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The Impact of Goldwind's ESG Performance on Financial Performance

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Abstract

This study examines the impact of ESG (Environmental, Social, and Governance) performance on financial performance, using Goldwind Science & Technology as a case study. By analyzing ESG rating data and financial reports from 2020 to 2024, the research reveals a dynamic bidirectional relationship between ESG performance and corporate financial outcomes. Improvements in environmental performance (e.g., reduced carbon emissions) initially increased costs but enhanced long-term resource efficiency. Social performance optimization (e.g., lower employee turnover) strengthened internal management, while governance deficiencies (e.g., the 2023 rating decline) led to below-average patent conversion rates. Financial indicators demonstrate that ESG performance exerts dual effects across four dimensions-profitability, operational efficiency, solvency, and growth potential. High ESG ratings reduce financing costs and boost market confidence, whereas compliance costs may temporarily suppress profits. The study recommends that companies balance ESG commitments with financial sustainability and refine governance frameworks to improve innovation efficiency.

Keywords

ESG Performance; Financial Performance; Green Transition; Sustainable Development; Corporate Governance.

1. Research Background

The 2025 Central Economic Work Conference explicitly proposed the strategic plan to "balance high-quality development with high-standard environmental protection," listing "comprehensively expanding domestic demand" and "developing new quality productive forces" as key annual tasks. It also emphasized "using technological innovation to drive industrial innovation and accelerate the green and low-carbon transition." This policy direction has heightened the focus of investors and other stakeholders on corporate ESG performance.

China's commitment to achieving carbon peaking by 2030 and carbon neutrality by 2060 has accelerated the energy structure transition and the growth of the low-carbon economy, with the wind power industry playing a pivotal role. However, wind turbine manufacturing faces increasingly stringent ESG scrutiny across its entire value chain-from the rare earth materials in permanent magnets to the disposal of decommissioned blades. Under the dual pressures of China's "dual carbon" goals and global ESG standards, companies like Goldwind must strike a balance between substantial ESG investments and financial sustainability.

Examining the impact of ESG performance on financial metrics not only sets a benchmark for emission reduction in other industries, facilitating the green transition, but also provides valuable insights for the future of the wind power sector, promoting sustainable development.

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2. Research Content and Methodology

2.1. Research Content

This study selects Goldwind Science & Technology as a case study and conducts an in-depth investigation into the impact of its ESG performance on financial performance, based on existing theoretical literature, by systematically analyzing its overall and specific ESG implementation.

First, the study provides an overview of Goldwind's basic profile, using changes in its ESG ratings as an entry point to analyze its ESG performance trends over the past five years.

Second, at the macro level, the study compares Goldwind's ESG ratings with the overall performance of the wind power industry to assess its relative standing. At the micro level, it selects specific performance indicators in environmental, social, and corporate governance (ESG) aspects to conduct a longitudinal time-series analysis of its ESG performance over the past five years.

Then, from four dimensions-profitability, operational efficiency, solvency, and growth capability-the study explores the impact of ESG performance on financial performance.

Finally, based on the research findings, the study provides targeted recommendations for optimizing Goldwind's future ESG development strategy and improving ESG practices and evaluation systems for domestic enterprises.

2.2. Research Methodology

This study employs case analysis, literature review, and quantitative analysis to systematically investigate the impact mechanism of Goldwind's ESG performance on financial performance.

(1) Case Study Method

This study selects Goldwind as a representative case and conducts an in-depth analysis of the relationship between ESG performance and financial performance based on its ESG rating data (MSCI and Hua Zheng ESG ratings) and financial reports from 2020 to 2024. Specific analytical dimensions include:ESG Performance Changes: Comparing the fluctuation trends of Goldwind's ESG ratings (E/S/G) over the past five years, combined with key events such as environmental violations, corporate social responsibility fulfillment, and governance structure optimization, to explore the driving factors behind ESG rating changes； Financial Performance Impact: Analyzing the dynamic effects of ESG performance on financial indicators from four dimensions-profitability, operational efficiency, solvency, and growth capability. For example, the study examines the correlation between the decline in ESG ratings in 2023 and the drop in net profit margin (to 3.02%), as well as the positive impact of the rating recovery in 2024 on net profit growth.

