

Research on the Profitability Analysis and Promotion Strategy of Yunnan Baiyao

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Abstract: In recent years, due to the aging of the population, people's health awareness is gradually improving, and the development of the pharmaceutical manufacturing industry has also been widely concerned by the people. Combined on the DuPont analysis system, comparative analysis and the current situation of Yunnan Baiyao, this paper analyzed the profitability of Yunnan Baiyao, found the deficiencies in its operation and management, and put forward relevant suggestions and strategies.

Keywords: Profitability; DuPont analysis; Yunnan Baiyao; promotion strategy.

1. Introduction

At present, most domestic scholars conduct financial analysis of Yunnan Baiyao based on Harvard analysis system and radar map analysis system, while DuPont analysis system, as an important index to study the profitability of enterprises, is not much used in the financial analysis of Yunnan Baiyao. The DuPont analysis system was proposed by scholars Pierre Du Pont and Donald son Brown (1919). The core financial index of the system is return on equity, which is divided into three indexes: net sales interest rate, total asset turnover rate and equity multiplier [1]. Zvi Bodie (2008) brought the financial synthesis into the DuPont analysis [2]. Mc Gowan J (2018) believes that the DuPont analysis system can better test and evaluate the profitability of listed companies, and can also well predict the future prospects of the company [3]. In this paper, we choose Yunnan Baiyao, which is quite representative of the pharmaceutical industry, as the research object, compare it with DuPont analysis method, and make horizontal comparison with the same industry to find out the

defects in the profitability of Yunnan Baiyao, and put forward enlightening strategies and suggestions in order to promote the healthy and rapid development of Yunnan Baiyao.

2. Analysis of the Profitability Status of Yunnan Baiyao Based on Dupont Analysis Method

2.1. The concept of the DuPont analysis method

Dupont analysis system from the perspective of financial analysis of the enterprise profit index, in dupont analysis architecture, return on equity as the core index, can represent the equity multiplier and the total assets of net interest rate, and total assets net interest rate can be expressed as sales net interest rate and total assets turnover product, thus, can reflect the financial situation from multiple aspects, the economic effect of the enterprise to various comprehensive system analysis. The DuPont analysis architecture diagram is shown in Figure 1:

