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Analysis of vertical integration strategy on Renhe Pharmaceuticals Working capital impact

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ABSTRACT
With the changes in market demand, consumer concepts and China's policies, in recent years, some enterprises in the pharmaceutical industry have adopted the strategy of vertical integration to a certain extent, and the strategy of vertical integration has a certain impact on the working capital of the enterprise in terms of capital appropriation and liquidity, risk control and stability, financing and investment needs. Working capital, which is called the "blood" of the enterprise, is even more important to the enterprise. In this paper, we will analyse the impact of vertical integration strategy on working capital of Renhe Pharmaceuticals, find out the current problems of Renhe Pharmaceuticals and put forward countermeasures.

KEYWORDS
pharmaceutical industry; vertical integration; working capital

1 Background and significance of the study

1.1 China's pharmaceutical industry basic situation and development trend

1.1.1 Opportunities for growth in the industry

China's aging population is a rising trend year by year, the residents of the medical awareness is rising, in China's relevant policy support and guidance, China's pharmaceutical industry will usher in significant development opportunities. Among them, China's policy to vigorously support the "big health" industry has great potential for development, the current domestic big health industry, the main listed companies are: Baiyunshan, Yunnan Baiyao, Aier Ophthalmology, Jiuzhou Tong, WuXi AppTec and other pharmaceutical companies. In recent years, China's large health industry continues to expand the scale of growth, large health industry involves a large number of industry chain links, policy support, "big health" industry for the pharmaceutical industry is a major development opportunity.

1.1.2 Impact of policies on the development of the pharmaceutical industry

In recent years, China's attention to the development of the pharmaceutical industry, the pharmaceutical industry policy frequently, consistency assessment, two-ticket system, the system of marketing authorisation holders of medicines (MAH), drug clinical trial data verification and other policies, selection of outstanding enterprises, accelerated the elimination of inferior enterprises; "three doctors" linkage, accelerate health care reform, but also accelerated the pattern of industry reshaping. The "Three Doctors" linkage, accelerated medical reform, also accelerated the industry pattern reshaping, "Made in China 2025" also pointed out that the pharmaceutical industry is a key area of development, as well as the promulgation of traditional Chinese medicine policy, to promote the culture of traditional Chinese medicine, for the development of China's pharmaceutical industry to develop a new development goals and key tasks.

1.2 The significance of the vertical integration strategy for the development of the company

Vertical integration strategy is a form of strategy in which enterprises adopt a positive and offensive attitude. Enterprises adopting a vertical integration strategy can reduce uncertainty in transactions between upstream and downstream enterprises and lower transaction costs; control key scarce resources and ensure the quality of key element inputs; control sales channels, understand customer needs in a timely manner and obtain customers; thus achieving the purpose of increasing the profitability of business activities at all stages, enabling enterprises to gain a competitive advantage and enhancing their competitive edge.

With the continuous implementation of medical reforms such as "4+7 Band Purchasing", "Separation of Pharmaceuticals" and "Zero Differential Rate for Drugs and Consumables", these restrictive policies for pharmaceutical distribution and sales have brought great pressure to traditional pharmaceutical marketing. These restrictive policies for the distribution of pharmaceutical sales have brought great pressure to the traditional pharmaceutical marketing. At the same time, the country in the strengthening of medical insurance cost control policy background, pharmaceutical enterprises bargaining space is compressed, sales profits significantly reduced prices, the traditional marketing shortcomings are increasingly prominent, part of the pharmaceutical enterprises in order to achieve the purpose of cost reduction and efficiency, began to try to vertically integrated strategy. For example, with the help of the pharmaceutical industry digital supply chain cloud platform to expand the pharmaceutical sales market, to achieve the online and offline integration of the development of the pharmaceutical industry, the digitalisation of the pharmaceutical industry, high-efficiency and low-cost business transformation, to a certain extent, all of the enterprise's resources have been integrated. In short, through the vertical integration strategy can integrate resources, optimize the layout of the industry chain, thus helping pharmaceutical enterprises to better cope with the challenges posed by the characteristics of the industry, which in turn helps to improve the overall competitiveness and market position of the enterprise.3. The impact of vertical integration on working capital

1.2.1 Before the implementation of vertical integration

Vertical integration, whether forward or backward integration, requires a certain amount of human and material resources, as well as corresponding financial resources, to implement the strategy. Before implementing a vertical integration strategy, it is important to ensure that the company has sufficient working capital to implement the strategy. If the working capital is sufficient it can be carried out smoothly, when the working capital is insufficient, it is necessary to consider the company's working capital financing strategy.

1.2.2 Vertical integration in progress

Vertical integration implementation involves the strengthening of control over upstream and downstream or the acquisition of ownership, and companies need to prepare corresponding funds for mergers and acquisitions, self-construction, expansion or investment in the process of strategy implementation. As a result, the implementation process will lead to a short-term reduction in the company's working capital.

