

# Financial analysis of BYD Company under the framework of Harvard Analysis

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**Abstract:** Harvard analysis framework is different from the traditional financial analysis. It takes the company's financial strategy analysis as the starting point, and makes quantitative and qualitative analysis on the company. In this paper, we will use Harvard analysis framework to make strategic analysis, accounting analysis and financial analysis of BYD Company, and make prospect prediction and risk prediction.

## 1. Introduction

This paper will analyze BYD based on the Harvard analysis framework. Strategic analysis mainly focuses on financial strategy, accounting analysis accounts for a large proportion of enterprises' assets, financial analysis mainly carries out overall analysis based on the company's financial statements, and prospect analysis is to make risk prediction and prospect prediction for the company.

## 2. Strategic analysis

### 2.1. Accounts receivable analysis

In terms of investment methods, BYD has adopted diversified investment channels. The first is the internal investment of enterprises, namely R & D and expansion: invest 2 billion in the production of electric buses in Tianjin, and invest 3 billion in the production of light buses and electric buses in Nanjing. The second is industrial chain M & A: BYD acquired Xi'an Qinchuan Automobile Co., Ltd. in 2003 and formally entered the field of automobile manufacturing. In 2010, BYD Daimler Co., Ltd. signed a contract to set up BYD Daimler New Technology Co., Ltd. in Shenzhen, with both sides holding 50% equity. In 2015, it signed a cooperation project with a British bus manufacturer to produce electric buses. With the continuous growth of new energy vehicle market, survival of the fittest is a severe development trend. Only enterprises with excellent competitiveness can survive in the market. Therefore, we can predict that BYD will still seek excellent partners in the future development to expand the scale and increase the competitiveness of enterprises.

BYD implements a high leverage financing strategy. The following is an analysis of BYD's short-term and long-term solvency, and the conclusion is that the company's long-term and short-term solvency are not strong, and the financial risk is large. But from the perspective of capital structure, BYD's financing structure is more appropriate, that is, endogenous financing first, bond financing second, equity financing last. The reason is that for BYD's former shareholders, using the internally realized interests for financing can save interest, dividends and transaction costs, and reduce the risk of losing control. In addition, the pre tax deduction of debt interest generated by bond financing is better than the post tax dividend behavior. In a word, BYD's financing strategy is more appropriate.

### 2.2. SWOT analysis

The following table analyzes BYD from four aspects: strengths, weaknesses, opportunities and threats, and gives strategic suggestions.

table 1 SWOT analysis

	S	W
	<ol style="list-style-type: none"> <li>1. production and research technology is leading in China</li> <li>2. vertical integration reduces production cost</li> <li>3. high brand awareness and large market share</li> </ol>	<ol style="list-style-type: none"> <li>1. Bottleneck of technology development</li> <li>2. The infrastructure construction is not perfect</li> <li>3. The price has no advantage over traditional fuel vehicles</li> </ol>
O	S+O strategy	W+O strategy
<ol style="list-style-type: none"> <li>1. International policy support</li> <li>2. Opportunities brought by environmental pollution</li> <li>3. The new energy vehicle industry has large investment and long return period</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase R &amp; D investment and actively innovate</li> <li>2. Adjust company strategy according to national policy</li> </ol>	<ol style="list-style-type: none"> <li>1. Invest in infrastructure construction and improve after-sales service</li> <li>2. Break through the technical bottleneck and reduce the production cost with the progress of science and technology</li> </ol>
T	S+T strategy	W+T strategy
<ol style="list-style-type: none"> <li>1. Competition from domestic peers</li> <li>2. Competition from international automobile industry</li> <li>3. Unable to surpass fuel vehicles in a short time</li> </ol>	<ol style="list-style-type: none"> <li>1. Make full use of its own battery technology advantages</li> <li>2. Continuously enhance product quality and narrow the quality gap</li> </ol>	<ol style="list-style-type: none"> <li>1. Cooperate with other new energy related industries</li> <li>2. Strengthen cooperation with other auto brands to reduce costs</li> </ol>

### 3. Accounting analysis

#### 3.1. Accounts receivable analysis

Over the past five years, BYD's bad debt reserves have developed in a "U" shape, with the lowest value in 2017, and the provision ratio was only 0.59%, and then showed an upward trend. To a certain extent, it shows that the company's capital flow is poor and management ability is lacking. Accounts receivable is an important item of current assets. More provision for bad debts indicates that more accounts receivable can not be recovered, but enterprises can not recover money from credit products, which is not conducive to the sustainable development of enterprises.

