

Analysis of the Impact of ESG Performance on Corporate Financial Performance: A Case Study of China Feihe Limited

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Abstract: Amid the global sustainability movement and China's "dual carbon" commitments, ESG (Environmental, Social, and Governance) has become a pivotal driver of corporate transformation and long-term viability. This paper examines China Feihe Limited to investigate the relationship between ESG performance and financial outcomes over 2022–2025. The results suggest a non-linear relationship: during upswings, ESG contributes to profit growth through cost efficiencies and pricing power; during downturns, however, its inherent cost rigidity tends to amplify earnings volatility. Nevertheless, ESG-driven structural improvements and enhanced financial resilience can buffer downturns. The financial effects of ESG thus vary with the business cycle. Accordingly, firms should capitalize on its amplifying benefits during expansions while proactively managing cost rigidities in contractions, so as to strike a dynamic equilibrium between near-term profitability and sustained value creation.

Keywords: ESG; Feihe; Financial Performance.

1. Introduction

Given China's "dual carbon" commitments and the global sustainability movement, corporate value assessment is undergoing a profound transformation. Traditional financial analysis alone no longer suffices to capture an enterprise's long-term competitiveness—non-financial factors such as environmental compliance, social responsibility, and governance effectiveness have become critical dimensions in evaluating sustainability. ESG has emerged as a comprehensive assessment paradigm that transcends the conventional finance-centric approach, offering a non-financial lens to evaluate long-term growth potential and risk resilience. Today, ESG is more than a screening criterion for investors; it enables firms to secure financing advantages, build brand trust, and optimize governance structures amid the green transition.

ESG is particularly salient in the dairy industry. The upstream segment is intrinsically linked to agriculture, ecology, and natural resource systems—encompassing carbon emissions, water consumption, and animal welfare. The midstream involves food safety and quality control, touching upon product liability and consumer confidence. The downstream extends to a broad consumer base and broader social welfare concerns, including nutritional health and community engagement. As a leading player, China Feihe Limited has systematically published ESG reports and refined its ESG strategy since 2020, establishing an ESG Governance Committee in 2022. The company's MSCI ESG rating was upgraded to A in 2022 and has since maintained a sector-leading position, with multiple inclusions in authoritative rankings such as the "China ESG Listed Companies Pioneer 100." Through sustained commitments to green transformation, social responsibility, and governance enhancement, Feihe presents an exemplary case for examining the nexus between ESG practices and financial performance.

Firms undergoing sustainability transitions commonly face

concurrent financial and operational pressures, particularly under resource constraints [1]. Against this backdrop, ESG principles have come to be regarded as pivotal pathways for corporate transition and sustainable development [2]. In recent years, ESG practices in China have advanced rapidly. Among A-share manufacturing listed companies, the proportion issuing standalone ESG reports rose from less than 15% in 2020 to 42% in 2024 [3]. Nevertheless, the academic literature has yet to reach a consensus on the relationship between ESG and financial performance. Some scholars contend that ESG performance exerts a facilitating effect: proactive ESG disclosure alleviates information asymmetry and reduces agency costs, thereby enhancing financial outcomes [4]. Empirical studies based on A-share listed firms over 2015–2023 further indicate that ESG ratings significantly improve financial performance, with this positive effect more pronounced among non-state-owned enterprises, firms in less environmentally sensitive industries, and those in regions with lower marketization [5]. Conversely, other studies adopt a more cautious stance, positing that ESG, as an externalized cost, may impede financial performance. For example, the effect of ESG performance on financial outcomes in industrial firms follows a non-linear pattern: in the initial phase, ESG commitments raise operating costs and depress financial performance; only after crossing a certain threshold does ESG investment begin to contribute to financial improvement [6].

This study investigates China Feihe Limited, drawing on ESG and financial performance data over 2022–2025 to examine the relationship between ESG and corporate performance. The findings offer actionable insights for enterprises seeking to advance sustainable development goals and fulfill environmental and social responsibilities while simultaneously enhancing financial performance.

