Research on the Application of Corporate Sustainable Growth Model from the Perspective of Financial Strategy--Take Kelun Pharmaceutical as an Example

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Abstract: Pursuing sustainable growth is the management goal of modern corporate enterprises. On the basis of using Higgins' sustainable growth model from the perspective of financial strategy, aiming at the defects of the model, this paper puts forward the method of considering the combination of free cash flow and the limit of industry financial resources to formulate the sustainable growth goal of the company, hoping to contribute to the development of the company.

1. Introduction

With the development of social economy and the gradual improvement of market economy system, the development of modern corporate system is becoming more and more mature. Company shareholders entrust managers to operate, and according to the amount of profits created by managers for the company, they can create wealth for shareholders and evaluate the performance of management. Senior managers of many companies believe that to achieve the above goals entrusted by shareholders, it is necessary to maximize the growth of enterprises. However, from the financial point of view, growth needs to consume the financial resources of enterprises, and excessive growth may soon exhaust the financial resources of enterprises, which will cause the company to fall into financial crisis or even go bankrupt. Similarly, if the company can't make full use of its own financial resources, its slow growth will be widened by competitors and become the prey of keen acquirers in the fierce market competition. Obviously, the problem of company growth is a difficult problem in financial management. Can enterprises keep sustainable growth and flourish? This paper first discusses the financial resources and growth mode, and makes a brief comment on the advantages and disadvantages of four sustainable growth models, and then analyzes the growth ability of Kelun Pharmaceutical by using Higgins sustainable growth model. In view of the shortcomings of Higgins model, which is too strict and out of line with the actual operating conditions of the company, this paper puts forward the method of combining the free cash flow of the company and considering the limit of financial resources of the industry to set the sustainable growth rate of the company. Finally, some suggestions are put forward for the sustainable growth of Kelun Pharmaceutical.

2. Financial Resources and Growth Mode

Companies should seek development with growth. The financial meaning of growth is capital growth. When sales increase, it usually causes the increase of accounts receivable, inventory, fixed assets, etc., which needs to consume the company's financial resources. The faster the growth, the more financial resources it consumes.

1). Completely rely on the growth of internal financial resources of the company

Sales growth depends entirely on the accumulation of funds within the company. Internal capital is the difference between net profit and dividends distributed to shareholders, also known as retained earnings. The growth rate achieved entirely by internal financial resources is called internal growth rate. For those companies that are unwilling or unable to borrow money, they mainly rely on this growth. The advantage of this growth mode is that the financial risk is extremely low, but the

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disadvantage is that only limited internal financial resources will miss the opportunity of rapid growth.

2). Mainly rely on the growth of external financial resources of the company

External financial resources, including shareholder investment and foreign debt, can also achieve enterprise growth. The advantage is that relying on external funds can make enterprises grow rapidly. Disadvantages make it unsustainable. Increasing debt will increase the financial risk of enterprises, and the high debt ratio will make enterprises lose their ability to raise funds; Shareholders' investment will disperse the company's control rights, dilute the earnings per share, and cause the stock price to fall. Moreover, shareholders' investment also has opportunity costs.

3). Balanced growth without exhausting the company's financial resources (sustainable growth)

Balanced growth, also known as sustainable growth, refers to the sales growth rate achieved by keeping the current financial structure unchanged and increasing liabilities according to the growth ratio of shareholders' equity. This kind of growth will not exhaust the financial resources of enterprises, and it is a sustainable growth rate.

3. Brief Comment on Sustainable Growth Model

Since Professor Higgins, an American financial expert, put forward the sustainable growth model in 1977, many models have been developed by academic experts. Among them, two types and four models based on different calculation calibers are more influential in the industry. One is Higgins model and Van Horn model based on statement accounting. The other is Lababort model and Corey model based on cash flow. The following two types of sustainable growth models will be compared.

3.1 Sustainable Growth Model Based on Statement Accounting

1). Higgins sustainable growth model

Higgins' sustainable growth model is based on the assumption that the company will not issue new shares without changing the company's current business strategy and financial strategy, and the SGR of the company's sustainable growth rate is derived by using the accounting balance formula-increase in assets = increase in shareholders' equity+increase in liabilities.

