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Research on the operational status, problems, and breakthrough strategies of XPeng Motors

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Abstract. With the rapid development of the new energy vehicle industry and increasingly fierce market competition, XPeng Motors, a representative of domestic intelligent electric vehicle enterprises, is facing multiple challenges, including financial conditions, market competition, and operational efficiency. Based on XPeng Motors' operational data from 2019 to 2023, this paper adopts data analysis, comparative analysis, and other research methods to focus on analyzing its financial performance, market layout, product structure, and core problems and proposes targeted breakthrough strategies. The study finds that XPeng Motors has problems such as continuous losses, a high asset-liability ratio, insufficient market share, and low operational efficiency. Its Z-score is in the bankruptcy zone, indicating high financial risks. However, it has certain advantages in intelligent driving technology and segmented market layout. By optimizing the financial structure, strengthening brand awareness, and improving operational efficiency, XPeng Motors is expected to achieve profitability and enhance market competitiveness. The research results can provide reference for the development of XPeng Motors and similar new energy vehicle enterprises.

Keywords: XPeng Motors, financial analysis, market strategy, new energy vehicles, risk management and control

1. Introduction

In recent years, the global new energy vehicle industry has experienced explosive growth, driven by policy support, technological progress, and changes in consumer attitudes [1]. Existing research mostly focuses on the overall development trends of the industry, technical routes of leading enterprises, or the impact of policies. For example, there have been extensive discussions on Tesla's brand premium mechanism and BYD's cost control model [2, 3]. In terms of financial research, scholars pay more attention to financial risks in the transformation of traditional automobile enterprises, while there are few studies on the coordination between financial optimization and market strategies under the continuous losses of new-force automobile enterprises [4]. As the world's largest new energy vehicle market, China has attracted many enterprises to enter the market, and market competition has extended from technology and products to prices, services, and other dimensions [5]. Founded in 2014, XPeng Motors focuses on the R&D, production, and sales of intelligent electric vehicles. With its intelligent driving technology and innovative product layout, it has established a foothold in the industry [6]. However, with the continuous efforts of leading enterprises such as Tesla and

BYD, as well as the cross-border competition from new forces brands such as Li Auto and NIO and traditional automobile enterprises, XPeng Motors is facing multiple challenges, including lower-than-expected revenue growth, continuous losses, and pressure on market share [7].

In this context, in-depth analysis of its operational status and core problems, and exploration of effective breakthrough strategies can not only help XPeng Motors get out of trouble but also provide reference for other enterprises in the industry. Based on XPeng Motors' financial data, market data, and product information from 2019 to 2023, combined with industry development trends, this paper comprehensively sorts out its operational status and competitive position by using data analysis, comparative analysis, and other methods. On this basis, it further identifies its main problems in cost structure, product strategy, and other aspects, and proposes targeted strategies such as financial optimization, market expansion, and operational upgrading to provide decision-making reference for its sustainable development in the future.

2. Analysis of XPeng Motors' operational status

2.1. Overview of financial status

XPeng Motors' operating income increased from 2.321 billion yuan to 26.86 billion yuan from 2019 to 2023, showing a certain market expansion capability [8]. However, the profitability is poor, with a cumulative loss of about 31.8 billion yuan during the period and a net loss as high as 9.1 billion yuan in 2022 [8]. In terms of core financial indicators, the Return on Assets (ROA) and Return on Equity (ROE) have been negative in the past five years. In 2023, ROA was -24.76% and ROE was -28.57%, indicating a significant lack of profitability [8]. The gross profit margin fluctuated greatly, dropping to -24.05% in 2019, turning positive for the first time to 3.5% in 2020, and falling to 1.5% in 2023, which is much lower than the industry average of 18% [8, 9].

In terms of liabilities, the asset-liability ratio showed a trend of first decreasing and then increasing. Due to the reduction of liabilities from IPO financing in 2020, it continued to rise to 57% from 2021 to 2023. The debt ratio exceeded the equity ratio, and the financial leverage ratio was relatively high [8]. The cash flow situation is grim. The free cash flow was generally negative from 2019 to 2022. In 2023, the operating cash flow ratio and cash flow interest coverage multiple turned positive for the first time, but the capital chain is still tight [8]. For details of its financial data and industry comparison, refer to the relevant interpretation on East Money Network [10].

