

# **THE IMPACT OF MERGERS AND ACQUISITIONS ON FINANCIAL PERFORMANCE OF NEW CHEMICAL MATERIALS ENTERPRISES: A CASE STUDY OF JINFA TECHNOLOGY'S ACQUISITION OF BAOLAI**

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**Abstract:** With the accelerated development of globalization, new materials have become an important pillar of national economic development, playing a crucial role in high-end manufacturing and the defenses industry, and becoming the focus of international strategic competition. China's new materials industry is considered an important part of the seven strategic emerging industries, providing a solid foundation for the development of the country's manufacturing industry.

The purpose of this paper has two aspects: (1) To research on mergers and acquisitions to produce performance impact on Jinfa Technology enterprises.

(2) To use two financial performance methods, financial indicators and EVA indicators, to analyse the impact of corporate mergers and acquisitions on financial performance.

This paper takes Jinfa Technology's merger and acquisition of 51.09% stake in Baolai as a case, adopts the Documentary Research method, conducts in-depth research on the case in this paper, and uses the EVA method and the financial index method to carry out the evaluation of merger and acquisition performance from multiple perspectives and dimensions, and strives for a comprehensive and accurate analysis and evaluation. Through the study, it is found that corporate M&A has a negative impact on Jinfa Technology enterprises by reducing their corporate performance. The goal of resource integration and optimal allocation can be achieved by means of mergers and acquisitions, but at the same time mergers and acquisitions also have a lot of unknowns and uncertainties. Jinfa technology mergers and acquisitions Baolai, into the ABS and other upstream raw materials industry, mergers and acquisitions of the two sides of the resource integration or there are certain problems, did not integrate the business of the enterprise and the merged enterprise, making the effect of mergers and acquisitions is not good enough. After the merger and acquisition should pay attention to the integration of resources, the use of appropriate methods to steadily promote the integration of resources, otherwise it can only be added together rigidly, resulting in a waste of resources, unable to play a synergistic effect.

**Keywords:** M&A, M&A Performance, Financial Index Method, Economic Value-Added Method

## **Introduction**

### *Background of the Study*

In recent year, China's new chemical materials industry investment and financing market heat, from the number of financing events, since 2017, China's new chemical materials industry investment and financing events fluctuating changes in the number of events, which in 2017, China's new chemical materials industry investment and financing events occurred in the number of events to reach a peak; in 2021, the investment scale reached a peak. In 2022, about 5 investment and financing events occurred in China's new chemical materials industry throughout the year, the investment scale of more than 900 million yuan; As of 11 May 2023, China's new chemical materials industry investment scale of more than 100 million yuan (Prospect Industry Research Institute, 2023). Most of the enterprises are still in the stage of relying on their own capital and resources for development, without forming an economic effect of scale. In order to improve production efficiency and maximize the economic benefits of enterprises, merger and acquisition activities between enterprises have gradually increased. Through successful mergers, enterprises are able to effectively integrate their respective advantageous resources, improve operational efficiency and realize a brighter future. With the changes in market laws, the industry is facing increasing M&A activities. Effective mergers and acquisitions can not only optimize the industrial structure, but also eliminate backward competitiveness, thus promoting the development of the whole industry. In order to stay ahead in an increasingly competitive market, many companies have opted for M&A. To sum up, this paper chooses Jinfa Technology's merger and acquisition of Baolai as the object of study, hoping that through the in-depth analysis of this merger and acquisition activity, it will provide new reference ideas for mergers and acquisitions in the new chemical materials industry. In this era of sustained economic growth and capital market improvement, M&A has also become a way and a means for companies to rapidly expand their strategic markets, consolidate their resources and optimize their allocations. M&A is an inevitable phenomenon in the process of enterprise development and growth, and M&A is related to the future development and operation of enterprises. With the development of new chemical materials industry, more and more enterprises choose M&A. Most of the current domestic research on the impact of M&A on the performance of the traditional industries, the Internet industry research, less about the new materials industry and selected new materials industry M&A cases are not representative of the enterprise scale is generally small, affecting the sustainability of industrial development. This study selected as the domestic industry leader Jinfa Technology, can provide a reference for other similar enterprises, so as to better use the optimal M&A strategy to achieve the desired goals.