(2) Literature Review Method

By reviewing classic domestic and international literature on the relationship between ESG and financial performance (e.g., Friede, 2015; Tan & Zhu, 2022), the study clarifies the theoretical pathways through which ESG influences financial performance. Positive pathways include ESG performance reducing financing costs (e.g., green bonds), enhancing innovation efficiency (e.g., R&D investment), and optimizing resource utilization (e.g., carbon emission reductions). Negative pathways involve ESG compliance costs (e.g., environmental governance investments) potentially suppressing short-term profits, as seen in Goldwind's 2023 net profit margin decline due to environmental violations.

(3) Quantitative Analysis Method

Based on Goldwind's disclosed ESG scores and financial data, the study employs descriptive statistics and trend analysis to quantify the impact of ESG performance on financial performance. Firstly, Correlation Analysis: By comparing the synchronous fluctuations

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between ESG rating changes (e.g., the environmental score rising from 86.02 in 2023 to 88.99 in 2024) and key financial indicators (e.g., gross margin, R&D expense ratio), the study verifies the direct impact of ESG on financial performance. Secondly, Key Indicator Tracking: For instance, after Goldwind's ESG rating rebounded to Grade A in 2024, its net profit increased by 39.78% year-on-year, whereas during the governance deficiencies in 2023 (BBB rating), its patent conversion rate was only 18%. This quantifies the constraining effect of governance levels on innovation efficiency."

3. Current Researches

3.1. ESG Performance

ESG stands for Environmental, Social, and Governance, representing a company's performance and commitments in these three dimensions. In recent years, current researches have studied that ESG has become a key framework for assessing corporate sustainability globally, playing a crucial role in investment decisions and corporate practices. Baldini et al. (2018) view ESG as an organizational response to public expectations in environmental, social, and governance aspects for compliance purposes. Stuart L[1]. Gillan et al. (2021), on the other hand, equate ESG behavior with corporate social responsibility (CSR)[2].

3.2. The Impact of ESG Performance on Financial Performance

ESG, an acronym for Environmental, Social, and Governance, has become a focal point in financial markets and a significant reference for corporate behavior. ESG integrates CSR and corporate governance performance, serving as an extension and expansion of the CSR concept. So, how does ESG performance affect corporate financial performance? Scholars have conducted extensive research to clarify this relationship.

Most studies suggest that ESG performance positively influences corporate financial performance. Companies with strong ESG ratings are better at attracting and retaining top talent, reducing labor costs, and thereby enhancing corporate performance. Firms with superior ESG performance also gain easier access to financing at lower costs, improving financial outcomes. Friede (2015), through an analysis of over 2,000 empirical studies, found a positive correlation between ESG performance and financial performance, particularly with governance (G) dimensions contributing most significantly[3]. Lu,J.Y. (2022) demonstrated that ESG ratings promote green innovation in Chinese firms by alleviating financing constraints and enhancing managerial environmental awareness. ESG commitments encourage innovation, helping firms develop technological barriers and competitive advantages[4]. H. Lin and X. Gu(2025) showed a negative correlation between bankruptcy risk and ESG performance-each one-level improvement in ESG ratings reduces bankruptcy risk by 12% and financing costs by 0.6 percentage points in manufacturing firms, which is crucial for advancing low-carbon transitions and high-quality development[5].

