

The Merger and Acquisition in the Blood Products Sector after Covid-19: A Study on the Deals of China's Enterprises

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Abstract. After COVID-19, the demand for blood products such as IVIG roared up immediately. Global biopharmaceutical enterprises are in a wave of M&As for expansion. While there lacks of related research on China's blood products sector. This article takes the example of financial data from Grifols and China's four cases of post-epidemic merger (Boya-China Resources, PLBIO-Shaanxi SASAC, Weiguang-Sinopharm, and SH RAAS-Haier) under China's domestic substitution policy, analyzing their acquisition transactions, equity structures and outcomes. This paper finds that M&A benefits the blood products industry of both Grifols and China's main merged firms in their post-deal stock market performances. Also, the merged firms enjoy the rising plasma collection stations number and plasma collection volume. This is expected to meet the demand for blood products, provide the possibility of co-development to the global industry, and contribute to human health progress. In conclusion, this research gives its prospect and suggestion for sustainable financial growth in long run.

1 Introduction

1.1 Background

1.1.1 M&As are an important path for blood product firms to grow stronger.

In contrast, other financing like venture capital does not have a significant effect on the innovation of biomedical firms in China [1]. Meanwhile, M&A is the only way for new players to enter the blood products industry. In 2001, the PRC State Council proposed to implement a total number limitation of blood products enterprises, and no longer approved the later establishment of new blood products enterprises, forming the blood products industry as an enterprise stock game. Nowadays, with less than 30 blood products enterprises, and scarce license resources, the later players who want to enter the blood products industry can only choose the way of merger and acquisition of existing blood products enterprises. Such as in 2021 China Resources and in 2023 Shaanxi State-owned Assets Supervision and

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Administration Commission completed their layouts through the merger and acquisition of the leading enterprises in the blood industry (Table 1.)

Table 1. Timelist of China's Supervisory Policies on the Blood Products Industry

Supervisions	Time	Event
Industry Entry	2002	State Council issued the " <i>Notification on the Publication of China's Action Plan (2002-2005), for Containing and Preventing AIDS</i> " From 2001 onwards no new blood products enterprises can be added.
Stations Set-up	1995	To control the inflection of AIDS, Henan, Anhui, and Hebei Provinces urgently closed all the apheresis plasma collection stations.
	1996	State Council released the " <i>Regulation on the Management of Blood Products</i> ": no other units or individuals are allowed to engage in Apheresis Plasma collection, except for the production units or health administrative department at the county level, who both have independent legal personality.
	2005	The Health Ministry released the " <i>Guiding Principal on Establishment Planning of Plasma Collecting and Supply Agents</i> ".
	2006	The " <i>Work Programme on the Transformation of Apheresis Plasma Collection Stations</i> : the plasma stations originally under health ministry or government transfer as corporate assets by acquired by blood product enterprises.
	2012	State Health Ministry released the " <i>Notification on the Matters related to the Management of Apheresis Plasma Stations</i> ", requires the manufacturers with newly applied plasma stations should register no less than 6 varieties of blood products(or 5 varieties for who are under the national planned immunity task), and also contain products of human serum albumin, human immunoglobulin, and coagulation factor.
	2016	State Health and Family Planning Commission released the " <i>Opinions on Promoting the Healthy Development of Apheresis Plasma Collection Stations</i> ", which favors blood product production enterprises with strong R&D capabilities, high comprehensive utilization rates, and standardized management.
	2022	Office of the National Health Commission published the " <i>Quality Management Standards for Apheresis Plasma Collection Station Laboratories</i> ".

1.1.2 M&A can achieve rapid growth in business volume.

According to the PRC's regulations on the management of blood products, the establishment of plasma stations requires three levels of administrative approvals, which are the county, prefectural and provincial levels, as well as the issuance of apheresis plasma collection licenses by the health department of the provincial government, before engaging in plasma collection activities. The new plasma stations generally need 3-5 years of ramp-up period before they reach a mature stage. Due to the long approval cycle of plasma stations and the ramp-up process of plasma collecting, it is difficult to achieve explosive growth of plasma stations and collection volume in the short term by relying on its own development. M&A brings the rapid growth of business volume and will increase the possibility of catching up with the existing players.

1.2 Related Literature

Here this paragraph reviews how the previous economists expounded on relative researches.