## **Research Objectives**

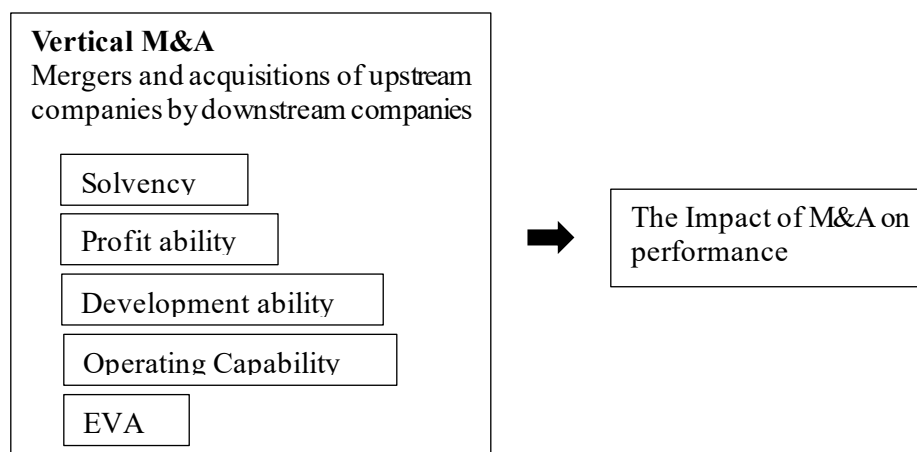
In recent years, the state attaches great importance to and has introduced a number of policies

to encourage and support the development and innovation of cutting-edge new materials industry, polymer modified materials as an important branch of the field of new chemical materials, widely used in home appliances, automobiles, communications and many other national pillar industries and emerging industries. Mergers and acquisitions are one of the effective ways for enterprises to expand their business scale. The main research objectives of this paper are as follows:

- 1) To research on mergers and acquisitions to produce performance impact on Jinfa Technology enterprises.
- 2) To use two financial performance methods, financial index method and EVA method, to analyse the impact of corporate mergers and acquisitions on financial performance.

### Theoretical Framework

This paper focuses on the impact of M&A of new chemical materials companies from the perspective of performance. Based on the literature review and relevant theories, this paper takes the case of Jinfa Technology's merger and acquisition of Baolai as the object of study, and mainly conducts a case study from the aspect of performance.



**Picture 1:** Conceptual Framework

### Literature Review

#### *M&A*

Norbert Steigenberger (2016) showed by summarizing previous studies that smooth integration is the basis for successful M&A transactions. This suggests that whether a company can achieve the desired M&A goals depends most on the reasonable control of the integration progress during the M&A process.

Kim (2017) points out that M&A can not only quickly capture market share, but also maintain market stability and enhance the control and regulation ability of the company, which is conducive to

the sustained development of the company.

Dezi et al. (2018) conducted an in-depth study of several manufacturing companies' mergers and acquisitions and found that most of the mergers and acquisitions are horizontal, and such mergers and acquisitions can lead to economies of scale, thus enhancing the market share of the firms.

Jana et al. (2019), with the study of listed companies in the U.S.A., examined the motivations of managers to engage in mergers and acquisitions from their point of view, and analyzed that the CEO's ownership and equity grants motivate them to promote mergers and acquisitions with a positive attitude to move forward with the M&A process and the acquisition premium increases.

Evangelos (2020) study shows support for the idea that mergers and acquisitions (M&A) parties create value by using overvalued equity to purchase less valuable or undervalued firms. Zhang (2018) clarified the motivation of Internet enterprises to carry out mergers and acquisitions by studying the case of Alibaba's merger and acquisition of UC, and his view is that Internet enterprises carry out mergers and acquisitions in order to occupy a more favourable market position and seize market share to cope with the increasingly competitive environment, and the results of the analysis show that one of the important ways for enterprises to avoid risks is to carry out a diversified strategic layout .