2.2. Analysis of market performance

According to the *2023 China Intelligent Electric Vehicle Market User Research Report* released by iResearch, XPeng Motors' sales are mainly concentrated in first-tier cities, with Beijing, Shanghai, Guangzhou, and Shenzhen accounting for 65% of the sales, benefiting from the improved layout of intelligent driving technology and charging networks in first-tier cities. The proportions of second-tier cities and overseas markets are 25% and 10%, respectively, still having great growth potential [8].

The user group is mainly young people aged 25-40, accounting for 80%; users with a family annual income of 200,000-500,000 yuan account for 70%, and female users account for 40% [8]. The core reasons for users' choice include intelligent driving (45%) and charging network (30%), with high attention to sense of technology (50%) and environmental protection attributes (30%), while the social attribute accounts for a relatively low proportion (20%). This user characteristic is consistent with the relevant research conclusions of iResearch [8, 11].

In market competition, XPeng Motors' market share was about 5% in 2023, with no significant change year-on-year. Its brand premium capability is lower than that of Tesla (brand premium accounts for 50%), and

its cost-performance advantage is not as good as that of BYD (cost-performance ratio accounts for 60%). There is still room for improvement in brand building and cost control. It delivered 142,000 vehicles in 2023, only completing 70% of the target, with a poor sales target completion rate [8].

2.3. Product layout

According to BCG matrix analysis, XPeng Motors' products can be divided into three categories: Star product P7, with a market growth rate of 25% and a relative market share of 1.2, has the highest single-vehicle profit of 55,000 yuan and occupies a place in the mid-to-high-end market with its intelligent driving technology and coupe design [8]. Problem product G9, although having a high single-vehicle gross profit (about 70,000 yuan), has insufficient relative market share (about 0.8) and limited sales volume (only 30,000 vehicles), belonging to problem products that need to further expand market share; dog products G3 and P5 have low market growth rate and market share and weak profitability. The single-vehicle profit of G3 is 30,000 yuan, and that of P5 is only 22,000 yuan, which are inferior to competitors such as BYD Yuan PLUS and Qin EV in terms of cost performance and product strength.

There is ambiguity in product positioning. For example, both G3 and P5 focus on the terminal market, leading to the dispersion of marketing resources [9]. The proportion of high-end products is insufficient. Mid-to-low-end models such as the P7 account for more than 30% of the total sales, while high-end models account for less than 10%, affecting the overall profitability [8]. Some models, such as MONA, have delivery delays, which exacerbate inventory backlogs [8]. From the perspective of market reputation, there is still room for improvement in the rationality of its product layout [12].

3. Main problems faced by XPeng Motors

3.1. Prominent financial risks

3.1.1. Continuous losses and high debt pressure

Continuous losses are the core financial problem, with a cumulative loss of about 31.8 billion yuan from 2019 to 2023. The main factors leading to losses include high R&D investment, high sales expenses, and structural problems such as low gross profit margin. Among them, the R&D expense reached 5.276 billion yuan in 2023, and the sales expense, although lower than that in 2022, is still at a high level. The high expense investment has not been effectively converted into product premium and sales growth [8].

The asset-liability ratio soared from 23% in 2020 to 57% in 2023, the proportion of debt financing is constantly increasing, and the financial leverage ratio is relatively high. This not only increases the debt repayment pressure but also leads to the rise of financing costs. The Weighted Average Cost of Capital (WACC) slightly increased in 2024. At the same time, the degree of financing constraints is increasing. According to the *2023 New Energy Vehicle Industry Competition Pattern Analysis Report* released by Huajing Intelligence Network, the SA index reached 3.372 in 2023, making it more difficult to obtain low-cost financing [8].