Theoretically, the welfare of merger is discussed by S. Cowan in his Oxford course, that monopolization raises social welfare because of the benefits of the redistribution of output to the most efficient firm. Social welfare can be higher when a monopoly sells to a monopoly, with double margins than when a competitive industry sells to a downstream Cournot oligopoly with differing efficiency levels. Which requires inverse demand to be sufficiently concave, and cannot hold when demand is convex [2]. Furthermore, L. Pepall et al. used the Stackelberg Model to prove when the merged firms act as Stackelberg's leader, the merger paradox is resolved. The leader's profit always exceeds the combined profits earned by the followers before the merger, thus, it is always profitable for the merger in the condition of an additional two followers. The merged firm as a leader will create more value than non-merged followers [3].

There exist several professional and systematical case analyses on biopharmaceutical M&As during the past decades. M. Thomas and J. Rose in their book showed a significant rebound in global M&A activity by 2018, which continued to rise in 2019 with 484 deals worth \$342 billion. This amount was comparable to Denmark's GDP and greater than the GDP of 157 countries. The life sciences sector was particularly active, accounting for about 10% of global deals, including major acquisitions such as Bristol Myers Squibb's purchase of Celgene for \$74 billion and Abbvie's acquisition of Allergan for \$63 billion [4].

Deshpande analyzed 585 global M&As in the "Bio-Technology Equipment" sector from 2006 to 2020, finding a clear wave pattern in M&A activity both globally and regionally, although the timing of peaks and drops differed between regions. The Asia Pacific showed growth in transaction numbers, Europe led in average yearly transaction value, while North America saw a decline in both the number of transactions and transaction value [5].

In respect of "M&A in Biotech Equipment", China's relative field is experiencing a merger wave supported by the government's "Domestic Substitution" Industrialization. China's high-end medical device market is currently dominated by imports, with low domestic production. National policies are encouraging localization and domestic substitution. External factors such as procurement policies with lower entry barriers, and hospital cost control under DRGs/DIP systems, along with internal factors like increased R&D investment and business model adjustments by companies, are driving the push towards greater domestic production and market share for Chinese-made medical devices [6]. Other Chinese scholars endorsed overcoming China's reliance on foreign core technologies in high-end manufacturing. The country is focusing on technological innovation and promoting domestic substitution, with collaborative efforts from the government, businesses, and research institutions [7]. Under U.S. sanctions and China's "dual circulation" development strategy, the key sectors such as the new materials industry face challenges in domestic substitution [8]. The strict foreign technology blockades and insufficient domestic competitiveness have hindered breakthroughs in critical technologies like the integrated circuit industry. China has invested heavily in exploring suitable innovation systems, with domestic substitution driven by varying government and market forces across different stages. The process has evolved from low-end to high-end markets and from lightweight to heavyweight industries [9].

BBVA research pointed out that China transformed from importing final technological goods to importing raw materials and conducting high-end manufacturing domestically for technology self-sufficiency and then exporting them to the economies. Under the value chain relocation "China+1" strategy applied by multinational firms, the lower-end exports from China significantly decline while high-end exports are ramping up, indicating higher-end enterprises still choose China for manufacturing due to China's special advantages [10]. A government should foster economic development by intervening in the markets when they are inefficient, to enhance efficiency through "right" regulation (or provision). Economists have suggested that China may have already passed (or is approaching) the Lewis turning

point. Hence, it is fairly necessary for industrial policy. If carefully implemented, strategic government interventions can promote the development of specific industries and modernization [11]. China's domestic substitution intends to upgrade the high-end in all modern sectors, including blood products, protect the essential rights of health and sanitation, strengthen the capability of homemade biopharmaceutical service, and create development opportunities for the state and also the global industries.

However, there are few previous studies focused on recent circumstances of China's Blood Products Sector in biopharmaceutical, which leaves blank for this paper to go through.

1.3 Objectives

Standing on the shoulders of giants, it is easier to understand the objectives of this research. This article will analyze the success story of Grifols' M&A, and then elaborate on China's four main blood products companies, including Shanghai RAAS, Weiguang Bio., PLBIO and Boya Bio. Also, this paper will look into their statement of stock market in the time of Covid-19, and make a prospect on their performance in the post-epidemic era.

