

Financial Pain Points in BYD's Premiumization Strategy: An Analysis Based on the Profitability of Denza, Fangchengbao, and Yangwang

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Abstract. Against the backdrop of the global new energy vehicle market shifting from policy-driven growth to market-driven competition, Chinese domestic brands face the dual pressure of low-end lock-in and price wars, making brand premiumization an important path for breaking through profitability constraints. Taking BYD as a case study, this paper focuses on its three premium brands, Denza, Fangchengbao, and Yangwang. Based on annual reports from 2021 to 2025 and publicly available literature, this paper applies a three-dimensional strategy-input-output framework to analyze the financial performance of BYD's premiumization strategy. The study finds that BYD's premiumization is supported by a solid technological foundation, including the second-generation Blade Battery, which improves safety and charging, the fifth-generation DM technology, which optimizes energy consumption, the DiSus system, which upgrades chassis experience, and God's Eye, which strengthens intelligent driving. These technologies significantly enhance product competitiveness. However, premium-brand sales have not yet been effectively converted into profits. In 2025, the gross margin of the automobile business, net profit attributable to shareholders, net profit excluding non-recurring gains and losses, and operating cash flow all came under pressure, indicating that BYD remains in transition from the investment stage to the return stage. The core financial pain points lie in insufficient scale, limited brand premium, and an imbalance between input and output. This paper provides a staged financial evaluation perspective for the premiumization transformation of domestic brands.

Keywords: BYD, brand premiumization, premium models, profitability, financial analysis

1. Introduction

China's new energy vehicle market has shifted from rapid growth to stock-market competition, and the escalating price war since 2024 has compressed profit margins in the mid- and low-end segments. Relying on its vertically integrated advantages in batteries, motors, electronic controls, and vehicle manufacturing, BYD has built strong cost competitiveness. However, its best-selling models have long been concentrated in the RMB 100,000-200,000 price range, and the pressure of revenue growth failing to translate to corresponding profit growth has gradually emerged. Against

this background, Denza, Fangchengbao, and Yangwang have become important levers for BYD to move upward into the RMB 300,000 to 1 million-yuan market.

Existing studies have discussed BYD from the perspectives such as its profit model, industrial development model, brand premium, profitability, and industrial upgrading, as well as the strategic path under the dual-carbon goals, suggesting that technological R&D, industrial-chain integration, and brand credibility can form profitability barriers [1-6]. However, the interaction among premium-brand sales, R&D and channel investment, and group-level profits still lacks continuous annual financial testing, and technology projects are seldom examined together with input-output performance within a unified framework.

This paper addresses three questions: whether premium brands improve BYD's profitability; whether core technologies can be converted into brand premium; and whether the inputs into the premiumization strategy have achieved the expected financial returns. Using a case-study method, the paper constructs a strategy-input-output framework and integrates comprehensive annual reports, model-sales disclosures, and relevant literature to examine the profitability of premium models and their financial pain points, thereby evaluating the implementation effectiveness of the brand premiumization strategy from the perspective of financial performance.

2. Resource input structure under the premiumization strategy

From a financial perspective, brand positioning defines direction of investment, R&D innovation drives product differentiation, and channels and services ensure value delivery. Whether these three factors align with sales and profit growth determines the financial return efficiency of premiumization inputs.

2.1. Premium brand matrix: strategic positioning of Denza, Fangchengbao, and Yangwang

The foundation of BYD's brand premiumization lies in its long-established capability in vertical integration across the industrial chain. The 2021 annual report disclosed that the company's businesses covered automobiles, handset components and assembly, rechargeable batteries, photovoltaics, and other fields, and that the company emphasized independent R&D as well as an integrated production model for complete vehicles and core components [7]. This model enables the company to establish cost and supply-chain advantages in the mainstream market while also providing a basis for technology sharing among premium brands.

In terms of strategic division of labor, Denza targets family luxury and business mobility, Fangchengbao emphasizes off-road, outdoor, and personalized lifestyle scenarios, and Yangwang uses million-yuan models to demonstrate technological height. These three brands do not merely raise product prices; rather, they form a brand matrix through which BYD shifts from scale competition to value competition. The objective is to further transform the technological advantages accumulated by the main brand into pricing power for premium brands and to achieve a transition from cost competition to value competition.