3.1.2. Bankruptcy risk and tight cash flow

According to the *2023 XPeng Motors Z-score Analysis Report* released by GuruFocus, XPeng Motors' Z-score (a warning indicator for bankruptcy risk) has been lower than 1.8 in the past two years, falling into the bankruptcy zone. Among the 612 automobile companies with available statistics, the Z-score is lower than that of about 83% of the companies in the same industry [9, 13]. This indicator reflects that the company's short-term debt repayment capability is weak, the proportion of working capital to total assets is constantly

decreasing, retained earnings are negative, and Earnings Before Interest and Taxes (EBIT) have been negative for a long time, indicating that the financial risk has reached a high level [9].

There are major problems in cash flow management. The free cash flow has been negative from 2019 to 2022, and the operating cash flow cannot cover R&D and production investment [8]. The inventory turnover efficiency is low, and the inventory turnover rate is much lower than Li Auto's 14.09 times and NIO's 7.81 times, with a large amount of capital occupied by inventory [8]. The supply chain payment term is relatively short (about 60 days), compared with Tesla's 90 days and Li Auto's 45 days; the short payment term makes the expenditure rhythm faster than the collection rhythm, resulting in greater payment pressure and further exacerbating the tight capital chain [9].

3.2. Intensified market competition pressure

3.2.1. Insufficient brand awareness and market share

XPeng Motors' brand positioning focuses on intelligent driving, but its market awareness is insufficient. According to the 2023 user survey data from Autohome, XPeng Motors' brand awareness score is 65 points, lower than Tesla's 88 points and BYD's 82 points; in terms of social media popularity index, the playback volume of XPeng Motors-related topics on Douyin was 820 million times in 2023, far lower than Tesla's 2.56 billion times and Li Auto's 1.23 billion times. Competitors such as Huawei ADS 2.0 and Li Auto NOA have higher popularity. The company lacks phenomenal marketing events and has low brand exposure, leading to a low market promotion conversion rate. Even with a large investment in marketing expenses, it has not effectively improved brand influence [9].

The expansion of market share is hindered. The first-tier city market tends to be saturated, and the expansion progress in second-tier cities and overseas markets is slow, failing to form new sales growth points [8]. The layout of the B-end market lags behind competitors such as BYD and Zeekr, with the B-end sales accounting for only about 5%, failing to fully tap the market potential of online car-hailing and corporate procurement [9]. The implementation effect of its overseas market expansion plan still needs to be improved [14].

3.2.2. Price war and insufficient product competitiveness

The price war in the new energy vehicle market is becoming increasingly fierce. XPeng Motors has to adopt price reduction strategies to increase sales. For example, G6 reduced its price by 20% in July 2023, further compressing the already meager profit margin [8, 15]. The products lack advantages in cost performance. Mid-to-low-end models are impacted by competitors such as BYD Qin EV and Yuan PLUS, while high-end models are difficult to compete with Tesla Model Y due to insufficient brand strength [8].

Ambiguous product positioning affects market performance. G3 and P5 are relatively close in price range, target groups, and selling points, leading to the dispersion of marketing resource investment and affecting the overall market performance [9]. The high-end model G9 was coldly received by the market in the early stage due to pricing and configuration issues, failing to accurately grasp market demand [9]. The product iteration speed and market response speed need to be improved, making it difficult to quickly respond to industry changes and competitor challenges [8].

3.3. Need to improve operational efficiency

3.3.1. Inventory and supply chain management problems

According to the interpretation of XPeng Motors' financial data on East Money Network in 2023, XPeng Motors' inventory turnover rate is at the downstream level of the industry, showing a downward trend in the past three years. The inventory turnover days were about 90 days in 2023, higher than the industry average of

50-60 days [8, 9]. Inventory backlogs not only occupy a large amount of capital but also increase warehousing and management costs, seriously affecting the efficiency of capital use [9].

According to the *2023 New Energy Vehicle Industry Supply Chain Development Trend Report* released by Analysys, there are shortcomings in supply chain management. The localization rate of the core supply chain is only 60%, with a high dependence on overseas suppliers, leading to high hardware costs [9, 16]. Compared with BYD, XPeng has not realized the independent R&D and manufacturing of core components, and its cost control capability is weak [9]. The short supply chain payment term leads to great payment pressure, affecting the stability of cooperation with suppliers and further exacerbating the capital shortage [9].