2 China's Domestic Substitution with the Global Portfolio

China's domestic substitution did have a positive effect on the industry after recent home firms' merger deals. In 2020, for example, Guangdong SLBIO acquired Pacific. In 2019, Guangdong SLBIO collected about 400+ tons of plasma, and the number of plasma stations was only 13, which is a big gap between Guangdong SLBIO, Tiantan Biological, Shanghai RAAS and Hualan Biological. After the acquisition of Pacific, the post-merger PLBIO's owned plasma volume increased rapidly to nearly 900 tons in 2021, and the number of plasma stations will reach 38, which made it the third largest enterprise in the number of plasma stations in China. Thus, it is expected to become the fourth listed blood products company to cross the threshold of dry-ton plasma collection.

This conforms the global wave, confirming the importance of M&A in such industry, which is proved in the growth path of international giant Grifols, as shown in Fig.1 and Fig. 2. CSL Behring, Baxalta and Grifols are the three leading blood product companies in the world, each with its own characteristics: CSL Behring has a monoclonal antibody business in addition to blood products and vaccines, achieving a three-round drive of blood products, vaccines and monoclonal antibodies; Baxalta has been vigorously developing recombinant blood products and has become the leader of recombinant blood products in the world. Grifols, on the other hand, focuses on the development of blood-derived blood products and has steadily grown to become the world's third-largest blood products company through keeping plasma station acquisitions and the expansion of blood products. The development path of China's blood products companies is similar to that of Grifols. Grifols blood products business achieved an operating income of EUR5.01 billion (RMB39.39 billion) in 2022, up 32% year-on-year, and the company's net profit will be approximately EUR210 million (RMB1.65 billion) in 2022, up 10% year-on-year. In terms of profit, the company's net profit in 2022 was approximately EUR210 million (approximately RMB1.65 billion), an increase of 10% year-on-year. Due to the impact of debt interest expense, the company's profitability has not yet recovered to the level of 2020 and before.

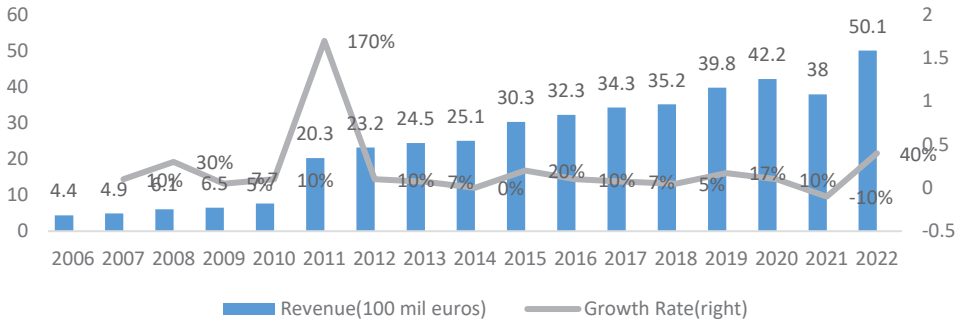


Fig. 1. Grifols Revenue and Growth Rate

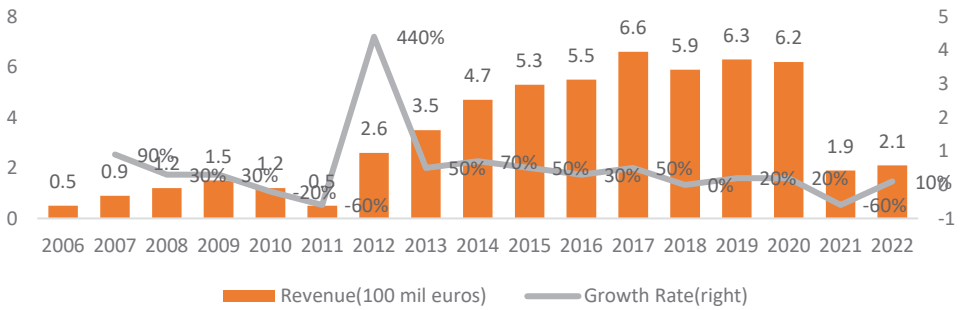


Fig. 2. Grifols Net Profit and Growth Rate

The rapid growth of Grifols plasma sites benefited from consistent external acquisitions. Since 2002, the company has made a number of acquisitions in the blood products business, acquiring nearly 300 external plasma sites. During the downturn in the global blood products industry in the early part of the 20th century, the company acquired Sera Care for 43 sites, Bio-Life for 8 sites and Plasma Care for 14 sites in 2006, giving the company a total of 72 sites in 2006. In 2011, the company acquired Talecris and gained 67 plasma stations in the United States, making it one of the top three blood products companies in the world. Through dozens of mergers and acquisitions, the number of plasma stations of Grifols has shown a gradual growth.

