

Financial Risk Analysis and Control of New Energy Automobile Enterprises

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Abstract: *In order to alleviate environmental pollution and energy shortages, national policies have given strong support to the new energy automobile industry, which has made the development of new energy automobile companies very rapid in recent years. This paper found through research that the financial risks of Chinese new energy automobile companies are affected by internal and external factors. The risks caused by internal factors include financing risk, investment risk and cash flow risk, and the risks caused by external factors include risks caused by technology, policy, and market competitiveness. In response to these risks, Chinese new energy automobile companies should reduce their internal risks by optimizing their capital structure, rationally adjusting strategic decisions, and establishing a financial risk early warning system. At the same time, companies should improve their key technologies and give full play to technological policies to reduce financial risks caused by external factors.*

Keywords: new energy vehicles, financial risks, quantitative analysis, risk control

1. Introduction

In recent years, new energy vehicles have gained strong support from the state and the government with their advantages in energy conservation and environmental protection. They have developed well in the automotive industry and are playing an increasingly important role. This has also attracted many scholars to study Chinese new energy automobile companies, and financial risk research is one of the important branches.

Throughout the research results related to financial risks, scholars focus on studying how to identify and measure risks more effectively. Foreign scholars have explored this issue earlier, and are more mature in theoretical exploration and empirical research. While expounding the concept, characteristics, sources, and impact of financial risks, they focused on choosing appropriate risk identification methods and identification variables to provide a basis for constructing financial crisis early warning models. The research results of Chinese scholars in this field are not very significant, but with the improvement of Chinese scientific research level, relevant research results are also becoming richer. In terms of research methods, the domestic analysis is mainly based on the three major corporate statements, from which specific financial indicators are selected for research, and then risks are identified and prevented. Based on this method, this paper selects my country's new energy automobile companies to conduct financial risk control research. In the process of research, the analysis of financial statements is combined with variable research to identify the current types of risks in the company and propose corresponding control measures.

2. The development status of Chinese new energy automobile enterprises

According to the current development status of the world automobile industry, new energy vehicles will undoubtedly

dominate the future world automobile market. In order to further alleviate energy pressure, promote technological progress, and realize the sustainable development of the automobile industry, many international powers are accelerating the industrialization of new energy vehicles.

Although Chinese new energy vehicles have been developed for nearly 20 years, they are still relatively backward compared with developed countries such as the United States. However, the country and government have full confidence and determination to vigorously develop the new energy automobile industry, and have successively promulgated a series of policies on new energy automobiles, such as the "Auto Industry Revitalization Plan". The promulgation and implementation of these policies have greatly encouraged relevant companies to invest in new energy vehicle scientific research. The core technical difficulties in the field have been constantly overcome, which effectively promoted the development of my country's new energy vehicle market and gradually formed a mature and complete market. New energy vehicle industry chain.

Since 2014, the scale of Chinese new energy automobile companies has grown rapidly. Data show that in November 2018, the production and sales of new energy vehicles reached 173,400 and 169,300 respectively, an increase of 36.93% and 37.62% over the same period of the previous year. Among them, pure electric vehicles accounted for a relatively large proportion, with production and sales reaching 135,300 and 138,100 respectively, an increase of 23.58% and 30.30% respectively over the same period of the previous year; while plug-in hybrid vehicles were relatively small, with production and sales volume respectively. Reached 38,000 and 31,100 vehicles, an increase of 121.71% and 82.50% over the same period last year. It can be seen that the market demand for new energy vehicles in China is increasing year by year, and its future market share has a lot of room for improvement.

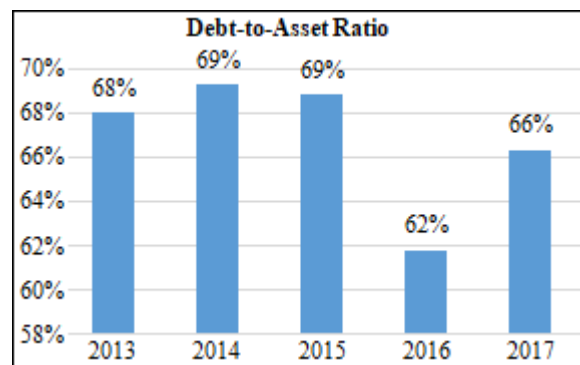
Although the development of Chinese new energy automobile industry has received strong support from the state and the government, there are still obstacles in the development of technology. At present, my country is not mature enough in the manufacturing technology of lithium batteries for vehicles, and many core technologies still need to rely on foreign manufacturers, which is very disadvantageous. In terms of capital resources, on the one hand, new energy automobile companies are capital-intensive companies and require a large amount of funds as support during their design, manufacturing, and research and development stages, which undoubtedly intensifies the company's dependence on government subsidies and the risk of external financing. On the other hand, new energy automobile companies in the initial stage have a long payback period and low short-term investment efficiency. Some investors believe that their long-term investment risks are high, and their investment enthusiasm will decrease accordingly. In recent years, domestic scholars have also focused on the technical obstacles, environmental issues, technology research and development and improvement of government policies in the development of Chinese new energy automobile enterprises to promote faster and better development of China's new energy automobile enterprises.