2. The Case Overview of Feihe

2.1. Company Profile

Founded in 1962, Feihe was originally established as the Zhaoguang Farm Dairy Plant under the Heilongjiang Provincial Bureau of State Farms and Reclamation, making it one of the longest-established enterprises in China's dairy powder industry. The company specializes in the research, development, and production of infant formula powder and is one of the few domestic dairy enterprises that have achieved an integrated "farming–animal husbandry–processing" full-industry-chain layout, operating 13 modern core production facilities, 13 self-owned pastures, and 1 million mu of dedicated farmland. In November 2019, Feihe was listed on the Main Board of the Hong Kong Stock Exchange, with an initial market capitalization exceeding HK\$67 billion, which marked the largest IPO by market value among dairy companies in the Exchange's history.

With respect to ESG ratings, Feihe has consistently published ESG reports since its listing in 2019, issuing its

inaugural Environmental, Social and Governance Report in 2020. At the end of 2021, MSCI assigned the company a BBB rating, which was upgraded to A in 2022—the highest rating among Chinese food industry firms at that time. Overall, through sustained commitments to green manufacturing, supply chain responsibility, and corporate governance, Feihe has been repeatedly featured on authoritative rankings such as the "China ESG Listed Companies Pioneer 100." Its ESG practices have matured into a comprehensive system spanning strategy formulation through to operational execution.

2.2. ESG Performance of Feihe

Feihe has established a three-tier ESG governance architecture comprising the Board of Directors, the Environmental, Social and Governance (ESG) Committee, management, and execution-level units (see Figure 1). With clearly defined roles and responsibilities across each tier, the company has formed a closed-loop "decision-making–coordination–execution" ESG governance mechanism that ensures effective implementation of its ESG strategy.

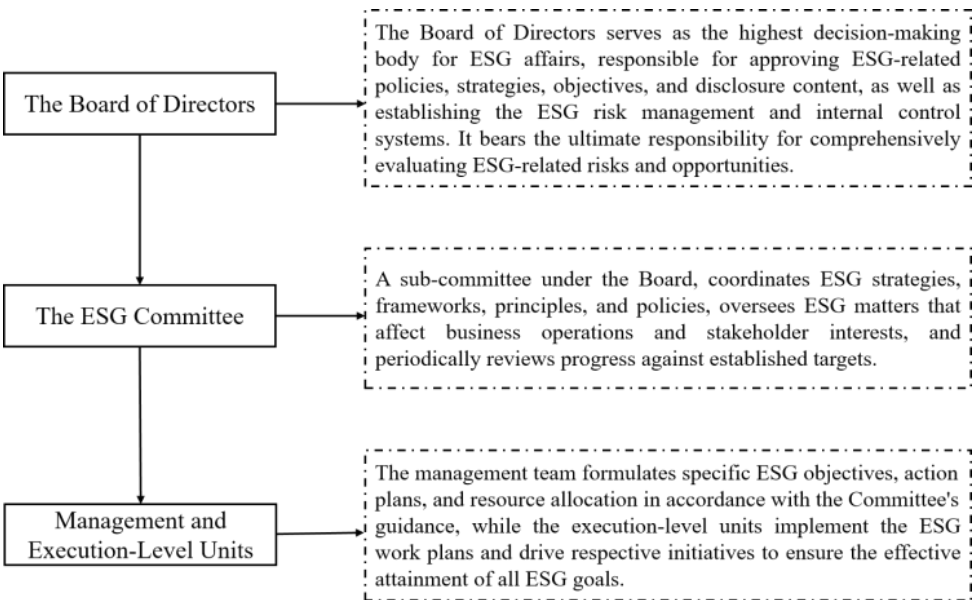


Figure 1. Three-Tier ESG Governance Architecture of China Feihe Limited

2.2.1. Environmental Dimension

Feihe's environmental strategy has evolved from a "compliance-driven emissions reduction" approach to one centered on "value circulation." In its early phase, the company focused on end-of-pipe treatments such as coal-to-gas conversions, becoming the first dairy enterprise to complete a full-facility clean-energy transition. Building on this foundation, Feihe further incorporated upstream agricultural waste into its resource recycling system. Through its "biogas and organic fertilizer comprehensive recycling and utilization" project, the company converts cattle manure from its pastures and agricultural straw into clean energy and organic fertilizer, processing 40,000 tons of corn straw and 100,000 tons of manure annually, which are then returned to support forage cultivation—forming a closed-loop "planting–breeding" system. This model reconceptualizes environmental costs as value-chain components: waste is transformed from a disposal cost into a productive input, while the substitution of chemical fertilizers with organic alternatives generates synergies between environmental and economic benefits. As of 2025, all plants have obtained ISO 9001 and FSSC 22000 certifications, with six facilities

recognized as national-level green factories. Environmental investment has thus shifted from end-of-pipe compliance to value-chain integration.