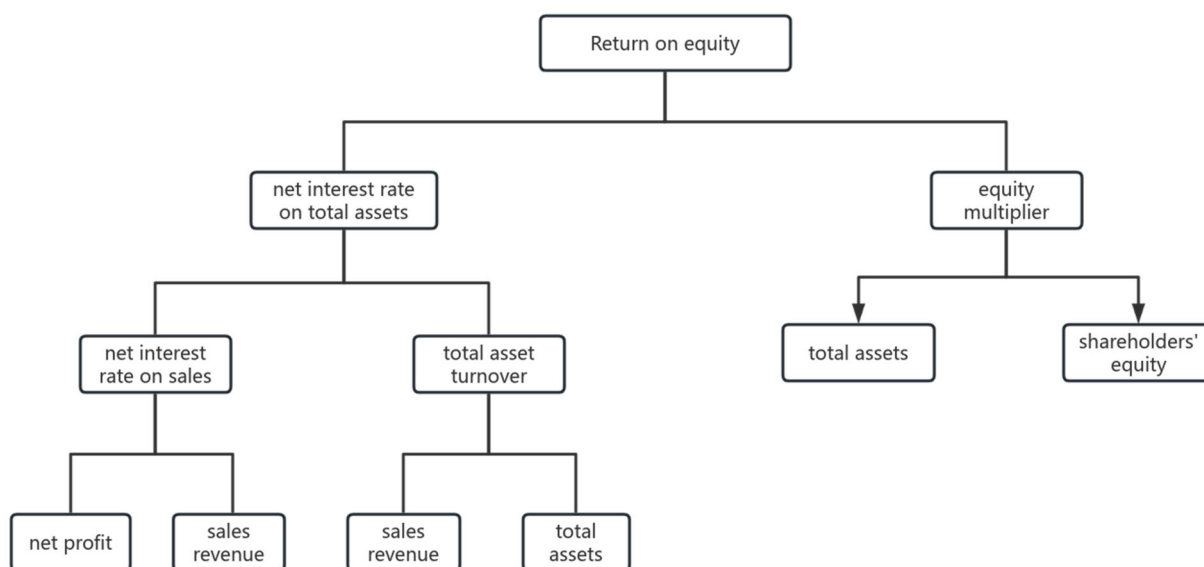


Figure 1. The DuPont analysis architecture

2.2. Overview of Yunnan Baiyao

Yunnan Baiyao, as a century-old Chinese brand, is one of the earliest state-owned enterprises. Since the reform of modern enterprise system by state-owned enterprise units, Yunnan Baiyao Group Co., Ltd. was officially established on May 3, 1993, and issued shares to the public for the first time at the end of the same year, becoming the first listed company in Yunnan Province. Yunnan Baiyao is committed to the research of drugs, mainly Yunnan Baiyao series, a total of nearly 100 products, sold to the mainland, Hong Kong, Macao, Southeast Asia and other places, and gradually explore the market in East Asia, Europe and the United States and other regions. On the basis of drug research, it continues to expand business categories and gradually achieve diversified development.

2.3. Financial analysis of Yunnan Baiyao was conducted by the DuPont analysis method

2.3.1. Longitudinal comparative analysis of profitability

The core index under the DuPont analysis method is the return on equity, which reflects the ability of the enterprise to use capital to obtain net income. Enterprise investors usually use this index to analyze the profitability of the enterprise. Through DuPont analysis, we can find that sales net interest rate, equity multiplier and total asset turnover rate are the driving factors of return on equity. Determine the influence of each driver on the core index. The following paper will split each index of Yunnan Baiyao in the past five years one by one, so as to find out the key factors affecting the profitability of enterprises. The specific data are shown in Table 1:

Table 1. Breakdown table of return on equity

a particular year	In 2018,	In 2019,	In 2020,	In 2021,	In 2022,
Return on equity	17.23%	14.50%	15.03%	7.11%	7.41%
Net interest rate on sales	12.32%	14.07%	16.83%	7.69%	7.78%
turnover of total capital	0.92	0.74	0.62	0.68	0.69
equity multiplier	1.52	1.30	1.44	1.36	1.38

According to Table 1, the return on equity of Yunnan Baiyao fluctuated. After the decline in 2019, it increased slightly in 2020, indicating that although the profitability of Yunnan Baiyao fluctuated in the three years, it changed little. By 2021, the return on equity showed a precipitous decline, showing a slight increase in 2022. In order to explore the root cause of the cliff decline of Yunnan Baiyao in 2021, this paper will use the serial substitution method to find the impact of each factor on the return on equity.

Return on equity = net interest rate of sales total asset turnover equity multiplier

In 2020: $15.03\% = 16.83\% \times 0.62 \times 1.44$

In 2021: $7.11\% = 7.69\% \times 0.68 \times 1.36$

Change in return on equity = $7.11\% - 15.03\% = -7.92\%$

According to the above calculation, the net interest rate on sales fell from 16.83% to 7.69% in 2021, leading to a precipitous decline in the return on equity in that year. Next, based on the data of Yunnan Baiyao in 2021, this paper uses the serial substitution method to make a specific analysis of its various factors.

Return on equity in 2020: $16.83\% \times 0.62 \times 1.44 = 15.03\%$

Net profit margin on alternative sales: $7.69\% \times 0.62 \times 1.44 = 6.87\%$

Alternative total asset turnover rate: $7.69\% \times 0.68 \times 1.44 = 7.53\%$

Alternative interest multiplier: $7.69\% \times 0.68 \times 1.36 = 7.11\%$

In 2021, the impact of the change of net sales rate on the return on equity is $6.87\% - 15.03\% = -8.16\%$, the impact of the change of total asset turnover rate is $7.53\% - 6.87\% = 0.66\%$, and the impact of the change of equity multiplier is $7.11\% - 7.53\% = -0.42\%$.