1.2.3 After the implementation of vertical integration

After the implementation of vertical integration, it helps enterprises to optimise the management of the industrial chain, reduce transaction costs, control key scarce resources, and is also conducive to more effective management of the supply of raw materials, the production process and sales channels, timely understanding of customer demand, adjusting the production of products, improving the market adaptation, responsiveness, and enhancing the market competition of enterprises, which is conducive to the increase of corporate profits. In general, through vertical integration can improve the operational efficiency of the enterprise, reduce unnecessary expenditure, strengthen the management of enterprise inventory goods, accounts receivable, improve the liquidity of working capital, which is conducive to the increase of working capital. However, the implementation of vertical integration strategy will expand the industrial chain, making the enterprise capital chain elongated and increasing the risk of enterprise capital chain breakage, and enterprises should also pay attention to this risk.

Second, the development history of vertical integration of Renhe Pharmaceuticals

The vertical integration strategy of Renhe Pharmaceuticals starts from the production link first, and then to the expansion of sales channels, Renhe Pharmaceuticals has taken effective measures, and has achieved certain results at present.

Phase I (industry chain integration and initial integration):

The implementation of the first stage of vertical integration strategy of Renhe Pharmaceuticals focuses on the integration of the production link. In 2006 - 2008, Renhe Pharmaceuticals integrated the resources of several subsidiaries such as Jiangxi Renhe Pharmaceuticals Co., Ltd. and Jiangxi Tonggu Renhe Pharmaceuticals Co., Ltd. and, at the same time, introduced advanced production technology and equipment to achieve unified management and optimisation of the production chain. The completion of this order of vertical integration strategy has enabled Renhe Pharmaceuticals to significantly improve its production efficiency, effectively control production costs and further improve product quality, laying a solid foundation for the company's market expansion.

Stage 2 (deep integration and increased competitive advantage in the market):

The implementation of the second stage of vertical integration strategy of Renhe Pharmaceuticals was mainly in the expansion and optimisation of sales channels. During the period from 2009 to 2012, Renhe Pharmaceuticals began to focus on the layout of sales channels, expanding the coverage of its products and increasing the awareness of its brand by combining online and offline. The completion of this stage enabled Renhe Pharmaceuticals to successfully build a diversified network of sales channels, including large pharmacy chains, hospitals and e-commerce platforms, etc. Through refined management and continuous market expansion, Renhe Pharmaceuticals has steadily increased the market share of its products, and gradually strengthened its brand influence.

Phase III (two carriages running side by side):

The layout of the third stage of vertical integration strategy of Renhe Pharmaceuticals, 2021 to the present "five-five" plan, this plan is still in progress, Renhe Pharmaceuticals "five-five" plan is: to continue to maintain the steady growth of the company's OTC industry on the basis of increasing to speed up the development of big health-related industries. The "Fifth Five-Year Plan" of Renhe Pharmaceuticals is: on the basis of continuing to maintain the steady growth of the OTC industry, Renhe Pharmaceuticals will increase and accelerate the development of large health-related industries, and ultimately realise the dual-wheel drive of the traditional OTC segment and the innovative large health segment. At this stage, Renhe Pharmaceuticals acquired 80% of the shares of each of Shenzhen Sanpu Natural Cosmetics Company Limited, Jiangxi Juhe E-commerce Company Limited, Jiangxi Juyoumei E-commerce Company Limited, Jiangxi Meizimiao Business Company Limited, Jiangxi Hehe Industry Company Limited, Jiangxi Renhe Great Health Science and Technology Company Limited, and Jiangxi Jinhengkang Biological Technology Company Limited, and together with Jiangxi Renhe Health Science and Technology Company Limited, Renhe Ltd, Renhe has 6 commercial companies and 3 industrial companies in the health products business segment, and the health products segment has been effectively supplemented and developed.

Renhe has achieved effective integration of the industrial chain through its vertical integration strategy. The development of Renhe Pharmaceuticals in recent years is still focusing on making two products bigger and improving the overall gross profit of the industry through structural reform and channel grouping.

C. Analysis of working capital-related indicators of Renhe Pharmaceuticals

This article analyses the metrics related to working capital of Renhe Pharmaceuticals mainly on the consolidated statements of Renhe Pharmaceuticals.