2.2.2. Social Dimension

Feihe's social responsibility practices leverage its supply chain as a conduit, transmitting the core enterprise's ESG standards to small and medium-sized suppliers. The company has instituted a full-life-cycle management system encompassing access control, auditing, and capacity-building. Through technical training programs, it has guided over 200 SME suppliers through environmental upgrades and facilitated water-conservation projects among 30 raw material suppliers. This "large-drives-small" mechanism harnesses the bargaining power inherent in procurement relationships to distribute compliance costs across the supply chain network while enhancing overall resilience. In terms of industry-oriented poverty alleviation, Feihe has capitalized on its cluster-based industrial model—integrating factories, pastures, cooperatives, and farming households—to embed dairy sourcing within the local agricultural system. By leveraging its full-industry-chain integration capabilities, the company has driven the large-scale, technology-driven

development of upstream forage cultivation and milk sourcing. As of the end of 2025, Feihe has cumulatively created 170,000 job opportunities, boosted the incomes of 150,000 farmers, and enhanced the value of over 1 million mu of cultivated land in Heilongjiang Province, contributing significantly to the transfer of rural labor and the optimization of industrial structure.

2.2.3. Governance Dimension

Feihe's governance framework is distinguished by its capacity for synchronous responsiveness to business innovation. The company has established a closed-loop "three lines of defense" mechanism encompassing risk identification, assessment, and response. In 2025, it conducted over 30 special-purpose audits, achieving 100% coverage of core business operations. Feihe has integrated emerging risks—including AI applications, live-streaming commerce, and personal data protection—into its risk control framework, introducing or revising 55 policies and procedures. This demonstrates that governance rules no longer lag behind business expansion but evolve in parallel with digital transformation. On the digital enablement front, Feihe initiated its digital transformation in 2010 and advanced to a comprehensive digital upgrade in 2018. It has since established smart manufacturing capabilities in its digital factories, an ERP core business system, and a unified office platform. In 2025, the company was recognized on the Ministry of Industry and Information Technology's "Excellent-Level Smart Factory" list. Digital capabilities have thus been elevated from operational support to governance infrastructure.

3. The application value of traditional embroidery in modern fashion designThe Impact of ESG Performance on Financial Performance

3.1. Profitability: The Dual Effects of ESG Enablement and Cost Rigidity

As shown in Table 1, Feihe's gross profit margin remained consistently around 65% over 2022–2025, attributable to a triple-channel enabling effect of ESG. First, green manufacturing reduced energy consumption costs, while the planting–breeding recycling system converted waste into energy. In 2025 alone, the company's plant-level energy-saving and consumption-reduction initiatives saved 2.49 million kWh of electricity and 5.68 million cubic meters of natural gas. Second, brand trust underpinned pricing power: the extensive membership base of the Xingmahui platform drove sustained repurchase rates among existing customers, enhancing the company's pricing autonomy. Third, governance transparency lowered financing costs, as the company's ESG rating advantage enabled bond coupon rates below industry averages, thereby reducing interest expenses.

Nevertheless, net profit attributable to parent company shareholders declined consecutively from RMB 4.942 billion in 2022 to RMB 1.939 billion in 2025. This divergence between gross and net profitability reveals the countervailing effects of ESG—cost rigidity. ESG infrastructure requires continuous investment: environmental protection expenditure reached RMB 45.04 million in 2025, representing a 57.7% year-on-year increase, with the planting–breeding recycling project incurring annual outlays of approximately RMB 14.44

million. Moreover, the premium brand positioning driven by ESG necessitates sustained brand communication and consumer education, with the selling expense ratio reaching 39.5% in 2025. During the same period, infant formula powder revenue declined by 16.8% year-on-year, attributable to declining birth rates and intensifying industry competition. When revenue comes under pressure, ESG-related fixed expenditures cannot be scaled back synchronously, compressing profit margins on both the revenue and cost sides. In essence, the front-loaded costs with deferred benefits characteristic of ESG is masked during procyclical upswings but becomes fully exposed during downswings.

