# Research on Mergers and Acquisitions and Development Trends in the Pharmaceutical Industry of State-owned Enterprises

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**Abstract:** In recent years, Chinese state-owned enterprises have been continuously acquiring medical industry companies, aiming to improve the quality and efficiency of medical services through resource integration and technological innovation, and meet the growing health needs of the people. Therefore, this paper mainly aims to explore the results of Mergers and Acquisitions (M&A) of companies in the pharmaceutical area. It studies the characteristics and the effects of M&A of CR Pharma, Sinopharm, and Genertec. It finds out that they are a success, which reflects the motivation and strategic intention behind it. Their profits have continued to rise after M&A in general in recent years. In conclusion, consolidation has sparked several revolutionary developments that have improved market positioning, realigned strategy, and increased financial performance. Despite ongoing difficulties, these companies' proactive effort to resolve these problems points to a bright future in the fast-paced pharmaceutical industry. The trend of M&A will continue, and the direction of M&A will also be adjusted according to the pace of economic development.

## 1 Introduction

With the growing problem of an aging population, medical insurance faces increased stress. In order to lessen the pressure, the government has carried out various policies to lower the prices of medicine, one of which is to merge private medicine enterprises into public ones. In China, new rules have been established in the pharmaceutical industry from medical, health insurance and pharmaceutical perspectives in recent years, which means a series of national policies related to centralized bidding and procurement of drugs, control of medical insurance fees, graded diagnosis and treatment, etc. are carried out to strengthen the state's supervision over the pharmaceutical industry, so the whole pharmaceutical industry has entered a stage of the survival of the fittest. Meanwhile, with the development of the Chinese pharmaceutical market, the Mergers and Acquisitions (M&A) of Chinese pharmaceutical enterprises become a must-trend of globalization, which is also a development demand for specialization and a high degree of centralization. Consolidation helps enterprises gain capital quickly and efficiently avoid the reset of fixed assets and win

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complementary advantages in the merger process. Therefore, no matter seen from the government's angle or the growth of the whole industry, the heat-up of pharmaceutical industry M&A is the general trend.

In recent years, M&A has become a heated trend in the world and many scholars have done some research on that. For example, Demirbag et al. investigate the value creation in M&A activities in the pharmaceutical industry by comparing the post-M&A performance of giant pharmaceutical firms with their pre-M&A performance and that of non-M&A rivals. The analysis concludes, using a variety of performance metrics, that no appreciable value creation was achieved about the profit margin, return on investment, or productivity of research. Research productivity was lower among the sample M&A than among their peers who did not engage in M&A. M&A outperformed their non-M&A competitors in terms of return on investment, but they did not outperform pre-M&A enterprises. Nonetheless, compared to pre-M&A companies, the sample M&A' profit margin performance was superior and nearly on a level with that of their non-M&A competitors [1]. In addition, James examines the management of M&A)from a resource-based perspective using three cases from the pharmaceutical industry. It highlights the challenges of transferring resources and capabilities through M&A, including evaluating their strength and potential, maintaining their performance, and managing learning and institutional inertia. James concludes that while M&A presents opportunities for capability strengthening and accumulation, their creation and combination are messy and uncertain processes that require flexible integration management and serendipitous linkages [2].

There are many related studies on China, too. Firstly, Yin and Salmon argued that M&A in China were very different from that in other countries in causal factors and payment. For example, it was caused not only by external factors, such as economic reform, health system reform, and changing business ethics but also by internal factors, such as enterprise competition and responses to the deregulation of the pharmaceutical market. Being in a transition stage with a mixture of socialism and capitalism also made them more complicated. However, they saved thousands of state-owned enterprises at that time [3]. Secondly, Barbieri et al. found that pharmaceuticals showed higher performance than other manufacturing sectors during the study period, with vertical M&A positively impacting competitiveness post-crisis. Horizontal M&A had positive effects when they created new large firms but negatively impacted competitiveness when they concentrated assets in existing firms. The results support the effectiveness of the sector's restructuring efforts but raise concerns about recent conglomerate M&A and asset growth in large firms [4]. Thirdly, Yang et al. examine the impact of technology M&A on corporate performance in China's pharmaceutical industry using panel data from listed firms from 2012 to 2022. Their study finds that technology M&A can improve company performance and that R&D investment plays a mediating role. The results enrich the literature on technology M&A in the pharmaceutical industry and guide for firms to enhance their performance through M&A activities [5]. Fourthly, Guo et al.'s paper explores the relationship between venture capital (VC) and patent activities in China, examining the overall investment landscape and conducting a case study of 57 biopharmaceutical companies. It identifies four types of companies based on their patent activity and VC involvement, providing insights for both startups and investors [6]. Fifthly, Zhang et al.'s study examines the impact of M&A on innovation performance in China's pharmaceutical industry, focusing on the influence of M&A quantity and ownership type on innovation. Using the PSM model, it finds that M&A improves invention patent applications but not design patents, and the more M&A, the stronger the innovation ability, but with decreasing marginal effects. Private firms outperform state-owned ones in M&A-related innovation. M&A helps firms overcome innovation barriers and acquire new technologies, but effective integration is needed for successful transformation [7].