SGR=Operating net profit rate × total asset turnover rate × equity multiplier × retained earnings rate=PXQXRXL

Among them, the operating net profit rate reflects the profitability of the company's commodities, and the company can improve the profitability of the enterprise's commodities only by continuously increasing the sales revenue and trying to reduce the cost. It reflects the management of business income, business cost, period expense and profit, and embodies the company's business strategy.

The turnover rate of total assets reflects the efficiency of a company's asset turnover. The faster the turnover, the more income a certain asset will earn, and the faster the income will grow. It reflects the company's working capital management and fixed assets management, and embodies the company's business strategy.

The equity multiplier reflects the degree of debt in the capital structure of an enterprise. The greater the equity multiplier, the higher the debt ratio of the company and the greater the financial risk. It reflects the company's debt financing and shareholders' equity financing management, and the external financial resources reflect the company's financial strategy.

Retained rate of return reflects the proportion of the net profit obtained by the company in the current period that stays in the company after distributing dividends to shareholders. It reflects the company's dividend policy and internal financial resources, and reflects the company's financial strategy.

The advantage of this model is that the financial indicators are valued in the financial statements, and it is easy to obtain financial data. However, the assumed conditions are too strict, which may be inconsistent with the actual operating conditions of the enterprise, and the cash flow of the company is not considered.

2).Van Horne's sustainable growth model

$SGR = \frac{\mathrm{P\times Q\times R\times L}}{1-\mathrm{P\times Q\times R\times L}}$(steady-state model)

Compared with Higgins' model, Van Horn's sustainable growth model is also derived from the accounting balance formula. The sustainable growth rate is affected by four financial indicators: P, Q, R and L, but the restriction of “not issuing new shares” is relaxed on the assumption condition. The steady-state and dynamic models are calculated respectively (omitted), and the sustainable growth rate is set as the target value. The company adjusts the financial resources to match the growth of the enterprise accordingly.

3.2 Sustainable Growth Model Based on Cash Flow

1). Lababort's sustainable growth model

$$SGR = \frac{\mathrm{R\times P\times L}}{\frac{CE+WC}{S_0} - R\times P\times L}$$

Numerical meaning: CE is the increase of capital expenditure, WC is the increase of working capital, and S_0 is the initial sales.

2). Corey's sustainable growth model

$$SGR = \frac{(\mathrm{EBIT-I})\times(1-\mathrm{t})\times \mathrm{R}\times \mathrm{L}}{NA_0 - (EBIT-I)\times(1-t)\times R\times L}$$

Numerical meaning: NA_0 is initial net assets, EBIT is earnings before interest and tax, I is interest expense, and t is income tax rate.

Both models hold that the sustainable growth rate is restricted by the company's cash flow, which is the maximum allowable growth rate of the company when the cash flow is zero. The difference is that Lababort model introduces relative index, while Corey model uses absolute index. Because there are many and complex factors affecting cash flow, and the calculation results fluctuate greatly, the operability of the two models is poor.

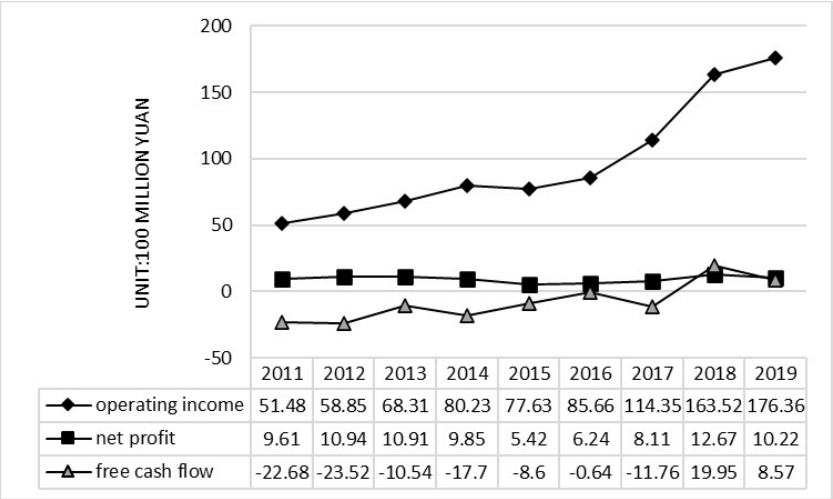
4. Analysis on Sustainable Growth Ability of Kelun Pharmaceutical