An adequate number of plasma stations is an important guarantee for the company's plasma supply. According to Grifols 2022 investor data in Fig. 3, in 2021 the company's plasma stations account for 29% of the global number of plasma stations, which is sufficient to ensure a larger plasma supply with collection accounting for 25% of the global total in 2021.

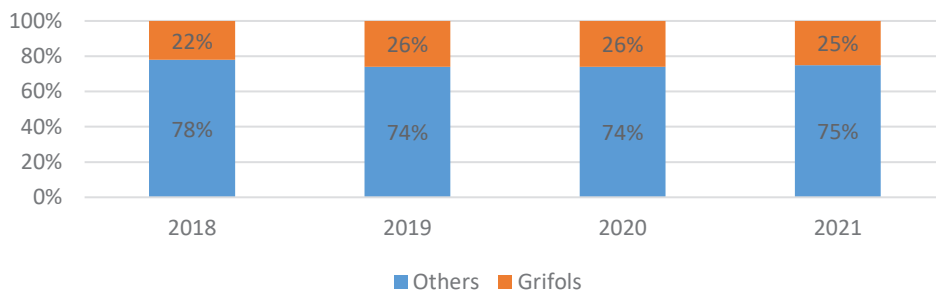


Fig. 3. Global Market Share of Plasma Collection

In the current post-epidemic era in the globe and China, the blood products industry's M&A takes three opportunities profiting manufacturers and its whole economics as below:

2.1 The long-term clinical demands like IVIG speed up industry expansion

Due to China's strict control of the number of plasma stations and blood products production licenses, the plasma supply grows about 10% per year, which is a high barrier to scarce resources, hence, in long-term the blood products are in short supply; during the Covid-19, the clinical practice and departmental application scenarios gradually expanded the doctor's prescriptions ushered by a long-term trend of change. The current clinical demand rigidity, where the blood products will become one of the sub-segments with the highest rigidity in the next 2-3 years' pharmaceutical boom.

Looking into the segmented products, during COVID-19, IVIG was included in several versions of clinical treatment guidelines under expert consensus, the demand for in-hospital diagnosis and treatment has increased significantly, and, there are no substitutes, so hospitals stock IVIG as a strategic material. Although human albumin products are the only permitted imports of blood products, they account for a high proportion of China's market. There is still room for home-made substitution, as home-made albumin demand is even stronger than imports. For instance, factor medicines are just-needed therapeutic drugs for rare diseases such as hemophilia, whose market scale and clinical application are expanding steadily. The strong terminal demand has also stimulated the motives of blood product enterprises to collect plasma, which is expected to be shown in financial performance in 2024-2025.

2.2 The gap between supply and demand for blood products enlarges

In 2023 H1, due to the large rise in the terminal demand, and rapidly depleted inventory of blood products leader companies and their distributions, the upstream supply side is subject to the strict limitations of the plasma station resources. Take IVIG as an example, its in-hospital sales growth rate is about 20%. Assuming that the plasma collection volume in 2024-2025 will maintain the growth at 10%, the supply and demand gap for China's blood products industry will expand in the medium run. At present, home-made blood products enterprises are only provided to in-hospital scenarios, which it creates an opportunity to strengthen both endogenous upgrading and exogenous extension for the enterprises that can open new plasma stations, advance in higher plasma volume, and wider terminal product coverage. With their expansions of in-hospital and out-of-hospital coverage, those firms can fully enjoy the elasticity of their performances under a rising volume and value.

2.3 New shareholders bring optimal resources on the quality and efficiency

At present, as the blood products industry is a stock game market, shareholder optimization is expected to bring more plasma station resources for the enterprise, and keep empowering the business extension, as well as the operation and management can be improved in many ways. For example, in 2018 Sinopharm joined the ownership of Tiantan Biological bringing rich plasma station resources, and in 2021 China Resources into the ownership of Boya Bio significantly improving profitability; in 2023 Shaanxi Coal Group, Sinopharm Group respectively succeeded the ownership of the PLBIO and Weiguang Biological, empowering the company's plasma station expansion with enhanced quality and efficiency; Haier Group is entering the ownership of Shanghai RAAS, whose capability to open new plasma station will be strengthened.