It can be concluded from the decomposition that the net interest rate on sales was reduced by 9.14%, resulting in an 8.16% decrease, while the turnover of total assets led to a

weak increase in the return on equity, but both were offset by the net interest rate on sales and the equity multiplier. It can be concluded that the decline of the net interest rate of Yunnan Baiyao is the main reason for the decline of its return on equity. According to the annual statement of Yunnan Baiyao in 2021, the main reason for the increase in operating income but the no increase in net profit is the impact of investment income. Yunnan Baiyao in 2021 fair value change profit and loss in 2021 decreased by 4.169 billion yuan compared with the previous period, a year-on-year decline of 186.12%. In addition, the operating cost in 2021 exceeded the growth rate of operating revenue, among which the most obvious increase was research and development expenses, with a year-on-year increase of 83%. According to the annual report in 2021, it was learned that Yunnan Baiyao Company added new special medical food R & D registration and skin care products research & development projects, which led to the increase of R & D expenses. This reflects that Yunnan Baiyao Company failed not effectively control the research and development cost in technological innovation, resulting in the low growth rate of net profit margin.

2.3.2. Horizontal comparative analysis of profitability

Above for Yunnan baiyao nearly five years of the longitudinal comparative analysis, but for its position in the industry is not clear, in order to have a more comprehensive understanding of the profitability of Yunnan baiyao, this paper will through the horizontal comparison of Yunnan baiyao and several companies in the industry financial indicators to study their profitability in the industry position, in order to make the indicators are comparable, this paper mainly selects the same industry competitive tongrentang, CRC Sanjiu and sunflower pharmaceutical, as a comparison. The relevant indicators are shown in the following table below.

Table 2. Analysis of Yunnan Baiyao and its main competitor DuPont

company	metric	2018	2019	2020	2021	2022
Yunnan Baiyao	Return on equity	17.23%	14.50%	15.03%	7.11%	7.41%
Tongrentang		12.83%	10.34%	10.82%	11.19%	12.71%
China Resources sanjiu		13.86%	16.81%	11.64%	13.98%	14.99%
Sunflower pharmaceutical		15.29%	18.44%	18.20%	19.43%	21.73%
Yunnan Baiyao	Net interest rate on sales	12.32%	14.07%	16.83%	7.69%	7.78%
Tongrentang		12.83%	11.76%	12.60%	12.95%	14.31%
China Resources sanjiu		10.98%	14.55%	11.86%	13.58%	13.81%
Sunflower pharmaceutical		13.90%	14.53%	17.91%	17.09%	19.34%
Yunnan Baiyao	turnover of total capital	0.92	0.74	0.62	0.68	0.69
Tongrentang		0.73	0.64	0.60	0.62	0.59
China Resources sanjiu		0.78	0.77	0.65	0.66	0.70
Sunflower pharmaceutical		0.81	0.84	0.66	0.83	0.80
Yunnan Baiyao	equity multiplier	1.52	1.3	1.44	1.36	1.38
Tongrentang		1.41	1.43	1.4	1.5	1.47
China Resources sanjiu		1.61	1.56	1.57	1.55	1.55
Sunflower pharmaceutical		1.47	1.55	1.51	1.43	1.58

(1) Comparative analysis of return on equity

It can also be clearly seen from Table 2 that the return on equity of Yunnan Baiyao has been at the bottom of these enterprises in the past two years, and there is a big gap with other enterprises. It is also worth noting that Yunnan baiyao return on equity trend and other enterprises are different, in recent years several other companies return on net assets belong to the rising trend, and Yunnan baiyao overall downward trend, in 2021, is in a gentle state, mainly due to the company of all kinds of product profit margins and operating cost growth is greater than the operating income. It can also be seen from Table 2 that the change range of ROE of Yunnan Baiyao is significantly greater than that of several other enterprises, indicating that Yunnan Baiyao not only's ability to use its own capital is not outstanding, but also is not stable in comparison. In 2021, Yunnan Baiyao's fair value income decreased by 439.05% year on year, which also aggravated the decline of return on equity. Through horizontal comparison, it shows that there is some room for progress in the profitability of Yunnan Baiyao.