There are also papers on other countries like India and Indonesia. For instance, Srivastava analyzed one Indian acquisition and proposed a "Merger, Acquisition Theory" based on rationality, emotion, and culture. The merger was found to be risky but rational, affecting net profit and employee morale. The study highlights the importance of considering employee well-being during M&A activities and suggests expanding research to other sectors and variables [8]. Besides, Basant and Jaiswal use panel data analysis to examine how M&A events affect R&D intensity in Indian pharmaceutical firms. Results indicate that acquisitions boost R&D more than mergers, and combining M&A with asset purchases has a positive effect on R&D. Firms may view asset purchases as a complement to M&A for enhancing innovation. Analyzing M&A separately provides better insight into their impact on R&D over time [9].

The study of Darapuspa and Soekarno concludes that the financial performance of Indonesian SOE pharmaceutical firms generally deteriorated after forming a holding corporation in 2020, based on financial ratio analysis and SOE healthiness scores. There were no significant differences in ROE, cash ratio, current ratio, collection period, inventory turnover, total asset turnover, and total equity to total assets, but ROI showed a slight change. The COVID pandemic and external factors affected the situation, leading to losses for PT Indofarma Tbk. Despite this, the holding policy may improve liquidity and should continue as it takes time to see its effects [10].

As mentioned above, previous research was either too broad or too early to study specific Chinese cases, and other researchers only studied other countries. In this way, this paper decided to study China's M&A in the pharmaceutical area in recent years, which is a blank space in research.

# 2 The process of M&A of pharmaceutical companies by Chinese state-owned enterprises

There are three pharmaceutical giants in China, namely CR Pharma, Sinopharm, and Genertec, and this paper will introduce their M&A processes (Table 1).

**Table 1.** Three major state-owned enterprises in China acquire pharmaceutical companies

| Time | Acquirer | Acquired Party | Field | Amount of Money |
|---|---|---|---|---|
| 2004 | CR Pharma | Donghan E-jiao | Ejiao and Ejiao series and other proprietary Chinese medicine | 230 million yuan |
| 2006 | CR Pharma | CWGC | Research and development, production and sales of packaging products, research and development, production and sales of health food and medicine, medical apparatus and instruments, sewage treatment process design, environmental protection equipment research and development and production, sewage treatment project investment and operation, chemical product production, real estate development, etc. | 5 billion yuan |
| 2007 | CR Pharma | 999 | Research, development, production and sales of pharmaceutical products (medicine) and related health services | 4.648 billion yuan |

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| 2010 | CR Pharma | BEIJING DOUBLE-CRANE PHARMACEUTICAL CO., LTD. | Production and sales of chemical pharmaceutical formulations, active pharmaceutical ingredients, and bio-fermentation products | 2 billion yuan+transfer from government free of charge |
| 2018 | CR Pharma | Jiangzhong Pharmaceutical | Research, development, and sales of traditional Chinese patent medicines and health food products | 4.2 billion yuan |
| 2021 | CR Pharma | Immunotech Biopharm Ltd. | Research, development, and commercialization of immunotherapy drug | 799.7 million HKD |
| 2021 | CR Pharma | China Resources Boya Bio-Pharmaceutical Group Co., Ltd. | Research, development, and sales of blood products | 4.8 billion yuan |
| 2022 | CR Pharma | Hefei Lifeon Pharmaceutical Co., Ltd. | Wholesale distribution of pharmaceuticals and medical devices | 113 million yuan |
| 2023 | CR Pharma | KPC Pharmaceuticals, Inc. | Research, development, and sales of natural plant medicines, including series of pharmaceuticals made of Artemisia annua, Panax notoginseng, and Gastrodia elata | 2.9 billion yuan |
| 2023 | SINOPHARM | Shenzhen Weiguang Biological Products Co., Ltd | Blood products | The government transfers it free of charge. |
| 2023/8 | Genertec | CASSTAR | Medical equipment maintenance services and full-cycle management services | 46.75 million yuan |
| 2023 | CR Pharma | GUIZHOU TIANAN PHARMACEUTICAL SHARES Co., LTD. | Research, development, and sales of diabetes-related pharmaceuticals | 260 million yuan |
| 2024 | SINOPHARM | China Traditional Chinese Medicine Holdings Co. Limited | Traditional Chinese Medicine (TCM) formula granules, prepared Chinese medicines, and Chinese herbal pieces sales | 15.45 billion HKD |
| 2024 | CR Pharma | ZIZHU PHARMACEUTICAL | Research, development, and sales of women's health medicines and devices, oral medications, ophthalmic drugs, diabetes medications, and active pharmaceutical ingredients | 3.115 billion yuan |
| 2024 | Genertec | C.Q. Pharmaceutical Holding Co., Ltd. | Wholesale and retail of pharmaceuticals and medical devices | The government transfers it free of charge. |