3 Main Four M&A Deals in China’s Blood Products Industry

3.1 The state-owned capitals actively lay out in blood products track race

Before the 14th Five-Year Plan, except for internal integration among subordinates of Sinopharm: Tiantan Bio and the four ‘blood product enterprises’, the participants of M&A were all private and foreign-funded blood product companies. During the 14th Five-Year Plan period, state-owned enterprises began to actively lay out the blood products industry, with China Resources Pharmaceutical and Shaanxi SASAC acquiring Boya Biological and PLBIO respectively, and Sinopharm strengthening its market position by taking a controlling stake in Weiguang Bio. By the end of 2023, among the six blood product companies in the A-share market, four of which are Tiantan, Boya, PLBIO, and Weiguang, have state-owned backgrounds. Besides, about foreign capitals, Boya partly bought the shares in Green Cross China in July 2024. Also, Chengdu Ronsen, a subsidiary of Tiantan, claimed to acquire 100% equity in Zhong Yuan Rui De from CSL on 31st Aug. (Fig. 4)



Fig. 4. Overview of China’s blood products firms

3.2 The reorganized equities create stock revenues, while demand fluctuates

From 2017 onwards, “Supervision and Management Measures for Drugs Production” and other statutes were issued, detailing the supervisory duties of high-risk drug manufacturers such as vaccines and blood products. As the iFind data illustrates, in this period the aggregated stock index fluctuated around 100.00, while in Oct 2018, Tiantan Bio. started its

state-owned capital board. In Dec 2019, the beginning of Covid-19, the demand for IVIG exploded. Around Aug 2020, the aggregated stock index reached its bullish pinnacle at 254.44. After 2021, the recurrence of COVID-19 made it stressful for the upstream plasma stations and plasma supply. In the fourth quarter of 2021, Boya Bio. was formally owned by state-owned firms. Meanwhile, the stock index hit the bottom after the epidemic at 104.35. In 2022, Guangdong Province started plasma collection by union, including 36 firms with 5 varieties of blood products, at a scale of 3.08 billion RMB (\$432 million). In the second half of 2023, PLBIO, Weiguang, and SH RAAS were in the process of M&A successively, which let the stock index recover to 141.60 in Dec.

Hereby, this is to analyze the four major M&A transactions in post-epidemic China:

3.2.1 Acquired by state-owned investment firm: China Resources owns Boya Bio

In Sep. 2020, Boya's former shareholder, Shenzhen GTJA, signed an equity transfer agreement with China Resources Pharma. Holdings (a wholly-owned subsidiary of China Resources Pharma. (3320. HK)). After the transfer of shares, entrustment of voting rights, and private offering of additional shares, China Resources Pharm. Holdings now owns a total of 40% of the company's shares in terms of voting rights. Boya has become the only blood product platform in the CR's Health section. During the 14th Five-Year period, Boya is expected to break through the threshold of 1,000 tons of plasma collection.