Giovanni (2021) argues that in today's big data environment, the development of self-media platforms enables a favorable corporate image to better boost investor confidence and enhance brand value[6]. Quinche-Martín (2020) suggests that strong ESG performance can further improve corporate credibility and market value, leading to better financial outcomes. Buachoom (2018) demonstrates that robust ESG practices help stabilize corporate governance structures, effectively resolve internal conflicts, reduce operational costs, and enhance profitability as well as sustainable development capabilities[7]. Kartika (2019) emphasizes that superior ESG performance reflects well-established governance mechanisms, which facilitate better coordination among stakeholders, mitigate agency problems, and ensure efficient corporate operations[8].

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However, some scholars argue that ESG practices may increase corporate costs, harm shareholder interests, and ultimately reduce financial performance. James Cordeiro and Joseph Sarkis (1997), in a survey of 1,992 companies, found a significant negative correlation between environmental activism and corporate financial performance[9].

3.3. Literature Review

In summary, the prevailing view in existing literature supports the notion that ESG performance positively affects corporate financial performance. Strong ESG ratings enhance performance by reducing labor and financing costs, stimulating innovation, and lowering bankruptcy risks. However, findings are not entirely consistent-Cordeiro and Sarkis (1997) noted that ESG practices might increase costs and impair short-term financial performance. Therefore, while the positive impact dominates and drives ESG integration, further research is needed to explore its mechanisms, cost-benefit balance, and contextual variations to provide a more comprehensive understanding and practical guidance.

4. Introduction to Corporate ESG Ratings and ESG Implementation Performance

4.1. Company Profile

Goldwind Science & Technology was founded in 1998 and registered in Xinjiang. The company completed its restructuring in 2001, officially transitioning into a joint-stock corporation. Its capital market journey has been notable: it was listed on the SME Board of the Shenzhen Stock Exchange in 2007 and successfully entered the Main Board of the Hong Kong Stock Exchange in 2010.

As a leading domestic wind power equipment manufacturer, Goldwind focuses on the R&D, production, and full-lifecycle services of wind turbines and key components. Concurrently, the company actively expands into wind farm development, investment, construction, and operation management, while also venturing into water treatment and other renewable energy-related businesses.

Goldwind is a pioneer in implementing Environmental, Social, and Governance (ESG) principles, having voluntarily compiled and published sustainability reports for fourteen consecutive years to systematically disclose its sustainable development practices. Its ESG performance has gained widespread recognition: since being included in the MSCI ESG Leaders Index in 2018, it has maintained this rating for multiple years. In early 2025, Goldwind achieved an "A" rating in the Hua Zheng ESG Ratings, reflecting its outstanding performance in environmental, social, and governance aspects. This accomplishment underscores its leadership in sustainable development and its recognition in international markets.

4.2. Changes in Goldwind's ESG Ratings

This study adopts the more professional and authoritative MSCI ESG Ratings as the benchmark. The MSCI ESG Ratings aim to help investors understand ESG risks and opportunities, enabling them to incorporate these factors into portfolio construction and management. MSCI's ESG ratings are divided into nine tiers from highest to lowest: AAA to CCC. Higher ratings indicate stronger sustainability prospects and greater attractiveness to investors.

With the exception of 2023, Goldwind has maintained relatively stable and high MSCI ESG ratings over the past five years. The rating decline in 2023 primarily resulted from multiple factors: a concentration of environmental compliance violations, underperformance in social responsibility and governance, selective disclosure practices, and reporting deficiencies. Additional contributing factors included a 50% plunge in net profit, structural weaknesses in ESG governance, and generally low ESG disclosure standards among A-share listed companies.

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However, through improved operational management in 2024, the company successfully restored its ESG rating to previous high levels.

Table 1. Goldwind Technology's MSCI ESG Rating (2020-2024)

	2020	2021	2022	2023	2024
MSCI ESG Rating	AA	AA	A	BBB	A

Data Source: MSCI ESG Ratings Report

4.3. Goldwind's Specific ESG Implementation Performance

Goldwind has maintained stable ESG ratings over the past five years, with continuous improvements in its environmental, social, and governance (ESG) sub-scores. This section will analyze Goldwind's recent ESG developments and trends by examining key indicators across these three dimensions.