(2) Comparative analysis of sales net interest rate

As can be seen from table 2, Yunnan baiyao in a few years ago sales net interest rate has remained in a high level, and in the past two years of sales net interest rate are the lowest value of several companies, the precipice fell, and the decline in its return on equity has a strong correlation, the sales net interest rate and several other companies have a larger gap, and the biggest gap is sunflower pharmaceutical, fully for 11.56%. A few years ago, the reason why Yunnan Baiyao can become the industry leader and its own higher sales net interest rate also has a very direct relationship. And Yunnan baiyao toward diversified development in recent years, began to involve medical beauty, hotel, medical food research and development, and other new business, hope to create new growth point, but also because of this, brought more risk, 2021 sales net interest rate cliff type decline is good, according to the related statements, 2021 due to the failure of

securities investment, Yunnan baiyao fair value changes in profit and loss of 1.929 billion yuan, and year on year earnings of 2.24 billion yuan. Affected by investment returns, lead to Yunnan baiyao in the revenue of rising, sales net interest rate fell, increase not increase, also well illustrates the Yunnan baiyao in technology research and development, marketing strategy, product production and strategic focus and other aspects did not effective control, eventually lead to Yunnan baiyao index in the same industry.

(3) Comparative analysis of the total asset turnover rate

It can be seen from Table 2 that the total asset turnover rate of Yunnan Baiyao was still at the top level of the industry in 2018, but after several years of fluctuations, there is a certain gap with Sunflower Pharmaceutical. In general, the asset operation efficiency of Yunnan Baiyao does not drag down its return on equity, but the efficiency of the company's asset turnover operation does not have the advantages of the same industry, which will also lead to the lack of profitability. In order to make a deeper analysis, this paper further analyzes each index, among which the most important is the inventory turnover rate and accounts receivable turnover rate.

As can be seen from Figure 2, the comparison of inventory turnover rate. Generally speaking, the inventory turnover rate of Yunnan Baiyao has been gradually improving in recent years, from 1.99 in 2018 to 3.28 in 2022. In 2022, it is only weaker than China Resources Sanjiu among these four companies. In the previous analysis of total asset turnover, Sunflower Pharmaceutical has always been the most efficient, so the inventory turnover of Yunnan Baiyao was always lower than that of Sunflower Pharmaceutical in 2018 to 2021. In 2022, the inventory turnover of Yunnan Baiyao was slightly higher than that of Sunflower Pharmaceutical, but there was still a certain gap with China Resources Sanjiu, 0.18 times. Yunnan Baiyao's sales recovery capacity and inventory management have been improving in recent years, which echoes the company's asset-light strategy. In general, Yunnan Baiyao is still in a high position in these four enterprises.