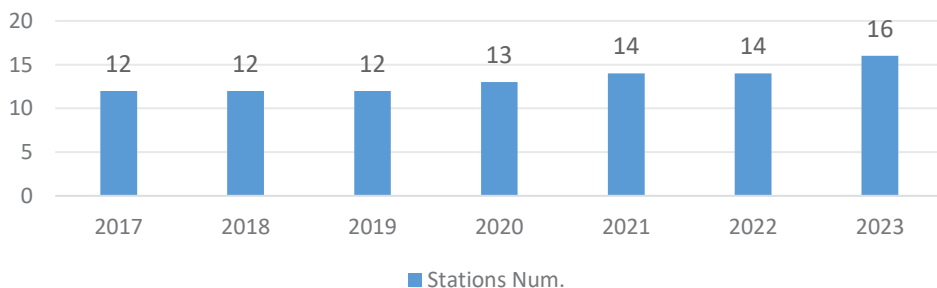


Fig. 5. Number of Boya's Plasma Stations

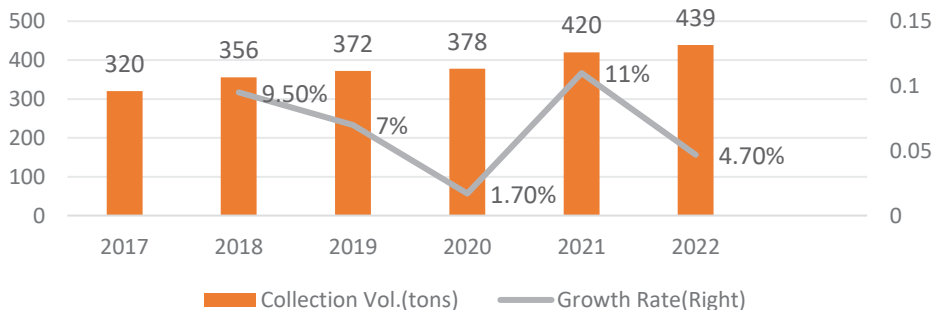


Fig. 6. Volume of Boya's Plasma Collection

Extension: CR to help Danxia acquisition. 2021, CR and GTJA signed the "Investment Framework Agreement" and its related supplemental provisions cleared that the endorsement of CR's central enterprise credentials and the corresponding governmental public relations capabilities will greatly facilitate the renewal of the Danxia plasma station's license and Boya's acquisition of Danxia Bio.

Endogeneity: With stable growth in stock, the CR platform helps to expand new plasma stations. In 2022 the company collected plasma volume of 439 tonnes, a year-on-year growth of 4.4%. According to the company's plan, the existing 14 plasma stations in the 14th Five-Year Plan reach 650-700 tonnes. In addition, through the advantage of the China Resources platform, Boya Bio is also expected to further achieve the expansion of new plasma stations (Fig. 5 and Fig. 6).

3.2.2 Indirectly owned by state-owned subsidiary: Shaanxi SASAC controls PLBIO

In March 2023, Zhejiang United Investment Group and ZUIG Tianhong agreed to transfer 21% of PLBIO's shareholdings and additionally 2% of their voting rights to Shengbang Yinghao (Shaanxi Coal Group is the shareholder of Shengbang Yinghao). After the transfer, the actual controlling board is Shaanxi SASAC.

This creates two post-merger advantages: First, Shaanxi Coal Group will bring newly opened plasma station resources in Shaanxi and the provinces along the Yangtze River, increasing the station number, which will grow apheresis plasma volume as well as in the stock stations. Second, the number of new high-value-added products has increased, such as the listing of Human Plasminogen Complex from Guangdong SLBIO and the one from Pacific which is applying to be listed, which is expected to bring an increase in the overall gross profit margin (Fig. 7 and Fig. 8).