Overall, in the past decade, China Resources (CR), Sinopharm Group, and China General Technology Group have been active in the healthcare sector through M&A, each with distinct characteristics.

For example, China Resources, known for its comprehensive strength, pays more attention to horizontal and vertical integration as far as acquisitions are concerned. Horizontally, it expanded its scale by acquiring Donghan Ejiao, a Chinese medicine company. Vertically, it acquired enterprises such as Kunming Baiyao Group, which not only achieved integration, but also improved supply chain and distribution capabilities. Apart from this, the group has also shown strategic interest in high-value sectors such as biopharmaceuticals, as evidenced by its investments in companies such as Immunotech Biopharm Ltd.

By contrast, Sinopharm, tends to strengthen its position in the pharmaceutical industry through acquisitions based on its extensive pharmaceutical distribution and selling network. It has expanded its presence in the TCM market by acquiring companies such as China Traditional Chinese Medicine Holdings Co. Limited. In addition to this, Sinopsin is also actively consolidating its dominant status in drug distribution and selling to ensure a sound supply chain in China.

Finally, China General Technology Group is inclined to take a more specialized approach to focus on healthcare services and medical device manufacturing. Compared with the last two companies, it prefers to acquire companies in the field of medical devices, make strategic investments in medical institutions, and actively integrate state-owned medical resources. The Group's commitment to expanding healthcare services can be seen in the acquisition of the Group's multi-hospital Gem Flower Healthcare Group. In addition, its investment in Neusoft Medical Systems further demonstrates its technological advancement in the field of medical imaging and diagnostics.

Although they have different priorities for the companies they acquire, these state-owned enterprises have used their financial advantages and policy support to reshape China's healthcare landscape. While improving the quality and accessibility of medical services, it promotes innovation in pharmaceuticals and medical technology. Their M&A activity reflects strategic alignment with national healthcare goals and a commitment to the long-term growth and development of the healthcare industry.

# 3 Case analysis of China Resources Group

In the context of the pharmaceutical sector, M&A are frequently employed as strategic maneuvers designed to consolidate market positions, enhance product portfolios, and exploit synergies to boost overall performance. A notable example of such a move within the Chinese pharmaceutical industry is the acquisition of China Resources Double-Crane Pharmaceutical Co., Ltd. (CR Double-Crane) by China Resources Group (CR Group).

## 3.1 Financial performance

Since being acquired by CR Group in 2010, CR Double-Crane has exhibited steady performance with the annual average growth rate is close to 7% from 2010 to 2023. Starting from 5.038 billion yuan of gross operating income in 2009, it rose slowly, then dramatically until 6.989 billion yuan in 2012. However, it showed a different trend, which declined sharply from 6.989 billion yuan to 5.138 billion yuan in the next 3 years for the issues related to industry rectification. The reasons include restrictions on the use of intravenous infusion, the use of auxiliary drugs in the catalog, adjustments to drug bidding and procurement policies, outpatient infusion, decline in pediatric drug use, rising raw material prices, and intensified market competition. Then, this amount increased drastically again to 9.381 billion yuan between 2016 and 2019. Finally, motivated by the pandemic of COVID-19, it rose stably. And in 2023, the company achieved a significant revenue milestone, surpassing the 10 billion yuan mark for the first time notably. This success is attributable to various factors, including the integration of newly acquired assets, such as CR Zizhu Pharmaceutical, which introduced a diverse range of products with high profit margin, especially in women's health, diabetes management, and ophthalmic solutions.