Table 2. Goldwind Technology's SinoSec ESG Rating (2020-2024)

	2020	2021	2022	2023	2024
SinoSec ESG Rating	BBB	BB	A	BBB	AA
Environment Rating	B	BB	A	A	A
Environment Score	73.47	78.05	87.56	86.02	88.99
Social Rating	A	BBB	BBB	BBB	A
Social Score	87.02	84.05	82.07	82.62	85.08
Governance Rating	BBB	BB	BBB	BBB	BBB
Governance Score	84.96	79.81	84.06	83.09	84

Data Source: SinoSec ESG Ratings Report

4.3.1. Environmental Dimension

Goldwind Technology adheres to green development principles, actively contributing to China's ecological civilization construction. The company aligns with national environmental protection directives and dual-carbon targets for 2025, leveraging its renewable energy advantages to accelerate energy structure transformation. Through green production initiatives and optimized green supply chain management, Goldwind has systematically enhanced resource utilization efficiency.

This study examines three key environmental indicators: Firstly, Total greenhouse gas emissions decreased from 21,199.85 tons (2023) to 18,459.33 tons (2024), representing a 12.9% year-on-year reduction. This achievement stems from continuous optimization of carbon management systems, proprietary carbon accounting platform development, and international certification compliance. Secondly ,Total waste generation declined from 351.86 tons (2023) to 316.94 tons (2024), with 100% recycling rates for construction waste and compliant hazardous waste disposal achieved through enhanced management systems. Thirdly, For offshore wind projects, Goldwind implemented emission control protocols, digital simulation technologies, and intelligent monitoring systems to mitigate marine ecosystem impacts during component transportation and installation.

4.3.2. Social Responsibility Dimension

Corporate social responsibility constitutes a critical component of sustainable development. Goldwind's internal and external social performance is evaluated through:Firstly,employee turnover rate improved from 16.51% (2023) to 14.60% (2024), reflecting leadership enhancement and communication mechanism optimization.Secondly,training hours per employee decreased from 48.5 hours (2023) to 47.3 hours (2024), with strategic reallocation toward managerial staff, suggesting potential automation adoption for frontline

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positions.Thirdly,volunteer hours exhibited significant volatility: 5,840 hours (2022) to 18,680 hours (2023) to 3,371 hours (2024), potentially reflecting strategic realignment during financial performance pressures (44.16% net profit decline in 2023.

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4.3.3. Corporate Governance Dimension

Goldwind integrates ESG principles throughout its operations, with governance performance assessed through:Employee engagement scored 4.44/5 (2024), +0.06 year-on-year; satisfaction reached 4.39/5, +0.07, based on surveys of 8,860 employees;R&D investment increased from ¥2.265 billion (2023) to ¥2.803 billion (2024), with rising proportions of revenue allocation. This investment yielded growing innovation outputs, including patents and technical standard participation.

5. The Impact of Goldwind's ESG Performance on Financial Performance

5.1. Profitability Analysis

Table 3. Profitability Indicator Data (2020-2024)

	2020	2021	2022	2023	2024
Reture on Net Asset(%)	9.57	11.55	6.38	3.45	4.91
Net Profit Margin(%)	5.27	7.43	5.25	3.02	3.27
Gross Profit Margin(%)	17.73	22.98	17.66	13.06	13.80
R&D Expense to Revenue Ratio(%)	2.62	3.11	3.42	3.75	4.37

The financial data reveals a notable decline in profitability metrics, with return on equity (ROE) decreasing from 9.57% in 2020 to 4.91% in 2023, while gross profit margin fell from its peak of 22.98% in 2021 to 13.06% in 2023 before recovering marginally to 13.80% in 2024, indicating sustained pressure on profitability. ESG performance demonstrates a dual impact on financial outcomes through distinct transmission channels. On the positive side, the consistent increase in R&D expenditure ratio reflects substantial investments in green technologies that enhance governance (G) dimension performance, which, while temporarily compressing gross margins, establishes foundations for long-term competitive advantage. Simultaneously, improvements in environmental (E) dimension performance (evidenced by an 88.99 score in 2024 and 12.9% year-on-year reduction in carbon emissions) generated operational cost savings through energy efficiency optimization, partially offsetting raw material price pressures.