3. Financial risks faced by Chinese new energy automobile enterprises

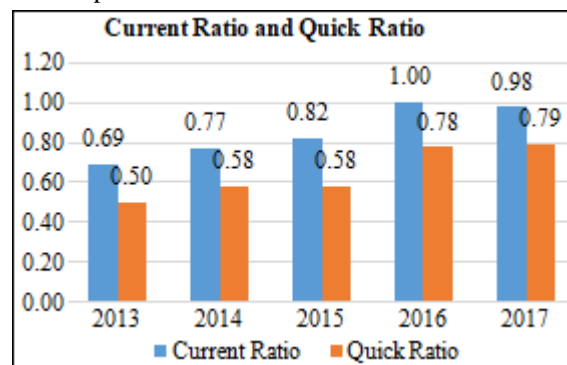
In this paper, the research on the financial risk of Chinese new energy automobile companies starts from the internal and external influence factors. According to the three types of corporate financial activities, different new energy automobile companies in my country are selected as case studies.

3.1 Financing risk caused by high debt ratio and weak solvency

Debt management is a common way for new energy automobile companies to operate. It has the function of quickly raising funds, which can make up for the company's own capital shortcomings, help companies expand their scale, and promote their development. However, if the scale of the company's debt is large, it will reduce the company's solvency and increase its financing risk. As a leader in the field of new energy vehicles in my country, BYD's development is inseparable from strong financial support. Therefore, taking it as a case to study the financing risks of my country's new energy vehicle companies is very representative. The specific analysis is as follows:



The debt-to-asset ratio is an important indicator to measure the long-term solvency of an enterprise. It is generally believed that it should be maintained in the range of 40%-60%, with 70% as the warning line. It can be seen from the figure that BYD's debt-to-asset ratio has basically maintained around 66% in the past five years. Although it has not exceeded the 70% warning line, it has exceeded the normal level, which shows that its debt scale is relatively large. In addition, from 2013 to 2017, BYD's current liabilities accounted for 82%, 81%, 83%, 87%, and 89% of total liabilities, respectively. A large proportion of current liabilities undoubtedly aggravated the company's short-term repayment pressure and made it The inability to maintain a sufficient amount of liquidity affects the daily operation of the enterprise and aggravates the financial risk of the enterprise.



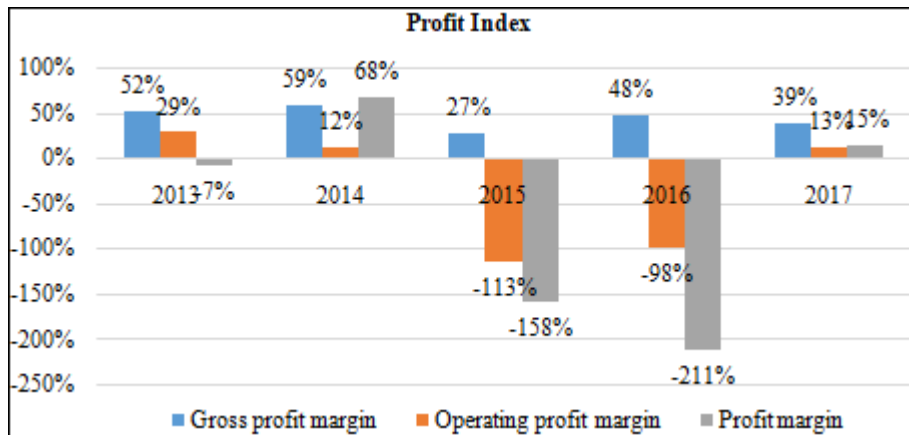
Combined with its short-term solvency analysis, as shown in Figure 2, BYD's current ratio has shown an overall upward trend, but it has not exceeded 1 in the past five years. Generally speaking, it is normal for the current ratio and quick ratio to maintain at 2:1 and 1:1 respectively. It can be seen that these two indicators are far from the ideal value, indicating that BYD's short-term debt solvency is poor, and companies are very likely to face The financial risk of insolvency, and therefore the huge financing risk.