1.3 Analysis of working capital-related indicators in the first and second stages of Renhe Pharmaceuticals' vertical integration strategy

sports event	2006	2007	2008	2009
current asset	140,301,504.86	181,391,525.17	299,336,077.60	681,373,867.35
current liability	77,014,007.12	73,043,886.11	132,201,282.97	203,720,107.44
total liability	77,014,007.12	73,043,886.11	132,201,282.97	203,720,107.44
total assets	271,721,020.77	308,483,317.96	437,801,718.19	1,060,882,497.57
cash flow ratio	3.06	0.48	0.47	0.98
current ratio	1.82	2.48	2.26	3.34
Net working capital	63,287,497.74	108,347,639.06	167,134,794.63	477,653,759.91
Working capital allocation ratio	45.11%	59.73%	55.84%	70.10%
net profit	130,301,621.26	39,170,351.84	70,161,003.37	165,525,440.59
(Inventory turnover ratio (cost-based)	0.64	12.08	19.52	8.59
Accounts receivable turnover ratio	0.44	Reorganization of assets of Renhe Pharmaceuticals involving debt restructuring payments, excluded		

From the above relevant data, it can be seen: Renhe Pharmaceuticals current assets continue to improve, working capital allocation ratio is high, there is a long money for short-term use of the situation, Renhe Pharmaceuticals to take a conservative financing strategy, the enterprise can not repay the debt due to the risk is low, the enterprise business risk is low, the enterprise operation is more robust; high current ratio, short-term debt servicing ability, but there may be funds occupation, waste of funds situation.

The net profit of Renhe Pharmaceuticals showed an upward trend from 2007 to 12, and the profit declined from 12 to 13. The turnover rate of accounts receivable of Renhe Pharmaceuticals is also increasing and then decreasing, and the turnover rate of accounts receivable is also slowing down from '12 to '13, which may be the period that Renhe Pharmaceuticals is facing a more intense market competition and the decrease of sales, which needs to cause the attention of the enterprise.

sports event	2010	2011	2012	2013
current asset	1,054,390,316.62	1,105,251,802.95	1,124,114,182.91	1,267,058,303.55
current liability	566,132,843.37	460,680,449.63	363,759,143.86	370,645,917.66
total liability	566,132,843.37	460,680,449.63	382,800,772.01	389,863,610.76
total assets	1,478,181,458.58	1,602,789,529.14	2,094,865,990.67	2,328,717,164.66
cash flow ratio	0.23	0.36	0.51	0.58
current ratio	1.86	2.4	3.09	3.42
Net working capital	488,257,473.25	644,571,353.32	760,355,039.05	896,412,385.89
Working capital allocation ratio	46.31%	58.32%	67.64%	70.75%
net profit	225,695,824.51	305,812,883.34	309,014,124.46	216,002,056.49
(Inventory turnover ratio (cost-based)	7.36	8.95	6.15	4.42
Accounts receivable turnover ratio	20.49	21.91	18.04	11.87

Renhe Pharmaceuticals inventory turnover since 2008, basically a downward trend, Renhe Pharmaceuticals inventory turnover decline may be vertically integrated first stage: the initial integration of the industrial chain, Renhe Pharmaceuticals in the initial integration stage of a number of subsidiaries for resource integration, the introduction of advanced production technology and equipment, production capacity increases, hoarding a large amount of inventory; in 12 years -13 years, the decline in net profit, accounts receivable In 12-13 years, the decline in net profit, accounts receivable turnover rate will also affect the inventory turnover rate.

1.4 Analysis of working capital-related indicators in the third stage of Renhe Pharmaceuticals' vertical integration strategy

sports event	2020	2021	2022	2023
current asset	3,833,462,258.55	4,055,655,994.38	4,580,859,200.27	4,583,711,177.02
current liability	684,708,824.49	968,661,533.16	1,164,511,191.47	751,011,884.52
total liability	694,536,400.03	980,999,158.26	1,209,855,727.22	790,180,602.21
total assets	6,305,052,157.97	6,907,891,889.07	7,631,643,912.76	7,444,681,386.84
cash flow ratio	1.27	0.8	1.09	0.67
current ratio	5.6	4.19	3.93	6.1
Net working capital	3,148,753,434.06	3,086,994,461.22	3,416,348,008.80	3,832,699,292.50
Working capital allocation ratio	82.14%	76.12%	74.58%	83.62%
net profit	657,657,198.41	799,873,787.75	711,556,917.04	629,410,311.31
(Inventory turnover ratio (cost-based)	5.04	5.74	6.17	7
Accounts receivable turnover ratio	12.96	13.59	13.54	13.41

From the above data, it can be seen: Renhe Pharmaceuticals has good short-term debt servicing ability, Renhe Pharmaceuticals in general still adopts conservative financing strategy, the overall debt burden of the enterprise is relatively light, the company's operation is relatively sound, but too many current assets may occupy the company's resources, affecting the company's profitability, Renhe Pharmaceuticals has been declining since 2021, net profit, Renhe Pharmaceuticals should pay attention to the company's working capital structure; and since 2021, accounts receivable turnover ratio also shows a downward trend, which will reduce the efficiency of the use of corporate funds. working capital structure and optimise the capital structure in a timely manner; and since 2021, Renhe Pharmaceuticals' accounts receivable turnover ratio has also shown a downward trend, and the prolongation of accounts receivable turnover days will reduce the efficiency of the use of corporate funds.