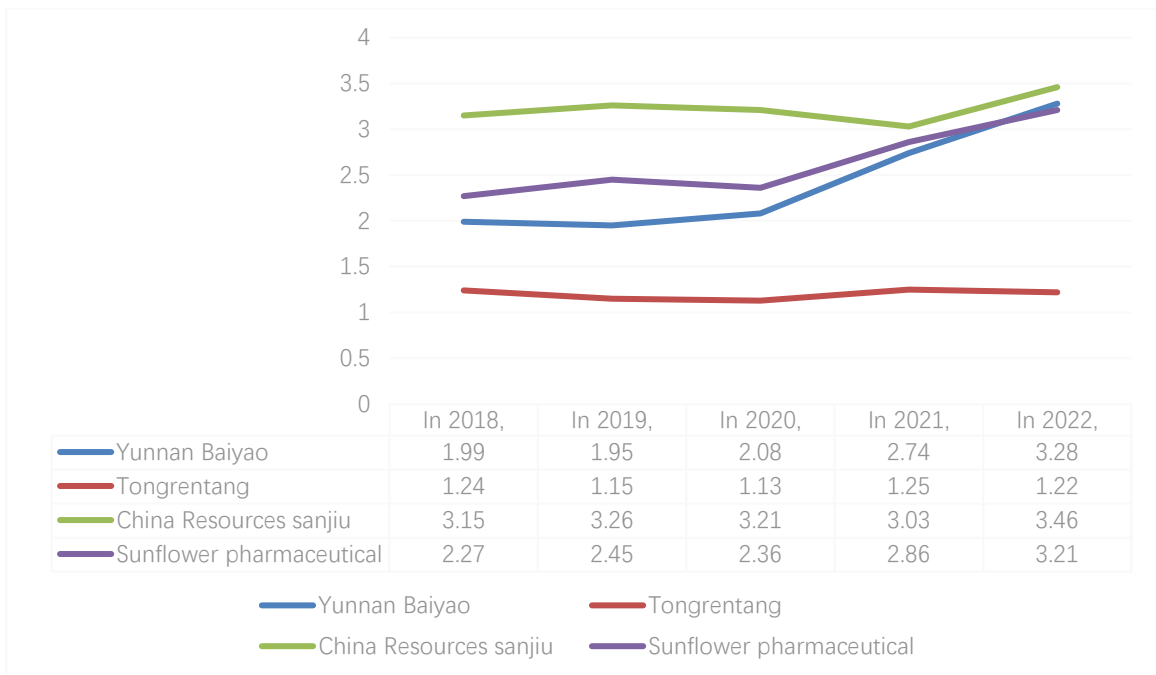


Figure 2. Comparative analysis chart of inventory turnover rate and major competitors

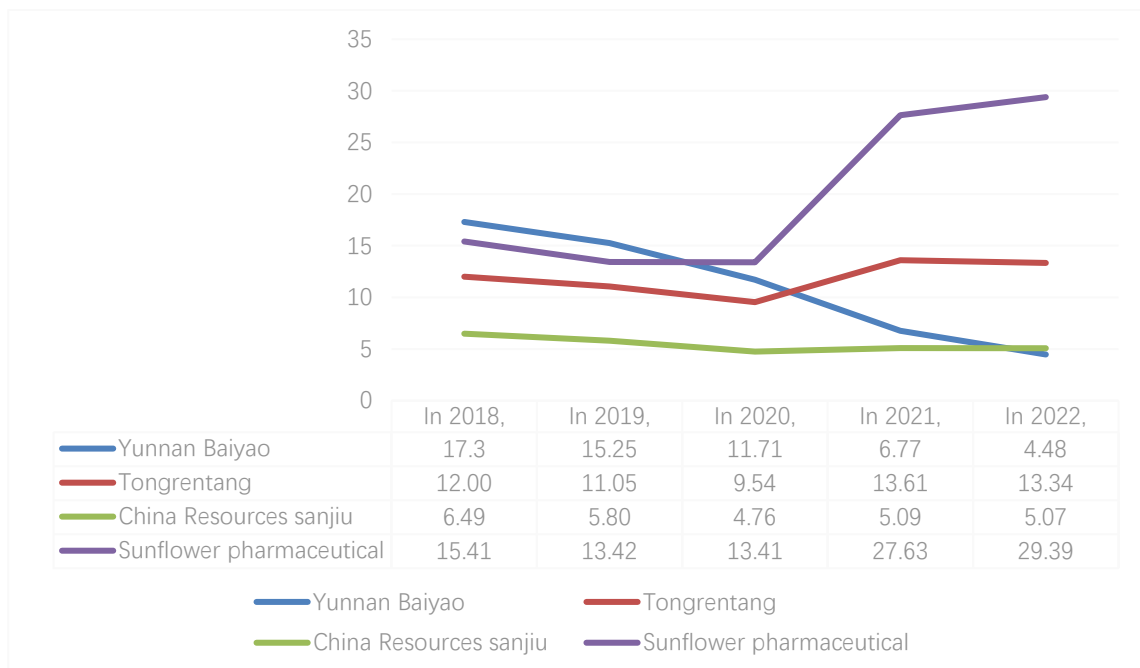


Figure 3. Comparative analysis chart of accounts receivable turnover rate and main competitors