2.2. R&D investment intensity: capitalization and expensing of premium technology projects

R&D investment is the core resource supporting the premiumization strategy. In 2025, BYD's R&D expenditure reached RMB 63.4 billion, and its R&D workforce exceeded 120,000 employees, with a focus on power batteries, electric platforms, plug-in hybrid systems, intelligent chassis, and intelligent driving [8-11]. From 2021 to 2025, its R&D expenditure increased from RMB 10.627

billion to RMB 63.441 billion, and R&D intensity rose from 4.92% to 7.89%, with a marked increase after 2023 [7-11]. In a horizontal comparison, in 2025 Changan, Great Wall Motor, and SAIC invested RMB 12.576 billion, RMB 10.378 billion, and RMB 21.706 billion in R&D respectively, with R&D intensities of 7.67%, 4.66%, and 3.36%. BYD ranked first in both absolute investment and R&D intensity, but its intensity was only 0.22 percentage points higher than Changan's, indicating that sustained high R&D investment has become a common competitive feature among domestic automakers [12-14]. In 2025, BYD's R&D expenses were RMB 57.978 billion, capitalized R&D investment was RMB 5.463 billion, and the capitalization rate increased from 1.78% in 2024 to 8.61%. Capitalization can reduce current expenses, but it also creates subsequent amortization and investment-recovery requirements. Therefore, rising R&D intensity does not necessarily mean immediate improvement in profitability [10, 11].

From the perspective of R&D outcomes, BYD has continued to promote technological innovation in power batteries, hybrid systems, intelligent chassis, and intelligent driving. The 2025 annual report disclosed that the second-generation Blade Battery, fifth-generation DM technology, DiSus intelligent body control system, and God's Eye intelligent driving system have gradually been applied to premium-brand models such as Denza, Fangchengbao, and Yangwang, providing a unified technology platform and R&D support for premium products [11].

However, from a financial perspective, R&D investment belongs to the resource-input side of the premiumization strategy. Its ultimate value can be converted into profit contribution only after it generates stable sales, higher gross margins, or brand assets.

2.3. Channel and service investment: the impact of independent network construction on selling expenses

To support intensive product launches and channel expansion, Denza and Fangchengbao introduced a dealer-partner model in 2024 and built a diversified channel system [10]. From 2021 to 2025, the group's advertising and exhibition expenses increased from RMB 1.355 billion to RMB 8.791 billion, while depreciation and amortization rose from RMB 284 million to RMB 3.919 billion. In 2025, selling expenses reached RMB 26.185 billion, and the selling expense ratio increased to 3.26% from 3.10% in 2024 [7-11]. This reflects sustained increases in brand reach and terminal-network investment, but the above figures are reported at the group level and cannot be directly attributed to the independent channel costs of the three premium brands.

The competitiveness of BYD's main brand comes from scale, efficiency, and supply-chain control, whereas premium brands must simultaneously cultivate service experience and emotional value. If sales do not reach break-even scale, channel and service investments will precede profit realization, leading to an input-output mismatch. Therefore, evaluating the efficiency of premiumization inputs should not focus only on selling price; it should also consider indicators such as gross profit per vehicle, output per store, selling expense ratio, and the payback period of channel investment.

3. Profitability evaluation of premium models

However, since the annual reports do not break down revenue, costs, or profits for each of the three premium brands, per-vehicle profitability cannot be directly calculated. Instead, this chapter conducts an indirect evaluation from the dimensions of brand sales, group-level profitability, earnings quality, cash-generating capacity, R&D investment intensity, gross margin of the automobile business, and input-output efficiency.

3.1. Market performance of premium brands: sales growth and market acceptance

Sales volume is an important indicator for evaluating the market performance of premium brands and a prerequisite for the formation of profitability. The 2025 annual report disclosed that the annual sales of Yangwang, Denza, and Fangchengbao approached 400,000 units, and their share of the group's passenger-vehicle sales further increased compared with 2024. Among them, Fangchengbao's sales grew by 316% year on year, and the combined sales of the three premium brands doubled year on year [11]. From a market-performance perspective, the premium brands have gradually gained consumer recognition: Fangchengbao has expanded to a broader user base, Denza has established a perception of family luxury, and Yangwang serves as a technology flagship.