Renhe Pharmaceuticals has shown a rising trend in inventory turnover ratio in recent years. Although the inventory turnover ratio has increased, it will also adversely affect the company's fund management if there is too much backlog of inventory or a large loss on inventory decline.

From the perspective of liabilities, in recent years, Renhe Pharmaceuticals liabilities since 2022, liabilities increased, 22 years of liabilities decreased, net profit has declined steadily since 21 years, liabilities grow too fast may increase the company's financial risk. The fast growth rate of assets and liabilities of Renhe Pharmaceuticals may be related to the acquisition of 7 big health companies in 2021, since then, Renhe Pharmaceuticals did not acquire other companies, and the liabilities of Renhe Pharmaceuticals decreased in 2023.

IV. Problems of working capital management in the context of vertical integration of Renhe Pharmaceuticals

1 Renhe Pharmaceuticals liquidity occupation is unreasonable, the asset structure needs to be optimised

Inefficient utilisation of working capital of Renhe Pharmaceuticals, part of the working capital of Renhe Pharmaceuticals has been left idle or used for non-core business, resulting in inefficient utilisation of capital, which has not effectively supported the development of the main business of the enterprise and may reduce the profitability of the Company.

2 Increased difficulty in inventory management

Integrated vertical integration involves more product lines and types of raw materials, thus increasing the difficulty of enterprise inventory management, and enterprises need to invest more human and material resources in inventory management to prevent inventory backlogs and obsolescence, which increase the operating costs of enterprises.

3 Lengthening of the capital chain and increased risk

The vertical integration of Renhe Pharmaceuticals involves upstream procurement of raw materials and downstream sales of products, which lengthens the enterprise's capital chain and involves more suppliers and customers. This not only increases the complexity of accounts receivable and accounts payable management, but also increases the risk of capital chain breakage. Problems with funds in any one link may affect the capital operation of the whole enterprise.

4 Decrease in accounts receivable turnover and efficiency of funds management

In recent years, Renhe Pharmaceuticals has experienced a declining accounts receivable turnover rate, slower accounts receivable paybacks, and longer ageing of accounts receivable, increasing the risk of bad debts and making the cost of corporate funds rise.

2 Response

2.1 Optimising the funding structure and improving the efficiency of funds utilisation

Renhe Pharmaceuticals has the situation of capital occupation and waste of funds, the enterprise should optimise the capital structure and improve the efficiency of capital utilisation. Compared with other enterprises in the same industry, Renhe Pharmaceuticals' investment in research and development is relatively insufficient, and it can appropriately increase its investment in research and development to improve its market competitiveness.

2.2 Strengthening inventory management

Renhe Pharmaceuticals should formulate a reasonable inventory management strategy according to the market demand and sales plan of the enterprise to avoid the backlog of inventory, which will take up the funds of the enterprise and affect the profit of the enterprise.

2.3 Improving risk control mechanisms

Renhe Pharmaceuticals, whether it is the lengthening of the capital chain after the implementation of the integration strategy, or the decline in the turnover rate of accounts receivable, the current liabilities account for a high proportion of the problem, need to improve the enterprise risk control mechanism. It is necessary to strictly control the scale of liabilities and ensure that the growth rate of liabilities matches profitability. Strengthen cooperation with financial institutions to reduce financing costs. Establishment of a sound internal control system: Regular self-inspection and auditing of the fund management process to ensure compliance and security of fund flows. Strengthen the internal approval process and monitoring mechanism, and clarify the authority and responsibility for fund management.

2.4 Strengthening accounts receivable management

To strengthen accounts receivable management, Renhe Pharmaceuticals should establish co-operation with the Ministry of Commerce and communicate with pharmaceutical commercial companies or customers on a regular basis to obtain timely and accurate information on accounts receivable. A red line area should be established for accounts receivable exceeding the billing period, and the relevant system should be refined to ensure timely collection. Further assess the credit status of customers, formulate reasonable credit policies and reduce bad debt provisions.

3 Concluding remarks

The current increasingly fierce market competition and changes in the industry environment, the vertical integration strategy is extremely important to Renhe Pharmaceuticals. By continuously improving the working capital management system, it is conducive to Renhe Pharmaceuticals to improve the utilisation rate of capital, which will help Renhe Pharmaceuticals to better cope with the market challenges, and help Renhe Pharmaceuticals to move steadily into the future. At the same time, Renhe Pharmaceuticals should also maintain a keen market insight and flexibly adjust its strategy to cope with the risks and uncertainties that may arise at any time. In conclusion, while the vertical integration strategy brings many benefits to enterprises, it may also put higher demands on their working capital.

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