Table 1. Profitability Indicators of Feihe (2022-2025)

Indicator	2022	2023	2024	2025
Gross profit margin	65.50%	64.80%	66.30%	65.00%
Net profit attributable to parent company shareholders (RMB billion)	49.42	33.9	35.7	19.39

3.2. Operating Capacity: ESG-Driven Efficiency Improvements and Cyclical Fluctuations

Compared with the marked volatility in profitability, Feihe's operating efficiency exhibited a more complex trajectory. As shown in Table 2, the inventory turnover ratio declined from 3.96 to 3.23 in 2023, rebounded to 3.39 in 2024, and then dropped again to 2.72 in 2025. This fluctuating pattern of decline, recovery, and renewed decline reflects the limited buffering effect of ESG-based supply chain management. Feihe has embedded ESG screening throughout the supplier life cycle—from access qualification assessments to monthly performance reviews (covering quality, delivery, and service) and annual comprehensive evaluations—forming a closed-loop management system. This mechanism unlocked efficiency gains during the industry's recovery phase, as evidenced by the modest 5.0% rebound in inventory turnover in 2024. However, when infant formula powder revenue dropped by 16.8% in 2025, the inventory build-up resulting from weakened terminal demand still drove a sharp 19.8% decline in the turnover ratio. While green suppliers identified through ESG screening demonstrated superior on-time delivery and qualified product rates, this efficiency premium was largely offset by the industry-wide demand contraction.

Accounts receivable management, by contrast, exhibited greater resilience. DSO increased from 7.67 days in 2022 to 7.94 in 2023, then improved to 7.17 in 2024 (a 9.7% reduction), and increased slightly to 7.58 in 2025 (a 5.7% increase)—yet still at an extremely low level in absolute terms. This performance significantly exceeded industry averages. The underlying driver lies in the channel trust accumulated under Feihe's ESG governance framework: brand reputation strengthened distributors' willingness to pay, with the proportion of prepayments from B-side customers steadily rising, while the digital risk-control platform enabled real-time monitoring and dynamic management of receivables. Even in 2025, a year of significant revenue decline, DSO only marginally increased to 7.58 days, illustrating the institutionalized disciplinary effect of ESG governance on channel relationships.

Table 2. Operating Capacity Indicators of Feihe (2022-2025)

Indicator	2022	2023	2024	2025
Inventory turnover ratio (times)	3.96	3.23	3.39	2.72
Days sales outstanding (days)	7.67	7.94	7.17	7.58

3.3. Growth Capacity: ESG-Driven Structural Transformation

Feihe's core infant formula powder business faces formidable headwinds. Affected by the continued decline in newborn births (approximately 7.9 million in 2025) and intensifying industry competition, infant formula powder revenue fell from RMB 19.062 billion in 2024 to RMB 15.868 billion in 2025, a year-on-year decrease of 16.8%.

Nevertheless, the strategic initiatives undertaken within the ESG governance framework are opening up new growth avenues. Whole-life-cycle nutritional products have emerged as a critical second growth engine—revenue from other dairy products (adult milk powder, liquid milk, etc.) increased from RMB 1.514 billion in 2024 to RMB 2.061 billion in 2025, representing year-on-year growth of 36.1% and a revenue share expansion from 7.3% to 11.4%. The Aiben small-molecule protein special dietary powder received the Special Prize of the China Dairy Industry Association Science and Technology Progress Award. In 2024, Feihe's Canadian facility obtained the first local infant formula powder production permit in the region and commenced commercial production in September of that year, marking a breakthrough in overseas markets. Driven by ESG-motivated product portfolio restructuring, Feihe is transitioning from a single-product-dependent growth model to a multipolar configuration encompassing infant formula, adult nutrition, and functional foods.