Sichuan Kelun Pharmaceutical Co., Ltd. (hereinafter referred to as Kelun Pharmaceutical Co., Ltd.), established in 2002 and headquartered in Chengdu, Sichuan, was successfully listed on Shenzhen Stock Exchange in 2010. The company is mainly engaged in two major product series: infusion products and antibiotics. The infusion products are in the leading position in the industry in terms of quality and innovation, and the antibiotic products have completed the whole industrial chain layout and have strong competitive advantages.

The following is an analysis of the financial resources and growth mode of Kelun Pharmaceutical, and then using Higgins sustainable growth model to compare the sustainable growth rate with the actual growth rate of the company, and combining the free cash flow and the financial resources limit of the industry, to make suggestions for the company to formulate reasonable growth rate.

4.1 Financial Resources and Growth Mode of Kelun Pharmaceutical

Selecting the financial data of Kelun Pharmaceutical from 2011 to 2019 after its listing in 2010, this paper analyzes the financial resources and growth mode of the company.



	2011	2012	2013	2014	2015	2016	2017	2018	2019
operating income	51.48	58.85	68.31	80.23	77.63	85.66	114.35	163.52	176.36
net profit	9.61	10.94	10.91	9.85	5.42	6.24	8.11	12.67	10.22
free cash flow	-22.68	-23.52	-10.54	-17.7	-8.6	-0.64	-11.76	19.95	8.57

Fig.1 Trends of Operating Income, Net Profit and Free Cash Flow of Kelun Pharmaceutical from 2011 to 2019

Figure 1 shows that the operating income of Kelun Pharmaceutical Company increased rapidly from 5.148 billion yuan in 2011 to 17.636 billion yuan in 2019, an increase of 2.4 times. However, the rapid growth of income has not brought about the synchronous growth of net profit, and obviously there are problems in the efficiency of growth. One-sided pursuit of expanding market share and maximizing income growth will not bring wealth growth to shareholders if the net profit cannot increase synchronously. Is extensive growth. The rapid growth of income will consume the financial resources of the company. If the financial resources needed for growth cannot be obtained, the growth will be unsustainable. We can see the shortage of the company's financial funds from the free cash flow-the cash generated by business activities minus the cash paid by investment. From 2011 to 2017, the free cash flow was negative, indicating the shortage of funds in these years, with a total shortage of 9.544 billion yuan. Does the shortage of funds depend on internal financing or external financing? We can take a look at the changes in the asset-liability ratio of Kelun Pharmaceutical from 2011 to 2019. See figure 2.