3.2 Investment risks caused by unstable returns and poor operating benefits

Investment risk refers to the risk that a company provides certain financial support after discovering a promising development opportunity, but during the period due to market, policy and other factors, the final return and the expected return will deviate greatly. For the analysis of investment risk, this article selects BAIC BJEV as a case

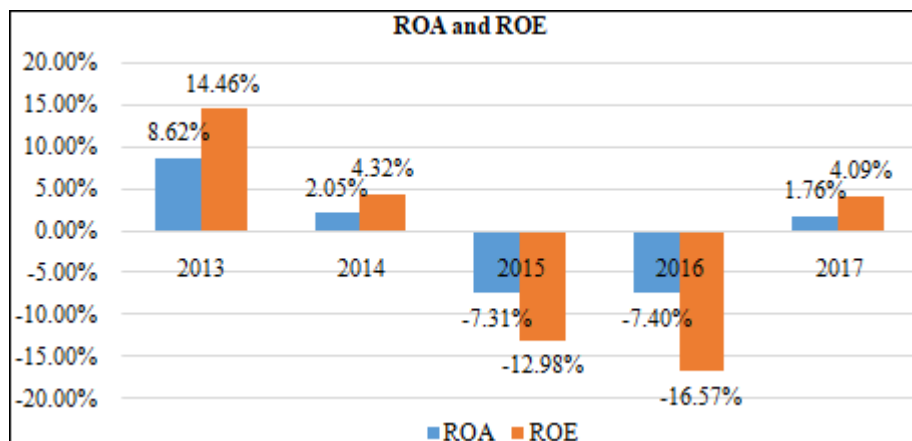
study. BAIC BJEV is the largest enterprise in the pure electric passenger vehicle industry in my country. It has a relatively complete industrial chain. Its market sales have been leading for many years in a row. At the same time, it

has a wide range of user coverage and good brand influence. The research on its profit indicators is very representative.



It can be seen from the figure that the gross profit margin of BAIC BJEV has fluctuated around 45% in the past five years, which is at a relatively good level, indicating that its sales volume is considerable. However, both the operating profit margin and the cost and expense margin have fluctuated significantly, and the indicators were negative in

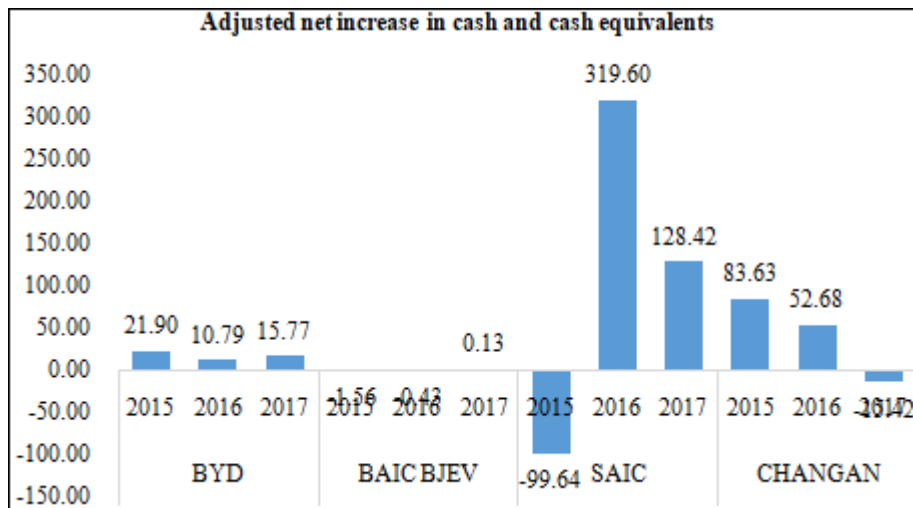
2015 and 2016, indicating that higher costs and expenses prevented revenue from being equal to costs, and the profit was negative, indicating the company's investment The income is unstable and the income level is poor, and faces greater financial risks.



From the perspective of the income results of invested assets, ROA and ROE continued to decline from 2013 to 2016, and only rebounded in 2017. Under normal circumstances, the investment objectives of enterprises should conform to the principle of steady improvement. Obviously, BAIC BJEV has not achieved the expected investment objectives, and the operating efficiency of the enterprise is poor, indicating that it has high investment risks.

3.3 Cash flow risk caused by large cash gap

Corporate cash flow is an important factor in maintaining corporate development. For new energy automobile enterprises, their development requires a large amount of funds, and cash flow risk has therefore become a major risk facing companies. This paper selects four typical new energy automobile companies in my country to compare their cash flow and analyze their cash flow risks.