Zhang (2020) through the 2016-2019 mergers and acquisitions and restructuring on the audit, the results found that listed companies to implement mergers and acquisitions motivated by the acquisition of competitors' market share, increase market share, a short period of time to obtain a larger income; through mergers and acquisitions to implement the control of the external enterprises, while enabling their own to reach the size of the industry limits to seize the market share: to control the risk, the implementation of diversification strategy of the three considerations.

In general, foreign scholars have explored the causes of M&A earlier and have developed a more complete theoretical system compared to Chinese M&A activities. These studies have focused on the purposes, motives, and various other aspects of M&A and have laid a solid foundation for today's research. They argue that the purpose of M&A is to improve production efficiency, enhance competitive advantage and expand market influence.

#### *M&A performance*

Since the rise of mergers and acquisitions, M&A performance has become a hot research topic in academia. Since at the theoretical level, the effect of M&A on corporate performance may be positive or negative. The specific views are as follows:

#### *Mergers and Acquisitions Improve Firm Performance*

Hersh Shefrin (2007) analyzed that the fundamental driving force for firms to create value lies in the fact that firms engage in mergers and acquisitions (M&A) activities, which leads to the conclusion that M&A behaviour has a positive impact on increasing firm value.

Xu Mingxia (2014) argued that the degree of industrial diversification of enterprises will

improve the performance of cross-border M&A of reciprocal capital; on the contrary, the degree of geographic diversification of enterprises will weaken the performance of enterprises; vertical integration of enterprises has no moderating effect on the relationship between the ownership structure and M&A performance.

Yu et al. (2019) used the framework of integration of resource-based pipe and institutional-based pipe to study cross-border M&A cases of Chinese listed companies as a sample over a seven-year period, and found that in cross-border M&A, corporate M&A performance can be significantly improved when the subject enterprise is a strategic emerging enterprise.

#### *Mergers and Acquisitions Reduce Firm Performance*

Chen Limin et al. (2016) take the return on total assets as a measure, select more than 100 listed companies mergers and acquisitions as a research sample, respectively calculate the return on total assets in the year before mergers and acquisitions and the value of one year after the completion of mergers and acquisitions, then compare the two, and found that mergers and acquisitions did not improve the overall performance of the company, but instead, it is detrimental to the value of the enterprise.

Huang (2018) selected the mergers and acquisitions events of non-state listed companies in the five years from 2010 to 2014 as a research sample, and after analyzing, it was found that there is also an important relationship between corporate mergers and acquisitions performance and political relevance, and when the internal control of the company fails to work, it will lead to a decline in the performance of the company's mergers and acquisitions, and in the second year after mergers and acquisitions, this effect will be more obvious.

Regarding the impact of corporate performance, relatively speaking, this paper analyses the long and short-term performance of M&A with Jinfa in the new chemical materials industry as an example, including the long-term impact of M&A on the enterprise's core financial indexes, and also including the M&A on the company's capital gains, which is conducive to the comprehensive evaluation of the performance of mergers and acquisitions.

#### *Financial Index Method*

The basic principle of financial indicator analysis is to judge the long-term impact of M&A on the performance of an enterprise based on the changes in various financial indicators of the enterprise before and after the M&A, which usually includes the impact of M&A on the enterprise's solvency, profitability, growth capacity and operating capacity (Agrawal et al., 1992). Analyses using financial data provide more intuitive and clearer access to financial information, leading to a better understanding of the current financial situation and a more accurate prediction of future changes in financial performance.

### *Economic Value-Added Method*

The Economic Value-Added method was first introduced and used by Stensted Management Consulting in the United States for evaluating corporate performance. The core idea of this approach to performance research is that a company makes a profit only if the return on its capital exceeds the cost of the inputs used to obtain that return. Unlike the traditional accounting profit calculation, EVA is most concerned with economic profit, and its characteristics enable the EVA method to accurately calculate the operating efficiency of a firm.