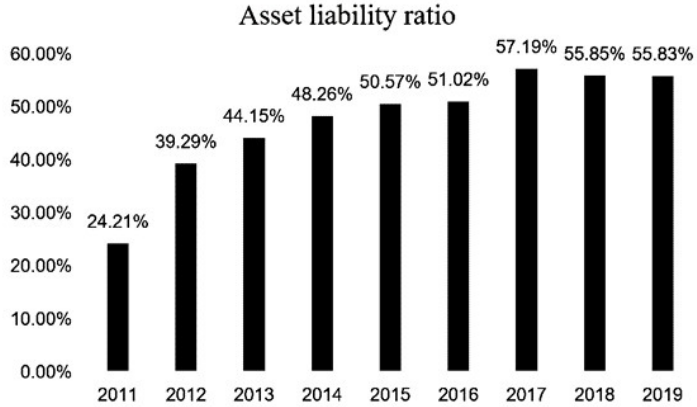


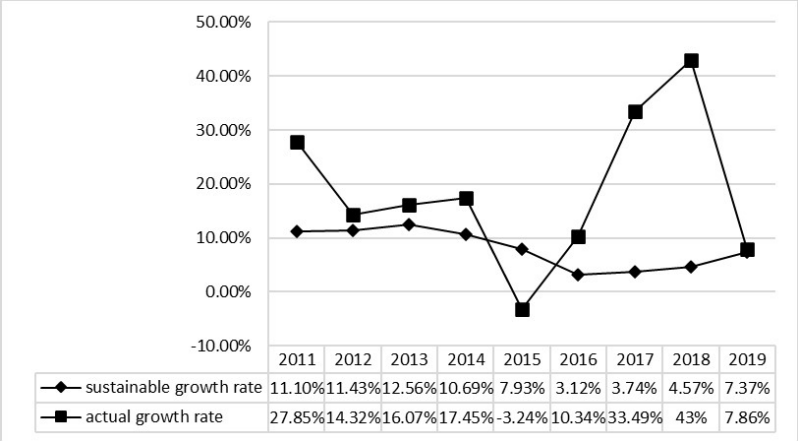
Fig.2 Trend of Asset-Liability Ratio of Kelun Pharmaceutical from 2011 to 2019

As shown in Figure 2, the financial resource gap needed by Kelun Pharmaceutical to support its high income growth is mainly supported by debt external financing. The debt ratio increased from 24.21% in 2011 to 57.19% in 2017. In the following two years, due to the positive free cash flow, there was no shortage of funds, and the debt ratio declined slightly. In the pharmaceutical manufacturing industry where Kelun Pharmaceutical is located, due to the risk of R&D innovation failure and product quality risk, the industry cannot bear large risks, and the debt ratio of enterprises in the industry is generally low, with an industry average of 34%. The debt ratio of Kelun Pharmaceutical has far exceeded the industry average, and there is a big financial risk. As a

pharmaceutical manufacturing industry, Kelun Pharmaceutical's growth supported by such a high debt ratio is obviously unsustainable.

4.2 Comparative Analysis of Sustainable Growth Rate and Actual Growth Rate of Companies

The sustainable growth rate of Kelun Pharmaceutical from 2011 to 2019 was calculated by Higgins sustainable growth model and compared with the actual growth rate of the company. See Figure 3.



	2011	2012	2013	2014	2015	2016	2017	2018	2019
sustainable growth rate	11.10%	11.43%	12.56%	10.69%	7.93%	3.12%	3.74%	4.57%	7.37%
actual growth rate	27.85%	14.32%	16.07%	17.45%	-3.24%	10.34%	33.49%	43%	7.86%

Fig.3 Comparison between the Trend of Sustainable Growth Rate and Actual Growth Rate of Kelun Pharmaceutical from 2011 to 2019

Figure 3 shows that, except that in 2015, due to the oversupply of some products in the market, the price dropped, and some backward production capacity was eliminated, resulting in a decline in revenue, and the increase in management expenses, research and development expenses, interest expenses, etc. caused by scale expansion, resulting in the actual growth rate being lower than the sustainable growth rate, the actual growth rate of the company in each year was higher than the sustainable growth rate. However, the real growth rate cannot always be higher than the sustainable growth rate, because the company's financial resources are limited. Kelun Pharmaceutical seized the opportunity of the rapid development of the pharmaceutical industry, mainly relying on external financing of liabilities to make up for the shortage of financial resources caused by high income growth, and rapidly expanded its market share and gained industry opportunities. However, as can be seen from Figure 1, the extensive rapid growth of enterprises has not brought about the synchronous growth of benefits, but also consumed the company's financial resources too quickly, and the debt ratio far higher than the industry average has brought greater financial risks and debt interest burden to the company. If you can't continue to get loans in the future, the shortage of financial resources will limit the growth rate of enterprises. Moreover, Figure 1 shows that the free cash flows in 2018 and 2019 are 1.995 billion and 857 million respectively, and there is a surplus rather than a shortage of cash. It shows that the resources obtained from the rapid pursuit of growth and expansion of market share in the early stage can not be fully utilized, resulting in idle waste of financial resources. Idle financial resources will reduce the real growth rate. In 2019, the actual growth rate dropped from 43% to 7.86%, which is very close to the sustainable growth rate of 7.37%.