Accounts receivable turnover rate is also an important index to measure the operating capacity of an enterprise. The faster the collection speed of receivables, the smaller the impact on the capital operation of the enterprise. However, it should not blindly pursue shortening the average collection period and set excessively strict payment conditions, which may hinder business transactions. As can be seen from Figure 3, Sunflower Pharmaceutical is still with the best receivables turnover speed among the four enterprises, while Yunnan Baiyao has been in a downward trend from 2018 to 2022, from the first of the four enterprises to the bottom, and the receivables management is even lower than that of the last year. The situation is very serious.

As you can see, Yunnan baiyao total assets turnover is low more subject to accounts receivable turnover, in recent years, Yunnan baiyao with more loose credit policy, hope to use

preferential payment terms to expand the business to occupy the market, but ignored the receivables recovery work, which may cause the backlog of accounts receivable, accounts receivable turnover is also decreasing, increase the risk of bad debts, causing financial crisis. Overall, the indicator is not optimistic.

(4) Comparative analysis of the equity multiplier

Can be seen from table 2 of Yunnan Baiyao equity multiplier has almost been in the lowest value of the four companies, no good play liabilities to bring financial leverage, in general, the greater the interests of the enterprise multiplier, so in all the capital, the proportion of enterprises operating in liabilities, the greater the leverage effect to the enterprise. However, the pharmaceutical manufacturing industry is a typical light debt industry. Yunnan Baiyao is low among these four enterprises, indicating a large proportion of shareholders'

equity, small debt repayment risk and financial risk, but also bring the situation of low leverage utilization rate.

3. Factors Influencing the Profitability of Yunnan Baiyao

3.1. High cost and expense

Yunnan baiyao sales in 2021 net interest rate almost halved, through the enterprise annual report found that this year revenue is still increasing, but the net profit increase is low, from the above analysis is the cost control is not enough, new medical food research and development registration and skin care products research and development projects led to the research and development costs, great compression profit space, and in 2021 suffered investment returns fell, under multiple factors, led to the enterprise sales net interest rate cliffs fell.

3.2. Investment strategy is too aggressive

Yunnan baiyao overall risk resistance ability is relatively not strong, under the background of performance growth is not strong, management choose aggressive strategy, through the fry as their important market development direction, and then bring too large financial risk, 2021 years ago three quarters fry cumulative losses of 1.5 billion, loss in fair value fell 1.929 billion yuan, synchronous down 186.12 percentage, this also is the important reason of the return on equity in 2021.

3.3. Poor management of receivables

It can be seen from the previous chapter that the main reason for the low total asset turnover rate of Yunnan Baiyao is the turnover rate of accounts receivable, which also directly affects the profitability of the enterprise. Through the investigation found that Yunnan baiyao due to the particularity of proprietary Chinese medicine, on the supply chain, lead to bargaining power is not strong, lead to enterprises on the accounts receivable collection deadline processing, adopted the credit policy hope to use preferential payment terms increase volume to quickly occupy the market, although credit sales can promote enterprise income, but also brings the risk of bad debts.

3.4. Weak utilization rate of financial leverage

Through the analysis of the equity multiplier of Yunnan Baiyao, we can find that the equity multiplier of Yunnan Baiyao is low in the same industry, indicating that its asset-liability ratio is also low. Yunnan baiyao, accounts receivable is very high, but too little liabilities, the side reflects the capital structure is too conservative, although can avoid some financial risk, but not give full play to the role of financial leverage, limits the future, development space and further expand the market potential, but also can affect the profitability of the enterprise.