Nevertheless, sales growth cannot be directly equated with profitability improvement. Compared with the main brand, premium brands require independent channels, dedicated services, and continuous communication. Even with higher selling prices per vehicle, insufficient sales during the ramp-up period may make it difficult to dilute fixed investment. Because the annual reports do not disclose the respective operating revenue, gross margins, or profits of Denza, Fangchengbao, and Yangwang, their profitability can only be indirectly evaluated by combining group-level financial indicators with brand-development conditions.

3.2. Impact of premiumization on group profitability

From 2021 to 2024, BYD's revenue and profit continued to grow: revenue increased from RMB 216.142 billion to RMB 777.102 billion, net profit attributable to shareholders increased from RMB 3.045 billion to RMB 40.254 billion, and return on equity (ROE) rose from 3.73% to 26.05%, reflecting the sustained benefits of scale expansion and technological advantages [7-10].

However, profitability faced significant pressure in 2025 (see Table 1): revenue continued to grow, but net profit attributable to shareholders, net profit excluding non-recurring gains and losses, operating cash flow, and ROE all declined [11]. Revenue from the automobile business increased by 5.06% year on year, yet its gross margin fell from 22.31% to 20.49% [10, 11]. This indicates that sales growth of premium brands had not yet offset the pressures of price competition, rising costs, and early-stage investment. Although premiumization can raise selling price and gross profit per vehicle, group profit elasticity may still be weakened if R&D, channel, and service investments rise simultaneously.

Table 1. Core financial indicators of BYD from 2021 to 2025 (amounts in RMB 100 million) [7-11]

Year	Revenue	Attributable Net Profit	Operating CF	ROE
2021	2161.42	30.45	654.67	3.73%
2022	4240.61	166.22	1408.38	16.14%
2023	6023.15	300.41	1697.25	24.40%
2024	7771.02	402.54	1334.54	26.05%
2025	8039.65	326.19	591.36	15.31%

Table 2. Earnings quality indicators of BYD from 2021 to 2025 (unit: %) [7-11]

Year	Net Margin	Ex-nonrecurring Net Margin	Operating CF/Revenue	R&D Intensity	Auto Gross Margin
2021	1.41	0.58	30.29	4.92	17.39
2022	3.92	3.69	33.21	4.77	20.39
2023	4.99	4.73	28.18	6.63	23.02
2024	5.18	4.76	17.17	6.97	22.31
2025	4.06	3.66	7.36	7.89	20.49

As shown in Table 2, from 2021 to 2023, the net profit margin rose from 1.41% to 4.99%, the net profit margin excluding non-recurring gains and losses rose from 0.58% to 4.73%, ROE increased from 3.73% to 24.40%, and the gross margin of the automobile business rose from 17.39% to 23.02%, confirming the role of scale and industrial-chain advantages in driving profitability [7-9]. In 2024, the net profit margin and ROE reached a high point, but the operating-cash-flow-to-revenue ratio fell to 17.17% and the automobile gross margin fell to 22.31%, indicating that earnings quality had begun to weaken. In 2025, revenue growth was only 3.46%, profitability and cash-flow indicators declined further, while R&D investment intensity rose to 7.89%, showing a pattern of higher input but lower profit and cash conversion [10, 11].

The above indicators are indirect evidence at the group and automobile-business levels, and the financial decline in 2025 cannot be attributed entirely to the three premium brands. However, combined with the fact that the sales of the three brands doubled year on year, this suggests that the market results of premiumization had not yet provided sufficient profit and cash-flow buffers [11].

3.3. Ability to form brand premium: analysis based on technological support and brand positioning

Brand premium is reflected not only in higher product prices, but also in whether consumers are willing to continue paying higher prices for brand image, service experience, and identity recognition with similar technology platforms, comparable configurations, or in the same usage scenarios. Relevant research suggests that brand credibility affects consumer choice, product prices, and profit levels [3]. For BYD, the key financial value of its premium brands lies in whether technological advantages can be further transformed into brand value recognized by consumers.