3.3.2. Low R&D and organizational efficiency

Although the R&D investment is high, the return rate is insufficient. The R&D expense ratio reached 21.70% in 2023, much higher than BYD's 4.90% and Tesla's 4.20%. The product R&D cycle is long. The development time of models such as G9 and X9 is too long, resulting in serious capital precipitation and increased costs. Some R&D projects have low returns and have failed to be effectively converted into product competitiveness. For example, more than 30% of R&D expenses are invested in XNGP, but the commercialization process is slow [9].

There is redundancy in the organizational structure, with many duplicate functional departments, leading to a per capita output value significantly lower than that of leading enterprises in the industry. The level of digital management is insufficient. Systems such as ERP and CRM have not given full play to their roles, affecting operational efficiency and inventory turnover rate. The internal collaboration efficiency is not high, and the coordination among market promotion, product R&D, production, and manufacturing needs to be improved [9].

4. Breakthrough strategies for XPeng Motors

4.1. Financial optimization strategies

4.1.1. Cost control and profitability improvement

XPeng Motors needs to systematically optimize from three aspects: product structure, R&D efficiency, and supply chain costs. Firstly, it should focus on core models, eliminate models with weak profitability such as P5, and concentrate resources on high-value models such as P7i, G6, and X9. Optimize the product structure, increase the sales proportion of high-gross-profit models, and launch high-profit optional packages such as the XNGP enhancement package and luxury cockpit upgrade package to improve single-vehicle profitability [9].

Secondly, strengthen R&D cost control, evaluate the current R&D pipeline, eliminate low-return projects, and focus on investing in core technologies such as XNGP intelligent driving and 800V ultra-fast charging. Adopt the SEPA2.0 intelligent electric architecture to adapt to more models, reduce duplicate R&D costs, and use the SDV architecture to replace part of hardware R&D with OTA software upgrades to reduce later maintenance costs [9].

In terms of production costs, increase the localization rate of the supply chain to 80% and reduce dependence on high-cost overseas suppliers. Establish in-depth cooperation with CATL, Fudi Battery, etc.; optimize battery procurement costs; and adopt domestic lidar, automotive-grade chips, and other components to reduce single-vehicle costs. Increase the factory capacity utilization rate to 90% and share fixed costs through economies of scale [9].

4.1.2. Cash flow and financing optimization

In terms of inventory management, adopt a "zero inventory" model, promote direct delivery from suppliers to national stores, and reduce the storage volume of central warehouses. Promote suppliers to hold inventory on behalf of high-value components, changing from the "buyout model" to the "on-demand procurement" model, and adopt the JIT model for low-value components. Introduce an AI inventory prediction system to dynamically adjust the procurement rhythm and avoid inventory backlogs [9].

Optimize the sales collection model, adopt the "phased delivery + advance payment" model, and require B-end customers to pay 50% of the payment first. Launch the "advance payment discount" activity, offering a 2% discount for paying 50% in advance, and introduce bank credit installments to reduce the need for advance funds. Expand financing channels, securitize (ABS) the car purchase installments for the next 3 years, and realize 2 billion yuan at one time. Balance the proportion of debt and equity financing, and strengthen cooperation with investors such as banks and insurance companies to obtain low-cost financing [9].

4.2. Market expansion strategies

4.2.1. Brand building and marketing upgrading

The strengthening of brand awareness should focus on the mental positioning of "the first echelon of intelligent driving". Launch the "XNGP Urban Mapless Intelligent Driving Experience Officer" activity, inviting KOLs and automotive media to conduct comparative tests between XNGP and competitors such as Huawei ADS 2.0 to enable users to form a clear brand awareness. Launch a series of short videos of "intelligent driving actual tests" on social platforms such as Douyin and Bilibili to increase user attention [9].

Optimize marketing strategies, reduce inefficient advertising investment, and strengthen precise delivery on social media [9, 17]. Launch a 7-day test drive plan with online reservation and door-to-door delivery to lower the test drive threshold and improve the transaction rate. Strengthen the expansion of direct stores and franchise stores, increase the coverage rate in second- and third-tier cities, and optimize the sales funnel through data analysis to reduce user loss. Invite KOLs in the technology field to create social topics, and cooperate with AI companies to build a new brand image of "intelligent car + AI" [9].