4. Yunnan Baiyao Profitability Improvement Strategy

4.1. Strengthen the regulation of costs and expenses

Yunnan baiyao sales in 2021 net interest rate almost halved, through the enterprise annual report found that this year revenue is still increasing, but the net profit increase is low, finally found that the enterprise cost control is not enough, greatly compressed profit margins, Yunnan baiyao can

according to their reality, accurate budget in terms of cost control, reduce unnecessary r & d costs, do open source throttling. To seek new performance growth points, we also need to innovate from the thinking, establish new sales concepts, innovate the research and development mechanism, and regularly train the r & d personnel and various technical personnel. Efforts to control and reduce the operating expenses, improve the examination and approval system, especially on the management expenses and sales expenses, reduce unnecessary expenses, try to make every money can bring effective economic benefits, finally is to establish standardized financial accounting system, for the enterprise, each cost can get accurate accounting.

4.2. Establish a risk investment and financing system

Yunnan baiyao is the overall anti-risk ability is relatively weak, new research and development there are many uncertain risk, the most obvious embodiment is the enterprise investment loss in 2021 nearly 2 billion yuan, so enterprises need to draw lessons from the successful cases of capital operation, in order to learn from experience, and hire relevant professionals, and with institutions specializing in the industry, do have specialized in. At the same time, strengthen the enterprise investment management system, optimize the innovation enterprise venture capital system, avoid some unnecessary investment, and make their own losses. And actively seek new financing channels, broaden the road, in order to enhance the ability of Yunnan Baiyao to absorb high-quality funds, for my own use, for the future development of the enterprise to provide a strong financial guarantee.

4.3. Strengthen the management of accounts receivable

The main reason for the low total asset turnover rate of Yunnan Baiyao is the turnover rate of accounts receivable, This also directly affects the profitability of the enterprise, So the need to strengthen the management of credit policies, Seek to increase sales while maximizing the avoidance of receivables, When conducting business transactions, we should first understand the customer's credit situation and the company's business situation, See if it has the ability to repay it, We can use all kinds of credit inquiry system to understand the credit situation of the enterprise, It can also understand the credit investigation situation of its major shareholders through the credit investigation system, And he can understand the previous relationship between his cooperative enterprises and word of mouth evaluation to understand the current situation of the enterprise. According to the credibility of customers, take different credit policy, the credit status and business situation is not very good customers, Yunnan baiyao should implement strict credit management system, try to reduce the amount of credit, and try to shorten the repayment period, to ensure the future collection information, for possible future bad debts to speed up the recovery.

4.4. Reasonable distribution of asset structure

There are also some problems in the asset structure of Yunnan Baiyao. The equity multiplier of Yunnan Baiyao, the low asset-liability ratio and the debt of the company is relatively small. Although the rights and interests of the creditors can be effectively protected, the company also suppresses the profitability of the company to some extent. From the perspective of financial management, the

appropriate increase of liabilities can play the role of tax deduction of liabilities themselves, so as to achieve the purpose of reducing the capital cost of enterprises. But at the same time also want to consider the market interest rate, if the bank interest rate is higher, enterprise business condition is bad, may cause to make ends meet, leading to the profitability of enterprises further reduced, instead of losses, but the current Yunnan baiyao debt is low, it is difficult to achieve the purpose of reducing the cost of capital. When determining the debt scale, Yunnan Baiyao should first start from the actual situation, understand the overall market situation, appropriately increase the corresponding proportion of debt, pay attention to the impact of the capital structure on the profitability of the enterprise, and seek solutions to maximize the benefits. When the asset-liability ratio of Yunnan Baiyao

is relatively low, if the necessary return rate is higher than the market interest rate, it can be considered to reasonably expand the debt scale according to the actual situation, so as to improve the profit of the enterprise.

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