may also have a negative impact on the company's financial condition.

2.4. Summary of this chapter

The company achieved remarkable results in 2022, with year-on-year growth of 84.9% in revenue and 36.94% in net profit, respectively. The company's downstream photovoltaic and semiconductor industries have developed rapidly, the photovoltaic industry's new installed capacity and power generation have increased, the total export of products has increased, the semiconductor market has expanded, and the demand for equipment has increased. But rising upstream costs are putting pressure on manufacturers. Liancheng CNC has a rich history of development and competitive products, financing effect and capital structure is stable, but need to pay attention to customer concentration. The company needs to continuously strengthen its market position and optimize its capital structure to cope with cost changes.

H1: The share price of Liancheng CNC is expected to continue to rise in the next year.

H2: Liancheng CNC will diversify its customers and reduce its dependence on a single large customer.

3. Liancheng CNC listing effect analysis

3.1. Effect analysis based on capital market perspective

3.1.1. Stock liquidity analysis

Liancheng CNC performed well during the New third Board listing, and its share price increased nearly 5 times in a year, showing the market's high recognition of its performance and prospects. After the successful transfer to the Beijing Stock Exchange in 2021, the market value exceeded 24 billion

yuan, and the stock price liquidity and market influence were significantly improved. After the board, the company's share price continued to be strong, and the market was full of expectations for its development.

Before and after the board, the transaction amount and turnover of Lianchong CNC have increased significantly, such as the transaction amount of 13,72,917,810 yuan on August 31, 2022, and the turnover of 186,115 lots, which is much higher than the 5,835,590 yuan and 1,560 lots before the board, reflecting the improvement of market position and investor confidence.

Before the board, the turnover rate was low, only 0.0001 on March 31, 2020, and market trading was not active. The turnover rate increased significantly after the board change, reaching 0.253 on July 30, 2021, indicating an increase in market attention and trading activity. The board transfer successfully attracted more investors, enhanced the company's position and brand influence in the capital market, and provided a driving force for the growth of stock trading volume.

3.1.2. Valuation level analysis

Before the board, Liancheng CNC has technical advantages in the field of photovoltaic equipment, and its performance is stable but its growth is limited. With the growth of the photovoltaic industry, the company increased research and development investment and business expansion to prepare for the growth of performance after the board. After the board, it is expected that the net profit will increase significantly from 2023 to 2025, showing the company's business expansion and market share improvement, as well as management's confidence in future development.

The company's valuation has been improved after the board transfer, and the market's recognition of the company's business and investor confidence have been enhanced. The high valuation level of new business will become a new impetus for stock price improvement. Based on this, the company's target stock price is set at 72 to 82 yuan, corresponding to the 2023 EPS price-earnings ratio of 21 to 24 times, providing a premium space of 18% to 34% for the current stock price, reflecting the market's positive expectations for the future development of Lianchong Numerical Control.

3.1.3. Short-term market reaction analysis

Before the board, Liancheng CNC has a good reputation in the field of photovoltaic equipment, facing the challenges of market changes and intensified competition. The market is concerned that the slowdown in the expansion of the main customer Longji Green Energy may affect the performance of Liancheng CNC. In order to reduce the dependence on a single customer, Liancheng CNC diversified customer base, and signed a major purchase agreement with Shuangliang Energy Saving, bringing new growth drivers. After the transfer, the company focused on risk management and cost control, optimized production processes, improved product quality, and dealt with market risks.

In terms of finance, the asset structure of Liancheng CNC is light, the business scale is expanded after the board transfer, the customer structure is optimized, and the financial situation is improved, but the market still has concerns about its customer dependence and performance fluctuations. The company's P/E ratio is close to Longji shares, but lower than that of companies in the same industry, reflecting the market's attention to the company's customer structure and performance stability.

3.2. Effect analysis based on the perspective of the company

The company showed steady financial growth pre-listing, with significant increases in operating income and net profit from 2017 to 2020. It maintained high profitability and efficient asset turnover. Annual decreases in financial risk and improved liquidity ratios indicated robust short-term solvency.

After the board change in 2021, the company's performance grew strongly, and its operating income and net profit continued to grow. Despite the decline in sales gross margin and operating margin, the company maintained a high level of profitability by improving product quality and service and optimizing cost management. Total asset turnover and return on equity improved, strengthening earnings and shareholder returns. However, the asset-liability ratio is rising, the current ratio and the quick ratio are falling, and it is necessary to pay attention to the debt structure and repayment ability.

In terms of costs, operating costs, selling expenses and administrative expenses have increased after the board transfer, and cost control and budget management need to be strengthened to maintain financial stability.

3.2.1. Analysis of financing scale

Before the board, the asset liability ratio of Licheng CNC was low, the parent company was 21.78%, and the merger was 37.09%, showing that the company relied on debt financing and had little financial risk. The company has a light asset structure and maintains a high asset turnover rate and operational efficiency. Public fundraising in 2020 is successful, and the financial pressure is small, providing a guarantee for sustainable development. After the board transfer, the financial position is sound, the book liabilities are mainly composed of healthy accounts received in advance and operating debts, and the management efficiency of accounts receivable is high, and the balance in 2022 accounts for 24.44% of the operating income, showing strong recovery ability. The board has successfully broadened financing channels, enhanced financial strength, helped business development and market expansion, and enhanced capital market position.