As a result of the acquisition, the company's business model was significantly restructured with a stronger focus on non-intravenous medicines. By reducing the risks connected with an excessive reliance on a single product line, this diversification strategy has allowed CR Double-Crane to grow steadily throughout several therapeutic areas.

### 3.2 Strategic realignment and integration

Following the acquisition, China Resources Double-Crane undertook a strategic restructuring, including the integration of the acquired entities such as China Resources Zizhu Pharmaceutical, which is a company that focuses on women's health medicine. This process is not just about financial integration, but aims to create operational synergies, which means to improve efficiency of their production and business activities after the merger of two or more companies due to economic complementarity and economies of scale, and enhance the entire value chain by lowering the costs of human resources and enterprise infrastructure. For example, the company has caught the opportunity and tapped into a lucrative but underserved market segment by leveraging CR Zizhu's expertise in women's health to expand its product offerings, like Yuting, a popular kind of contraceptives in China.

Moreover, enhancing manufacturing procedures, optimizing distribution networks, and bolstering research and development (R&D) capacities can be further endeavors to integrate. By lowering operational expenses and increasing productivity, these actions can boost profitability effectively.

### 3.3 Market positioning and brand enhancement

Post-acquisition, CR Double-Crane strategically positioned itself as a comprehensive healthcare provider, making the most use of its expanded product series to cater to a broader spectrum of patient needs. The addition of well-established brands such as Yuting from Zizhu, a leading contraceptive drug in China, has significantly boosted the company's reputation as a reliable medical enterprise. With more well-rounded products and greater brand effect, more and more customers are attracted to purchase its drugs or services, which increases its profits a lot.

CR Double-Crane's market presence has also expanded internationally, as the company seeks to capitalize on global opportunities through strategic partnerships and potential cross-border M&A activities as its scale continues to grow. This expansion has not only increased its customer base, but has also provided valuable insights into international markets, fostering innovation and driving further growth.

### 3.4 Challenges and prospects

Despite the many advantages brought about by the acquisition, CR Double-Crane faces challenges, primarily concerning the management of a high level of goodwill on its balance sheet, which reached 935 million yuan by mid-2023. What is worth mentioning is the risk of impairment connected with this significant amount of goodwill, which is a critical issue that the company must manage diligently.

In the future, CR Double-Crane's prospects appear optimistic. With a focus on growing its non-intravenous product lines and ongoing R&D investments, the company is well-positioned to manage the changing pharmaceutical industry landscape. Furthermore, the continuous trend of digitalizing healthcare presents CR Double-Crane with a chance to innovate and set itself apart from competitors.

Therefore, the acquisition of CR Double-Crane by CR Group has catalyzed a series of transformative changes, leading to enhanced financial performance, strategic realignment, and improved market positioning. While challenges persist, the company's proactive approach to addressing these issues suggests a promising future in the dynamic world of pharmaceuticals.

## 4 Conclusion

This paper studies the background of the consolidation of pharmaceutical companies in China in recent years, and it summarizes related researches' opinions. Moreover, it collects the data of various M&A examples and brings up their characteristics, which suggests that to improve the standard and accessibility of healthcare services, while also promoting innovation in pharmaceuticals and medical technology, each of these state-owned businesses has reshaped the healthcare scene in China by utilizing its financial might and governmental support. Their M&A activity demonstrates a commitment to long-term expansion and development in the healthcare industry as well as a strategic alignment with national healthcare objectives. Besides, their M&A activities have stimulated various transformative changes, such as enhanced financial performance, strategic realignment, and improved market positioning. Despite ongoing difficulties, the company's proactive effort to resolve these problems points to a bright future in the fast-paced pharmaceutical industry.

In the future, since the costs of running a company can be greatly reduced by M&A and it expands the company's scale largely, it should be believed that it is a good way to resist risks in the changeable markets. On the other hand, because Chinese almost-successful medicine is always bought by foreign countries, it is a good way to protect China's intellectual property. Moreover, medicine prices can really be pushed down by buying these medicine companies, because it is owned by China and people don't have to pay for the extra price of foreign medicine caused by tariffs and other taxes. Yet the profits of these three pharmaceutical giants keep on growing generally in a bad economy. Therefore, the M&A is the right decision and will have a promising future at least in current conditions.

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