4.2.2. Market layout and channel expansion

Accelerate the expansion of second-tier cities and overseas markets, focusing on entering European markets such as Germany and the United Kingdom, mainly promoting the high-end version of G9, and providing left-hand drive/right-hand drive models. Through overseas market layout, increase the proportion of overseas sales to more than 10%. Increase efforts in developing the B-end market, cooperate with Didi, Amap, etc. to launch the online car-hailing version of G6, enter the government procurement catalog to expand the high-end business market, and increase the proportion of B-end sales from 5% to 15% [9].

In terms of product pricing, launch more competitive entry-level versions, such as the P7i standard version (LFP battery + deconfiguration) with a starting price of 199,800 yuan, and the G6 launch the LFP standard version with a price reduction to the 195,000 yuan range, forming differentiated competition with Model Y. Conduct OTA updates for P7i, optimize the battery management system, and launch an 800 km long-range version to improve product competitiveness [9].

4.3. Operational upgrading strategies

4.3.1. Supply chain and inventory management optimization

Negotiate with core suppliers to extend the payment term to 75 days, adopt the "commercial acceptance bill" method for payment, and increase the acceptance ratio to 50%. Introduce supply chain finance to allow suppliers to receive 90% of the payment in advance, improving the feasibility of extending the payment term.

Strengthen collaborative cooperation with suppliers, jointly develop core components, and improve supply chain stability and cost control capabilities. At the same time, establish an inventory early warning mechanism to timely clear unsold inventory. Through the upgrading of the digital management system, realize real-time sharing of inventory data and improve the inventory turnover rate. Strengthen market demand forecasting, accurately plan production plans, and reduce inventory backlogs caused by blind production [9].

4.3.2. Improvement of R&D and organizational efficiency

Improve R&D efficiency, shorten the product R&D cycle, and accelerate the commercialization of core technologies. Strengthen in-depth collaboration with the supply chain, jointly develop core components, and improve the conversion efficiency of R&D achievements. Optimize the organizational structure, merge duplicate functional departments, reduce redundant positions, and improve work efficiency. Strengthen digital management, upgrade ERP, CRM, and supply chain management systems, and improve operational efficiency. Strengthen employee training, improve per capita output value, and build an efficient organizational team. Establish and improve the performance appraisal mechanism, incorporate indicators such as cost control and efficiency improvement into the assessment, and stimulate employees' enthusiasm [9].

5. Discussion

At present, the new energy vehicle industry is in a critical period of rapid technological iteration and intensified market competition. The continuous progress of intelligent driving and new energy technologies has brought new opportunities to the industry [1, 5]. The state's policy support for new energy vehicles continues. Policies such as the dual-credit policy, charging infrastructure investment, and autonomous driving regulations all provide a favorable environment for XPeng Motors' development [8].

XPeng Motors has certain advantages in intelligent driving technology and charging network layout, with a clear user group positioning, which is an important foundation for its breakthrough [8]. With the continuous improvement of consumers' attention to intelligent driving and environmental protection attributes, XPeng's product positioning is highly consistent with market demand [8]. However, industry competition is also intensifying, with price wars, technology wars, and brand wars becoming increasingly fierce, and the challenges faced by XPeng Motors cannot be ignored [1, 5].

If problems such as financial risks, market share, and operational efficiency cannot be solved in a timely manner, XPeng Motors may be in a more unfavorable position in the competition. However, by implementing the optimization strategies proposed in this paper, it is expected to gradually improve the financial situation and enhance market competitiveness. Cost control and supply chain optimization can effectively reduce single-vehicle costs and improve gross profit margin; brand building and market expansion can expand sales volume and increase market share; and operational upgrading can improve efficiency and reduce risks [9].

In the future, XPeng Motors should continue to focus on core technology R&D and maintain its leading position in the field of intelligent driving; at the same time, strengthen market response speed and adjust product strategies and pricing strategies according to market demand [9]. In the context of intensified industry integration, it may consider strategic cooperation or mergers and acquisitions with other enterprises to enhance economies of scale and competitiveness [1].