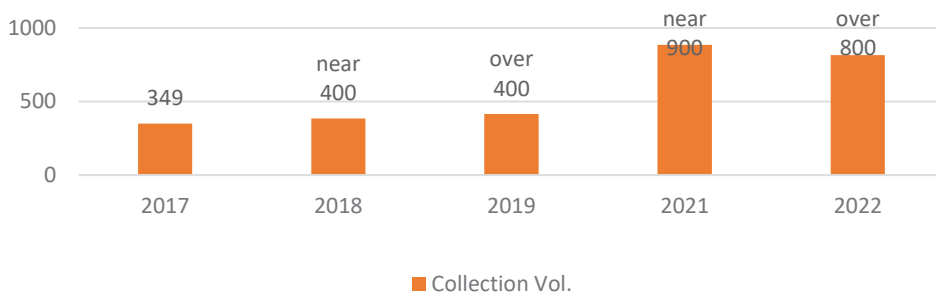


Fig. 7. Volume of PLBIO's Plasma Collection

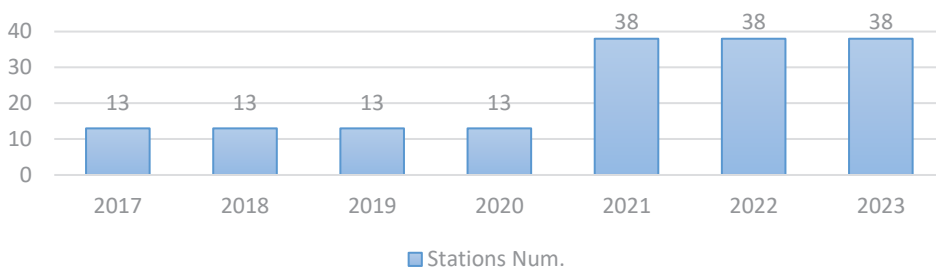


Fig.8. Number of PLBIO's Plasma Stations

3.2.3 State-owned capitals recombine: Sinopharm enlarges its shares in Weiguang

In June 2023 Weiguang Bio announced that Shenzhen Guangming District SASAC and China Biotec entered into a cooperation agreement to set up a joint venture company: China Biotec transferred 5.96% equity shares in Tiantan Bio to the joint venture, Guangming SASAC transferred 35.25% equity shares in Weiguang Bio to the joint venture, where 51% equity is held by China Biotec and 49% equity is held by Guangming SASAC. After the

equity change, China Biotec controlled 42.50% of the shares of Weiguang Bio through the Joint Venture and Wuhan Institute, becoming an indirect controlling shareholder of Weiguang Bio, and the actual controller of Weiguang Bio was changed from Guangming SASAC to Sinopharm Group, as in Fig. 9.

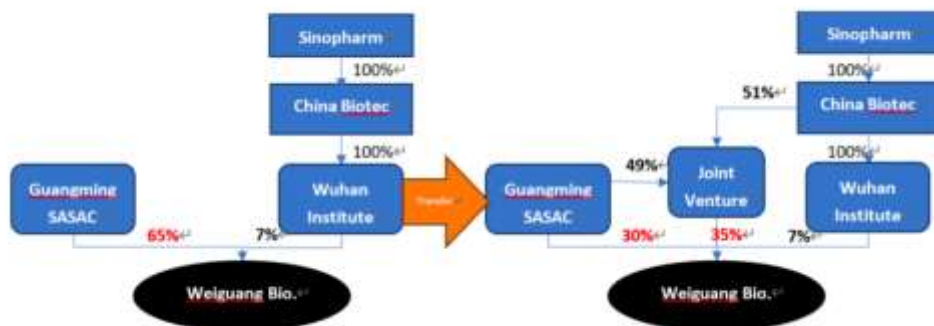


Fig. 9. Equity structure change of Weiguang

At present, Weiguang Bio owns 9 apheresis plasma stations, and the volume in 2022 was about 467 tonnes. With the change of the actual controller from a local state-owned enterprise to Sinopharm, Sinopharm is expected to further enhance the company's ability of raw material plasma supply.

3.2.4 Foreign capitals replaced by private: Haier purchased SH RAAS from Grifols

On 29 December 2023, Shanghai RAAS's shareholder, Grifols, signed a Share Purchase Agreement with Haier Group, in which Haier or its designated affiliates intend to acquire 1.329 billion shares from Grifols, accounting for 20.00% of total shares, and transfer a total price of 12.500 billion RMB. Meanwhile, Grifols entrusted to the Grifols' remaining 437 million shares, accounting for 6.58% of the total share of SH RAAS. Eventually, Haier completed the above transaction through its wholly-owned grandson company, Haiyingkang (Qingdao) Medical Tech Co.. According to the announcement, after the completion of all the transactions, Haiyingkang obtains 26.58% of the voting rights in aggregate. After the reorganization of the board of directors, Haier Group becomes the actual controller of SH RAAS.

SH RAAS equity has a mix-ownership with the main shareholder Haier as a private enterprise (or mixed-ownership), while other shares hold by foreign capitals such as Grifols (6.58%), RAAS China (3.55%) and HKSCC (2.75%), as well as state-owned capitals such as Cinda Assets (4.2%), Hwabao Trust (4.04%), CITIC Financial (3.7%), china fortune Trust (2.1%), CITIC Securities (1.94%), BOC (1.32%) and CCB (1.16%).

The 2023 financial report shows that SH RAAS's revenue is 7.964 billion yuan, a year-on-year increase of 21.27%; net profit is 1.779 billion yuan, a year-on-year decrease of 5.35%. The annual volume of plasma collection exceeded 1,500 tonnes, hitting a new record. In the 2024 first quarter, SH RAAS revenue was 2.056 billion yuan, dropping 0.33% yearly, while net attributable profit was 757 million yuan, rising 5.32% yearly.