#### 3.2. Inventory analysis

BYD's inventory includes raw materials, products in process, goods in stock and revolving materials. Among them, the number of goods in stock in 2019 is almost double that in 2015, with a year-on-year growth of 93.49% and a year-on-year growth of 19.04% compared with that in 2018, which indicates that BYD increases new project stock, and its production scale and sales scale increase year by year.

An enterprise should make provision for inventory depreciation according to the lower of cost and net realizable value on the balance sheet date of each year. Net realizable value refers to the net amount of the estimated selling price of the product after deducting the cost, selling expenses and relevant taxes and fees required for further production and processing. It can be seen from the table that the provision proportion of inventory falling price reserves of BYD Company has decreased

year by year from 2016 to 2019, nearly doubled, which fully shows that BYD Company has full confidence in the price of its products, has high quality, and is marketable in the market.

#### **4. Financial analysis**

BYD's assets, liabilities and owner's equity have been on the rise in the past five years. The growth rate of assets and liabilities is higher than that of owner's equity. The growth rate of assets and liabilities from 2015 to 2018 is higher, with the highest of 25.62% in 2016 and 31.76% in 2017. In 2019, the growth rate of assets is 0.55%, while the growth rate of liabilities is - 0.63%. In contrast, the growth rate of owner's equity is relatively stable.

Through the analysis of the balance sheet, it is found that the main reasons for the growth of non current assets are investment in other equity instruments, other non current financial assets, long-term receivables, intangible assets and construction in progress. The decrease of total current assets is mainly due to the decrease of inventory, accounts receivable and monetary capital, which may be due to the purchase of fixed assets, the increase of fixed assets by 5.765 billion in 2019 compared with 2018, or the increase of collection speed of accounts receivable.

Combined with the growth trend of business income in the past five years and BYD's marketing mode of credit sale, the risk of bad debts is high. The development of an enterprise cannot do without a large amount of funds. The failure to generate sufficient cash flow means that the enterprise needs to solve the capital problem by increasing liabilities. The increase of borrowing will also cause the risk of short-term borrowing and long-term investment, which is not conducive to the long-term development of the enterprise.

#### **5. Prospect analysis**

##### **5.1. Risk prediction**

The trend of oil price is one of the important factors affecting the development of new energy vehicle companies such as BYD. In recent years, the international oil price continues to decline, which is a great opportunity for traditional fuel vehicles. Many potential customers of new energy vehicles may choose to give up buying new energy vehicles and then buy traditional fuel vehicles because of the reduction of oil price. If there is no upward trend in oil price, it will greatly affect BYD's business layout and bring certain risks to sales volume, revenue and profit.

In addition, BYD's asset liability ratio is high in recent years, and its short-term solvency is poor, so the company's financial risk is large. If BYD can properly reduce the financial leverage ratio and reduce the financial burden to reduce the financial risk, it can ensure the healthy development of the company to a greater extent..

##### **5.2. Development prospects**

Xi Jinping once pointed out the only way which must be passed from China's automobile power to a powerful automobile country. As a leading enterprise of new energy vehicles in China, BYD has benefited a lot from the subsidy policy issued by the state. However, the company is still affected by the decline of subsidy this year, and the production and sales volume has also declined.

Throughout the domestic new energy vehicle market, both independent brands and foreign-funded enterprises have identified the irreversible development trend of new energy vehicles. They have increased R & D investment and more and more product types. At the same time, automobile manufacturers in Japan, the United States and other countries are also joining the field of new energy vehicles. In one word, this paper summarizes the future development trend of BYD Is: will face more intense market competition.

#### **6. Conclusion**

According to the analysis, we found that BYD has poor liquidity and solvency, so its financial risk is also high. The company should change its asset structure to reduce its financial risk.

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