BYD's long-established advantages are mainly reflected in technological reliability, cost control, and sufficient configurations. These advantages can support competition in the mainstream market, but they do not automatically create the brand scarcity, identity symbolism, and emotional value required by luxury brands. In terms of the premium formation mechanism, technology itself does not directly create brand value; instead, it must enhance consumers' perceived value through product experience. The second-generation Blade Battery and fifth-generation DM technology improve vehicle safety, range, charging efficiency, and usage economy, thereby establishing product credibility for premium models. Technologies such as DiSus, e3, e4, and God's Eye further improve chassis comfort, vehicle handling, intelligent-driving experience, and safety performance, enabling consumers to directly perceive the differentiated experience brought by technology (see Table 3). This transformation from technological advantage to product experience and then to brand recognition is an important path for forming brand premium [11].

At the same time, BYD has adopted differentiated positioning strategies for different brands. Denza relies on e3, DiSus-A, and God's Eye B to shape an image of new luxury defined by technology and safety. Fangchengbao combines hybrid technology, DiSus, and off-road scenarios to highlight a personalized lifestyle. Yangwang uses e4, DiSus-P/Z, and God's Eye A to build a technology-flagship image and premium-brand perception [11]. Although the brands share underlying technology platforms, differentiated brand positioning meets the needs of different consumer groups and thereby strengthens consumers' willingness to pay a premium. Nevertheless, technology is only a necessary condition for forming a premium; long-term premium still depends on service experience, brand identification, residual-value expectations, and price stability.

Table 3. Core technologies for premiumization and their financial implications [11]

Technology	Premiumization Role	Financial Implication
Second-generation Blade Battery	Safety, range, fast charging, and low-temperature charging	Enhances basic trust in premium models
Fifth-generation DM	Low fuel consumption, long range, and AI energy management	Reduces usage costs for large vehicles
DiSus	Chassis quality, comfort, and passability	Creates a technology-enabled luxury experience
God's Eye	Intelligent-driving safety, data iteration, and parking assistance	Strengthens intelligent brand premium

3.4. Input-output efficiency analysis of premiumization

The input-output efficiency of premiumization should be observed simultaneously through R&D investment, incremental sales, changes in gross margin, and cash flow. In 2025, BYD's R&D investment reached RMB 63.4 billion, and the combined sales of its premium brands doubled year on year [11]. From a strategic perspective, technology investment has already improved product visibility and sales structure. However, in the same year, net profit attributable to shareholders, net profit excluding non-recurring gains and losses, operating cash flow, and the gross margin of the automobile business all declined, indicating that premiumization inputs had not yet been fully converted into incremental group profit [11].

Therefore, input-output efficiency in premiumization cannot be judged only by whether premium models are launched or whether sales grow; the speed of input recovery must also be considered. If R&D, channel, and service investments grow faster than profit realization, premiumization will manifest as expense pressure in the short term. Only when premium models can stabilize prices, expand sales, and raise the average gross margin of the automobile business can technology investment generate financial returns. BYD's current technological strength already provides a foundation for moving upward, but the revenue, gross profit, and cash-flow contributions of its premium brands are still not separately disclosed.

4. Pathways of financial pain points

4.1. Triple dilemma of insufficient scale, limited premium, and input-output imbalance

Combined with the analysis in Chapter 3, BYD's premium brands have achieved sales growth and an improved brand matrix, but their profitability still faces three challenges: scale, brand premium, and input-output efficiency.

First, scale insufficiency is the most direct financial constraint. Premium brands require independent positioning and independent channels, but their market capacity is smaller than those of mainstream price segments. Except for a few models that have established strong recognition, most premium models must go through a relatively long ramp-up period. If sales have not yet reached the scale required to dilute fixed costs, brand building, channel services, and R&D verification expenses will precede profit release, causing strategic value to appear earlier than financial value. Specifically, Denza D9 has already formed a certain sales base, but other models still need to expand scale. Fangchengbao's sales grew by 316% year on year in 2025, yet rapid expansion still requires sustained sales volume to dilute channel and service investments. Although Yangwang became the first domestic million-yuan automobile brand with sales exceeding 10,000 units, its market capacity is limited, and brand-display value may emerge before profitable scale [11].