Generally, brokers believe Haier shares benefits to SH RAAS. Hua'an Securities research report in January this year, the research report pointed out that Haier is expected to empower its resources in the plasma station, and the collection volume is estimated to further increase. Galaxy Securities research reported that the acquisition further improves Haier's blood

ecosystem chain layout. For SH RAAS, this ends the state in the previous four years with no real controller, which is conducive to the company's overall management efficiency and steady growth in performance.

4 Performance and Prospect

Since the unlock at the beginning of 2023, the blood collection of the plasma station will be fully resumed. The four M&A cases prove this in their financial performances now and then.

According to China Post Securities, in 2023-2025 SH RAAS's net profit will be 2.33/25.0/3.03 billion yuan, corresponding to EPS will be 0.35/0.38/0.46 yuan, and the current share price corresponding to PE will be 20.93/19.51/16.10 times. Taking into account that Haier Group brings the potential resources, the company's plasma products, for instance, high-margin coagulation factor products continue to expand, and the albumin business contributes to growth in performance, which will drive the SH RAAS's value to further enhance. Thus, its stock maintains the "buy" rating.

As shown in Table 2, based on iFind data from China Post Securities, the four merging cases discussed above, and the other two A-shared listed firms all benefitted from the state-owned capital integration after Covid-19 as well as the explosion of demand in the short run. All these six firms have a growing EPS from 2023 to 2024 due to the stock market calls on the industry, although their price-to-earnings ratios drop in 2024, implying a potential to grow in the long run.

Table 2. Stocks of four Merged and other two A-share Listed Firms

<i>Stock Name</i>	<i>Invest. Rating</i>	<i>Closing Price</i>	<i>Total Market Capitalization</i>	<i>2023 EPS</i>	<i>2024 EPS</i>	<i>2023 PE</i>	<i>2024 PE</i>
<i>PLBIO</i>	Buy	26.4	192.5	0.82	1.05	31.21	24.38
<i>Hualan</i>	Not Rated	20.37	372.5	0.79	0.93	25.83	21.84
<i>SH RAAS</i>	Buy	7.35	488.4	0.35	0.38	20.93	19.51
<i>Boya</i>	Not Rated	31.27	157.7	1.02	1.19	30.57	26.37
<i>Weiguang</i>	Not Rated	30.9	70.1	0.98	1.13	31.63	27.25
<i>Tiantan</i>	Not Rated	28.89	476.1	0.68	0.83	42.61	34.89

For the current development of the blood products industry, since 2023, the integration of blood products has accelerated significantly, as industry concentration improved. Such integration of the total capital factor especially the state-owned giants' capitals can optimize the capital allocation to the efficient firms, incentivize higher profitability and productivity in China's blood products field, and maximize the total social welfare. It is expected that the post-merger synergy will gradually improve the total capital factor arrangement with concentration. When the diversified capitals including state-owned, mixed-owned, private, and foreign enterprises work effectively in this industry, it will meet the terminal demand, and improve the capability in regional health protection, through relative scientific research and development, as well as China's political support and supervision, therefore, the sector value will achieve further growth.

5 Conclusion and Recommendation

Mergers and acquisitions are one of the most efficient ways in the develop of China's blood products firms, which both maximize the total social welfare and provide the benefits for the enterprises in volume and value. Especially, after the Covid-19 epidemic, the demand for blood products such as IVIG exploded, lifting the stock price to a higher range and incentivizing the relative firms' shareholders to seek equity optimization. Under the wave of the government's domestic substitution policy, many excellent blood product companies with

potential are supported by shareholders' reorganization by larger capital groups. This article analyzed the comparison of their plasma stations number and plasma collection volume, showing that the spontaneous M&As improved the industry's financing and business performance, supporting firms better to meet the gap between demand and supply. Hence, M&As lift the regional capability of sanitation, contributing to the progress of global human health. Last but not least, China's blood products sector will provide its high-level development and chances for not only China but also other economies.

This article here recommends that China's enterprises and policymakers shall further develop biopharmaceuticals into a sustainable steady growth via M&A, and at the same time, resolve its sluggish growth in stock markets and other financing methods. For international scholars and institutes, it is necessary to focus more on the dynamic M&As in China and other economies, to foster international collaboration and co-development.

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