3.4. Solvency: The Institutionalization of ESG Financing Advantages

As shown in Table 3, Feihe has maintained a highly robust financial structure. The debt-to-asset ratio declined from 28.27% in 2022 to 23.26% in 2025, while the quick ratio fluctuated from 3.00 to 2.72 over the same period, which peaked at 3.35 in 2024—all remaining within an extremely safe range.

This margin of safety derives from three ESG governance dimensions. On the financing front, the company's consecutive A-grade information disclosure ratings from the Shanghai Stock Exchange, coupled with the external validation of its MSCI A-level ESG rating, have effectively reduced creditors' risk premium requirements. In 2024, both the corporate bond coupon rate and green special loan interest rates outperformed industry averages, demonstrating that ESG governance transparency and external ratings have translated into quantifiable financing cost advantages. On the financial strategy front, the company avoided increasing leverage during the industry downturn; the debt-to-asset ratio remained stable with a slight downward trend, and the quick ratio stayed above 2.7x, consistent with the prudent financial philosophy embedded in the ESG risk-control framework. On the cash flow front, net operating cash flow reached RMB 2.214 billion in 2025, while cash and cash equivalents amounted to RMB 7.339 billion—sufficient to cover all interest-bearing liabilities. The combination of a low gearing ratio, high liquidity, and ample operating cash flows has provided Feihe with adequate solvency and financial buffers despite substantial profit decline and industry adjustment.

Table 3. Solvency Indicators of Feihe (2022–2025)

Indicator	2022	2023	2024	2025
Debt-to-asset ratio	28.27%	27.24%	23.28%	23.26%
Quick ratio	3.00	3.03	3.35	2.72

4. Transmission Mechanism Analysis

Feihe's financial data reveal the complex operative mechanisms of ESG effects: rather than being constant, the financial implications of ESG exhibit asymmetric characteristics that shift with the phase of the business cycle.

Procyclical Amplification Mechanism During Upswings. During the business cycle upturn in 2024, certain positive effects of ESG materialized. Feihe's brand and service strengths, combined with the delivery efficiency improvements derived from green supply chain screening, contributed to the gross profit margin of infant formula powder reaching a historical high of 71.3%. At this stage, the "cost reduction" and "premium pricing" channels of ESG created a virtuous cycle.

Cost Rigidity Effect During Downturns. As the business cycle accelerated its downturn in 2025, the countervailing side of ESG manifested. Brand communication and channel maintenance expenditures exhibit short-term rigidity. When infant formula powder revenue fell by 16.8%, the selling expense ratio was passively driven to 39.5%. Compounded by the contraction in revenue scale, the net profit margin declined from 17.2% in 2024 to 10.7%.

Structural Hedging Effect During Downturns. Yet, even as the income statement came under pressure, the structural transformation driven by ESG provided a critical buffer. The whole-life-cycle nutrition strategy supported the adult milk powder business in achieving countercyclical growth of 36.1%, partially offsetting the decline in the core business. More importantly, the financial safety margin built through the ESG governance system—a debt-to-asset ratio of 23.26% and cash and cash equivalents of RMB 7.339 billion—has enabled the company to maintain ample solvency and the financial wherewithal for strategic transformation even amid significant earnings volatility.

5. Conclusion

Feihe's practice demonstrates that the relationship between ESG performance and financial performance is not a straightforward linear positive correlation; rather, the financial effects of ESG exhibit directional variations that shift with the stage of the business cycle. During upward phases, ESG empowers profit growth through the accumulation of brand trust and improvements in supply chain efficiency. During periods of operating pressure, the rigid costs inherent in ESG tend to amplify short-term earnings volatility, yet the product portfolio restructuring and financial resilience driven by ESG can provide a downside buffer. For enterprises, the key challenge is to manage the dynamic equilibrium between short-term profit pressures and long-term value creation. Offsetting the decline in infant formula through the adult milk powder business, and maintaining a low-leverage strategy to preserve the margin of safety for transformation, suggest that the combination of ESG-driven structural transformation and financial prudence is critical for navigating cyclical volatility. For investors, the implication is that they should focus on the differentiated performance of ESG-leading firms across distinct stages of the business cycle, rather than simplistically equating high

ESG ratings with stability in earnings growth—the long-term value of ESG resides in building corporate resilience rather than eliminating short-term volatility.

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