The second dilemma is limited premium. The difficulty for domestic brands in moving upward does not lie in whether they can manufacture high-priced models, but in whether consumers are willing to accept their high-price identity over the long term. The premium of traditional luxury brands comes from history, design, service, community recognition, and residual-value expectations, while BYD's strengths come more from technology, supply chain, and scale efficiency. Denza has established recognition in family and business luxury, Fangchengbao has built identification with personalized scenarios, and Yangwang has created a technology-flagship image. However, the service systems, brand histories, and residual-value expectations of the three brands still require long-term accumulation. If these non-technical factors are not strengthened simultaneously, technological leadership may still be difficult to translate into stable premium.

The third dilemma is input-output imbalance. In 2025, BYD's operating revenue remained high, but net profit attributable to shareholders, net profit excluding non-recurring gains and losses, operating cash flow, and ROE all declined [11]. Although the decline cannot attribute the decline entirely to premium brands, this change indicates that premiumization has not yet fully eliminated group-level profit and cash-flow pressure. In 2025, BYD's R&D investment reached RMB 63.4 billion and R&D investment intensity rose to 7.89%. The combined sales of the three premium brands doubled year on year, but net profit margin, ROE, the operating-cash-flow-to-revenue ratio, and the gross margin of the automobile business all declined, showing that technology and brand investments had not yet been synchronously transformed into financial returns [11].

4.2. From specification stacking to experience premium: a path for profitability improvement

To alleviate the above pain points, BYD needs to shift premiumization from a product-configuration logic to an experience-premium logic. Technical specifications are a necessary condition for entering the premium market, but they are not sufficient. Denza needs to stabilize its reputation in family premium and business scenarios. Fangchengbao needs to build user stickiness around off-road, outdoor, and personalized lifestyles. Yangwang needs to continue serving as a technology flagship to raise the ceiling of the group's brand image.

At the level of financial management, premium brands should establish more refined input-output assessments, distinguish brand-display investments from sales-conversion investments, and focus on store-level efficiency, contribution per vehicle, channel payback period, operating cash flow, and net profit excluding non-recurring gains and losses. At the technological level, they should also move from configuration leadership to a closed loop of experience, integrating the Blade Battery, fifth-generation DM, DiSus, and God's Eye into charging, safety, comfort, intelligence, and service commitments. Only when premium brands expand sales while maintaining price stability and translate technology experience into gross-margin contributions above the average level of the main brand will brand premiumization have solid financial significance.

5. Conclusion

Through analysis based on the strategy-input-output framework, this paper finds that BYD's brand premiumization strategy has clear necessity. Against the backdrop of intensifying price competition and compressed profit margins in the mainstream new energy vehicle market, premiumization is an important path for enterprises to break away from low-price competition, improve product structure, and pursue a second growth curve. BYD's advantage lies in its relatively systematic technological reserves: the second-generation Blade Battery addresses concerns over safety, range, and charging; fifth-generation DM alleviates the conflict between energy consumption and range for large premium models; DiSus improves chassis quality and scenario-based passability; and God's Eye strengthens intelligent safety, efficiency, and data iteration. However, the study also shows that premiumization does not automatically equal high profit. From 2021 to 2024, BYD's revenue, profit, and ROE increased rapidly, indicating that scale expansion and industrial-chain advantages had effectively released profits. In 2025, operating revenue remained high, but net profit attributable to shareholders, net profit excluding non-recurring gains and losses, operating cash flow, and ROE all declined significantly, indicating pressure on profitability elasticity and cash-flow quality. Combined with the logic of premium-brand building, BYD's brand premiumization faces three financial pain points: insufficient scale, limited premium, and input-output imbalance. The core contradiction lies in the dilemma between scale expansion and premium maintenance: pursuing scale may require price discounts, while maintaining premium may restrict sales volume. Therefore, the key to BYD's future premiumization is not simply to continue expanding the price range, but to improve the efficiency with which technological strength is converted into financial results. Denza needs to assume the task of stabilizing sales and profit contribution, Fangchengbao needs to build user stickiness in differentiated scenarios, and Yangwang needs to serve as a technology flagship to raise the group's brand ceiling. This paper has limitations: the annual reports do not disclose the independent revenue, gross margins, or profits of the three premium brands, so the relevant judgments remain indirect inferences. Future research may supplement model-level sales, terminal transaction prices, store efficiency, customer satisfaction, residual-value performance, and competitor data to enable more detailed calculations of the true profitability of premium brands.

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