3.2.2. Analysis of financing structure

Licheng CNC's low pre- and post-merger asset-liability ratios reflect minimal debt reliance and low financial risk. Its asset-light structure ensures operational efficiency. Fundraising in 2020 alleviated financial pressure, securing sustainable growth. Post-listing, the company's financial health continues, with a sound debt structure and efficient accounts receivable management. The board transfer has broadened financing options and strengthened financial capacity, supporting business development and market share expansion, enhancing its capital market influence.

3.2.3. Analysis of anti-risk ability

Liancheng CNC has achieved significant growth in customer cooperation and business expansion before and after the board transition. Before the board, the company's close cooperation with Longi Green Energy provided a stable business for Liancheng CNC, and the operating income accounted for more than 60%. In 2022, the proportion of Longi green energy revenue dropped to 28.69%, showing that Liancheng CNC successfully expanded new customers, such as Shuangliang Energy Saving, Artes, Trhe Solar, etc., to achieve customer diversification.

In order to reduce the dependence on a single large customer, Licheng CNC gradually adjusted the customer structure, especially after the board to pay more attention to the expansion of new customers. The diversified business layout of the company has expanded from silicon equipment to batteries, component equipment and auxiliary materials, enhancing market competitiveness and laying the foundation for long-term development.

After the success of the board, Liancheng CNC took advantage of capital market financing to accelerate business expansion and technological innovation. The Automation division was strengthened to focus on the development of silicon film deposition production lines, injecting new impetus into the business. Orders in hand grew strongly, from about 4.87 billion yuan at the end of 2022 to about 11 billion yuan by the end of the third quarter of 2023, mainly for crystal growth and processing equipment orders. These orders reflect a high level of market recognition and indicate stable growth in future performance. Liancheng CNC will continue technological innovation and market expansion, improve products and services, meet customer needs, and consolidate market position.

3.3. Comparison of similar enterprises

The company has a notable market presence in photovoltaic equipment, with high profit margins from cost efficiency and significant R&D investment. Post-listing improvements in financing and brand have supported expansion and innovation. However, it must continue innovating and manage risks amidst market changes and competition to ensure sustainability. Liancheng CNC excels in profitability and R&D but needs to adapt to market shifts and strengthen governance and risk management to maintain its competitive advantage.

3.4. Summary of this chapter

Liancheng CNC's listing on the New Third Board led to a nearly 5x increase in its share price and a market valuation over 24 billion yuan, indicating strong market confidence in its future. The company saw improved liquidity and trading activity, with a significant rise in turnover and turnover rate. The market value surge reflects positive outlooks for the company's growth. Despite concerns over customer diversification and silicon wafer production capacity expansion, Liancheng CNC boasts a healthy financial status with a low-risk, asset-light structure. However, it should monitor customer

reliance and performance volatility. Overall, Liancheng Numerical Control's listing positively impacts the capital market and the company, with market performance and financial health meeting expectations and supporting initial assumptions.

4. Suggestions

4.1. Recommendations for small and medium-sized enterprises

Small and medium-sized enterprises (SMEs) can emulate Liancheng Numerical Control's success to leapfrog in development through the Beijing Stock Exchange's (BSE) tiers. The BSE offers diverse listing conditions, a short listing cycle, and low costs, making it an ideal platform for SME growth. Post-listing on the BSE, companies can transfer to the Shanghai or Shenzhen Stock Exchanges, offering more options and growth potential. SMEs should capitalize on opportunities and align with national policies to become "specialized and special new" entities. State policies, including development plans and improved financing channels, significantly support SME growth. SMEs should leverage these opportunities for high-quality development.

4.2. Suggestions on Liancheng numerical control

Listed companies are key to capital markets, with governance fundamental to their success. It's crucial to ensure company independence, protect shareholder interests, and have transparent governance and information disclosure. The "Beijing Stock Exchange Listing Rules (Trial)" highlight the need for listed companies to maintain transparent governance, loyalty, and diligence from management, and to actively fulfill social responsibilities to protect stakeholders' rights. Post-listing, companies should focus on improving governance quality, participating in regulatory training, ensuring compliance, and the standard operation of corporate bodies. They should also ensure company independence in all facets and enhance information disclosure transparency, while introducing professional management to refine governance mechanisms.

4.3. Suggestions for Beijing Stock Exchange

The BSE has attracted ~7 million investors with lower thresholds and supportive policies, allowing direct SME growth sharing. Investors should engage rationally, with a focus on value. Post-BSE establishment, significant trading metric fluctuations indicate speculative trading, especially for small-market stocks. The BSE's 30% fluctuation limit increases volatility potential. Retail investors should approach BSE investments cautiously, understanding rule differences and assessing company profit sustainability, trading according to their risk appetite.

5. Conclusion

Since 2019, the comprehensive deepening of the reform of the New Third Board has proposed the select layer as A bridge connecting smes and the A-share market, and the Beijing Stock Exchange as its basic positioning as the main platform serving innovative smes, effectively solving the short board of the capital market. Through the research on the listing effect of Liancheng Numerical Control in Beijing Stock Exchange, it is found that its financing ability, stock price performance and comprehensive strength of enterprises have significantly improved, indicating that the reform of the New Third Board has achieved positive results. In the future, the Beijing Stock Exchange will continue to release the dividend of reform, help more small and medium-sized enterprises to go public with financing, promote stable competition in the industrial chain and supply chain, and achieve high-quality development.

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