Biddle et al. (1997) used the EVA method to directly illustrate the relationship between the value of a firm and its stock position. At this stage, the application of EVA in China is also gradually expanding, especially in the performance evaluation of enterprises is widely used, and is even applied in the field of the whole evaluation of enterprises. This study analyses the performance of enterprises before and after mergers and acquisitions in depth with the help of EVA method.

### **Research Methodology**

This study adopts the Documentary Research method, mainly using the financial indicator method and the economic value-added method, to calculate the various indicators and values of the target object, and to vertically compare the characteristics of the company in different periods of time and the trend of change and development. An in-depth analysis of the financial statements of Jinfa Technology 2019-2023 provides a better understanding of the company's debt servicing, profitability, growth potential, and operations, which allows for a better assessment of its short-term financial position.

After determining the data based on the annual financial report of Jinfa Technology, analysis and research are conducted based on the financial data. Financial information can be obtained more intuitively and clearly, leading to a better understanding of the current financial situation, and changes in future financial performance can be more accurately predicted. By comprehensively examining the company's financial situation, including profitability, repayment ability, operational efficiency and growth potential, it is possible to more accurately predict the impact of the M&A behaviour on the company, and ultimately achieve the desired goals of the M&A.

### **Results**

**Table 1:** Annual EVA and Net Profit of Jinfa Technology

Items (¥10k)	2019	2020	2021	2022	2023
EVA	171,135.67	509,168.71	164,788.50	212,208.90	41,128.24
Net Profit	126,424.39	460,948.50	165,666.77	200,041.35	6,874.17

## **Discussion**

After the merger and acquisition of enterprises, we should carry out resource integration in a timely manner, efficient and reasonable use of resources between the two. First of all, in the business aspects of complementary advantages, and enhance the core competitiveness. Secondly, according to the actual situation of the company, drawing on the management model, stable and retain talents, especially the core talent, improve the enthusiasm of the staff and the efficiency of the company's management, to protect the core human resources for scientific and technological research and development work to provide vitality: and finally attach importance to Technology integration, fully absorb the core technology and quality resources brought by the merger and acquisition, increase investment, improve technological innovation capacity, promote the progress of core technology, make up for the key technology short board, drive the high quality development of the enterprise, improve performance. After mergers and acquisitions should pay attention to resource integration, the use of appropriate methods to steadily promote the integration of resources, otherwise it can only be added together rigidly, resulting in a waste of resources, unable to play a synergistic effect.

## **Conclusions**

In the year of the merger and acquisition of Baolai by Jinfeng Technology, there were still certain problems in the integration of resources between the merging parties, which did not integrate the business of the enterprise and the merged enterprise, making the merger and acquisition not effective enough. The Company is vigorously promoting the integrated layout, and has established a large number of reserve projects, many of which are being successfully implemented. Due to the short operating time of the subsidiary, coupled with the fact that the chemical industry is in the trough of the cycle and the market is in the doldrums, the profitability of the green petrochemical business has come under pressure; from a long-term perspective, by expanding the petrochemical field in the upper reaches of the industrial chain, the Company will not only be able to ensure the security of supply of the core raw materials and the stability of the quality, but also be able to open up a new point of growth for the enterprise, laying the foundation for the sustainable development of the Company.

By adopting the M&A strategy, Jinfeng Technology can not only significantly expand the upstream raw material industry such as ABS, but also enhance its own competitiveness and profitability, and at the same time, it also provides the company with an excellent opportunity to enhance the technological innovation ability of the entire industrial chain, thus making the company's "strengthen the middle, expand the two ends, technology leadership, leapfrog development" This will make the company's strategy of "strengthening the middle, expanding both ends, technology leading and leapfrogging development" more successful and bring greater benefits to all shareholders.

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