It can be seen from the figure that among the four new energy vehicle companies, except for BYD, the remaining three have negative net cash flows from 2015 to 2017, and BAIC BJEV is the norm. SAIC had a huge net cash flow gap in 2015, which was alleviated in 2016, and then fell sharply in 2017, which shows that its management and control of cash flow is not stable. About CHANGAN, its net cash flow continued to decline for three consecutive years, and it was negative in 2017, which shows that the cash flow risk it faces is increasing year by year.

3.4 Financial risks caused by external factors such as technology and policies

First, the technical level is relatively lagging behind. At present, the research direction of Chinese new energy vehicles is mainly focused on pure electric vehicles. The use of lithium batteries has not yet been popularized, mainly because Chinese technology in this area is not mature enough. In addition, many high-end raw materials used in the manufacture of new energy vehicles rely heavily on imports, which undoubtedly aggravates the production cost of new energy vehicles in my country, making it difficult to compete with the cost of traditional fuel vehicles. High costs lead to higher prices, and higher prices will weaken consumers' willingness to buy, bring challenges to the sales of new energy vehicles, and ultimately affect their profitability and expose them to financial risks.

Second, the subsidy policy is gradually tightening. As an emerging technology industry in my country, the new energy automobile industry cannot develop without the support of the state. In recent years, the state has promulgated a series of favorable policies and government subsidies to drive it, which has promoted the rapid development of Chinese new energy automobile companies. Today, the state's subsidy policy for new energy is gradually tightening, and the review of enterprise subsidy qualifications is becoming more and more stringent. For new energy automobile companies with large capital needs, it is easy to cause the company's capital to be cut off and increase financial risks.

Third, market competitiveness has increased. Nowadays, under the general development trend of the auto industry, many traditional auto companies are making use of government support and technological innovation to transform, and many companies choose to cooperate with foreign brands, and a large number of multinational auto companies have emerged. In addition, many new car-making forces have also entered Chinese automobile industry market. The development of these three types of enterprises has intensified market competitiveness among enterprises, brought a great impact to the development of new energy automobile enterprises, and intensified financial risks.

4. Related Suggestions

4.1 Optimize corporate capital structure

The financing methods of enterprises mainly include debt financing and equity financing. Although debt financing has a lower capital cost and can produce financial leverage effects, the corresponding debt financing methods also bring greater financial risks to enterprises. This requires companies to maintain a reasonable capital structure, that is, to keep debt financing and equity financing within a reasonable range. Through analysis, it is found that the capital structure of Chinese new energy automobile companies is not very reasonable, and the proportion of debt financing far exceeds equity financing. The company should maintain its asset-liability ratio in the range of 40%-60%. At the same time, its debt structure shows that the proportion of current liabilities is too large, which brings greater short-term repayment pressure to enterprises. Relevant enterprises should adjust the proportion of current liabilities and long-term liabilities through long-term borrowings and issuance of bonds, so as to alleviate the short-term debt repayment pressure of enterprises and reduce their financing risks.

4.2 Reasonable adjustment of strategic decisions

The success of investment decisions is closely related to the development prospects of new energy automobile

companies. In the initial stage of the development of new energy automobile companies, production and sales have always maintained sustained growth, which has driven the development of the entire industry. Now, in the period of rapid development, "quantity" is no longer enough to promote its development. We should focus on "quality", continuously optimize the overall performance of new energy vehicles, improve safety and reliability, and increase investment benefits. It is also necessary to maintain a sufficient amount of funds as a guarantee for business development, and make timely strategic adjustments in accordance with different market environments and financial conditions to reduce and diversify risks.

4.3 Establish a financial risk early warning system

For most new energy automobile companies, fluctuations and changes in many financial indicators can be used to determine whether the company faces greater financial risks. In order to more effectively identify risks based on corporate financial indicators, it is necessary to establish a risk early warning system within the enterprise. The establishment of this system can help managers discover potential financial risks in the enterprise's production and operation activities in advance, and then take measures to prevent and control the risks. When the system is established, it can learn from the research results at home and abroad, select some typical financial and non-financial indicators as early warning indicators, and realize the establishment of the system through the early warning model.

4.4 Improve the level of key technologies

In recent years, Chinese new energy vehicle manufacturing related technology has been greatly improved, but it still bears high costs. In order to reduce its manufacturing costs, my country should integrate human resources, capital, and technology to form an industrial alliance. Organize technical teams to conduct in-depth discussions and study foreign advanced technologies, carry out forward-looking technology research and industrialization key technology development, and narrow the gap with international technology levels, so as to reduce dependence on foreign technologies and effectively reduce the manufacturing costs of new energy vehicles in my country. As a result, the advantages of new energy vehicles over fuel vehicles will be more obvious, and the financial risks caused by excessive costs will also be reduced.

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