5. Conclusions and Suggestions

5.1 Conclusion

The growth of the company is not to pursue maximization. Limited by financial resources, the actual growth rate of the company always fluctuates around the sustainable growth rate and is restricted by the sustainable growth rate. Kelun Pharmaceutical Co., Ltd. should reasonably formulate its sales growth rate according to its own financial resources and the growth allowed by the market, combined with the free cash flow situation, considering the industry debt ratio as the

limit of external financing, and combined with the sustainable growth rate calculated by Higgins' sustainable growth model. Make full use of its own financial resources and pursue the sustainable growth of the company. In view of the fact that the company's debt ratio is much higher than the industry average and its financial resources are idle after 2018, the company may consider appropriately reducing the actual growth rate to make full use of financial resources and change from extensive operation to intensive operation.

5.2 Suggestions

This paper selects the data of four factors affecting the sustainable growth rate of Kelun Pharmaceutical from 2011 to 2019, and puts forward some suggestions from the aspects of business strategy and financial strategy.

Table 1 Factors Affecting Sustainable Growth Rate of Kelun Pharmaceutical in Higgins Model from 2011 to 2019

Projects	2011	2012	2013	2014	2015	2016	2017	2018	2019
Operating net profit rate	18.67%	18.58%	15.98%	12.27%	6.98%	7.29%	7.09%	7.75%	5.79%
Total asset turnover	0.53	0.46	0.42	0.41	0.35	0.37	0.44	0.57	0.58
Equity multiplier	1.32	1.65	1.79	1.93	2.02	2.04	2.33	2.26	2.26
Retained yield	87.51%	89.03%	89.01%	81.71%	63.25%	68%	62.89%	76.33%	41%

1). Adjust the company's business strategy

(1) Improve the profitability of goods

The previous analysis shows that the excessive and extensive growth of Kelun Pharmaceutical Company has not brought about the synchronous growth of profits. This can be clearly shown from Table 1 that the operating net profit rate reflecting the profitability of commodities has dropped from 18.67% in 2011 to 5.79% in 2019. By analyzing the company's financial report data, the gross profit margin of the company's two pillar products, namely infusion and antibiotic products, has been increasing. Among them, the gross profit margin of infusion products increased from 45% in 2011 to 71% in 2019, and that of antibiotics products increased from 23% in 2011 to 46% in 2019. The main reasons for the decline of the company's operating net profit rate were the debt interest expenses supporting the rapid growth of sales, the large increase of the company's strategic transformation R&D expenditure, the rapid growth of marketing expenses and the large increase of management expenses caused by the rapid growth of scale. It is suggested that the company can appropriately reduce the growth rate and seek high-quality development. Change the product structure, intensify research and development, innovate products continuously, implement high-quality differentiated competition, and further improve the gross profit margin of products. Reduce the debt ratio, reduce financial risks and reduce the interest burden of enterprises. Strengthen the management of human, financial and material resources, improve management efficiency and reduce management costs.

(2) Improve the efficiency of asset management

Table 1 show that the turnover rate of total assets first drops and then rises. After 2015, the company strengthened the management of assets and gradually improved the efficiency of asset turnover. Companies should further strengthen the management of working capital such as accounts receivable and inventory, and further improve the efficiency of asset turnover.

2). Adjust the company's financial strategy

Table 1 the equity multiplier has increased rapidly, and the liabilities in the capital structure have increased too fast. In view of the fact that the debt ratio caused by the company's rapid growth is much higher than the industry average level, and considering the reality of excess free cash flow in 2018, the company may consider repaying some bank loans without better investment projects, so as to reduce the company's debt ratio, financial risks and interest burden. Reduce retained earnings rate and increase dividend payout rate to make full use of financial resources.

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