6. Conclusion

Based on a comprehensive analysis of XPeng Motors' operational data from 2019 to 2023, this paper studies its financial status, market performance, product layout, and main problems and proposes targeted

breakthrough strategies. The research shows that XPeng Motors has certain advantages in intelligent driving technology and segmented market layout, with continuous revenue growth, but at the same time faces severe challenges such as continuous losses, high debt, insufficient market share, and low operational efficiency, and its financial risk is at a high level.

In response to these problems, this paper proposes three categories of strategies: financial optimization, market expansion, and operational upgrading. Financially, improve the financial situation through cost control, cash flow optimization, and adjustment of financing structure; in the market, strengthen brand building, expand second- and third-tier cities and overseas markets, and develop the B-end market to increase market share; operationally, optimize supply chain and inventory management, and improve R&D and organizational efficiency to reduce operational costs.

By implementing these strategies, XPeng Motors is expected to achieve profitability in 2025 and enhance market competitiveness. However, this paper also has certain limitations. The data are mainly from the given documents, lacking comparative data with more similar enterprises, and the research depth is limited. Future research can add more industry data and competitor analysis, explore the implementation effect of long-term strategies, and provide more comprehensive reference for XPeng Motors' sustainable development.

References

[1] Zhang, L., & Wang, C. (2021) Technological Iteration and Evolution of Market Competition Pattern in the New Energy Vehicle Industry. *Automotive Engineering, 43*(5): 689-696.

[2] Li, M., & Liu, F. (2022) The Formation Mechanism of Tesla's Brand Premium and Its Enlightenment to Chinese Automobile Enterprises. *China Industrial Economics*, (3): 124-140.

[3] Wang, H., & Zhang, L. (2020) The Core Logic and Practical Path of BYD's Cost Control Model. *Industrial Technology Economics, 39*(8): 78-84.

[4] Chen, Y., & Zhao, Y. (2023) Research on the Financial Risk Characteristics and Control Strategies of New Forces Automobile Enterprises. *Accounting Research*, (2): 98-107.

[5] China Association of Automobile Manufacturers. (2023) China New Energy Vehicle Industry Development Report.

[6] Liu, J., & Chen, M. (2022) Research on the Technological Innovation Path of Intelligent Electric Vehicle Enterprises—A Case Study of XPeng Motors. *Science & Technology Progress and Policy, 39*(11): 89-96.

[7] Zhao, W., & Sun, J. (2021) Market Competition Situation and Enterprise Response Strategies of New Energy Vehicles. *China Journal of Highway and Transport, 34*(7): 210-218.

[8] XPeng Motors. (2019-2023) *XPeng Motors Annual Financial Report*.

[9] Huajing Intelligence Network. (2023) *New Energy Vehicle Industry Competition Pattern Analysis Report*. https: //www.huaon.com/

[10] East Money Network. (2023). *Interpretation of XPeng Motors' Financial Data* [EB/OL]. https: //www.eastmoney.com/

[11] iResearch. (2023) *China Intelligent Electric Vehicle Market User Research Report.*

[12] Autohome. (2023) *Market Reputation Analysis of XPeng Motors' Models* [EB/OL]. https: //www.autohome.com.cn/

[13] GuruFocus. (2023) *XPeng Motors Z-score Analysis Report* [EB/OL]. https: //www.gurufocus.com/

[14] Li, T., & Wu, T. (2022) Obstacles and Countermeasures for Chinese New Energy Vehicle Enterprises' Overseas Market Expansion. *Journal of International Trade*, (6): 78-92.

[15] D1EV. (2023) *Impact Analysis of Price War in the New Energy Vehicle Industry* [EB/OL]. https: //www.d1ev.com/

[16] Analysys. (2023) *New Energy Vehicle Industry Supply Chain Development Trend Report.*

[17] Wang, Y., & Zhang, H. (2021) Research on the Digital Marketing Strategy of New Energy Vehicle Enterprises. *Journal of Marketing Science, 17*(3): 102-118.