Conversely, the negative pathway manifests through ESG compliance costs that eroded profitability, as exemplified by the 2023 environmental compliance incidents that triggered a BBB ESG rating downgrade and coincided with net profit margin plunging to a historic low of 3.02%, demonstrating how governance deficiencies can directly impair earnings capacity. This bidirectional relationship underscores the complex interplay between ESG performance and

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financial results, where strategic ESG investments yield long-term benefits but implementation challenges may create short-term profitability pressures.

5.2. Operational Efficiency

Table 4. Operational Capability Indicator Data (2020-2024)

	2020	2021	2022	2023	2024
Total Asset Turnover Ratio(Times)	0.530	0.445	0.362	0.360	0.380
Inventory Turnover Ratios(Times)	5.869	6.049	4.154	3.048	2.991
Accounts Receivable Turnover Ratio(Times)	3.093	2.293	1.940	2.025	2.012

According to the data in the table, the total asset turnover rate decreased by 28.3 over the five-year period, while the inventory turnover rate dropped sharply from 6.049 times in 2021 to 2.991 times in 2024, a decline of 50.6%. Simultaneously, the accounts receivable turnover ratio fell from 3.093 times to 2.012 times, indicating a 35% deterioration in the efficiency of payment collection.

On one hand, deficiencies in ESG corporate governance have impeded operational efficiency. The deterioration in inventory turnover aligns with the decline in ESG governance scores in 2023, suggesting that the company may have faced raw material backlogs and supply chain management disruptions due to non-compliance with ESG regulatory reviews. Additionally, the employee turnover rate reached 16.51% in 2023, and the instability of the sales team has negatively impacted payment collection efficiency.

On the other hand, the company is currently undergoing a transitional phase in its green transformation. Offshore wind power projects typically have long construction cycles, leading to short-term pressure on asset turnover. Therefore, ESG governance standards serve as a critical indicator of a company's operational efficiency, and the expansion of green production capacity requires more refined operational management."

5.3. Debt Repayment Capacity

Table 5. Solvency Indicator Data (2020-2024)

	2020	2021	2022	2023	2024
Assst-Liability Ratio(%)	67.96	69.31	70.51	71.96	73.96
Current Ratio	0.920	0.961	1.055	1.013	0.954
Quick Ratio	0.801	0.864	0.888	0.771	0.748

The asset-liability ratio has consistently risen from 67.96% to 73.96%, while the company's current ratio has persistently hovered around 1, significantly below the normal range for manufacturing firms. Moreover, the quick ratio even dropped to 0.748 in 2024. ESG factors exert a dual impact on the company's solvency:

On one hand, ESG financing instruments have partially alleviated financial pressure. Despite the increasing leverage ratio, the company’s 2024 Sino-Securities ESG rating of AA enabled the successful issuance of green bonds to refinance high-cost debt, leading to a 1.2 percentage point year-on-year decline in the financial expense ratio.

On the other hand, deficiencies in ESG governance have amplified liquidity risks. During the 2023 period when the ESG governance rating was BBB, the current ratio fell to 1.013 and the quick ratio to 0.771. This demonstrates that ESG ratings play a significant signaling role in debt financing, where superior environmental performance can effectively reduce corporate debt financing costs and expand access to green financing channels.

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5.4. Growth Capacity

Table 6. Growth Capability Indicator Data (2020-2024)

	2020	2021	2022	2023	2024
Year-on-Year Growth Rate of Operating Revenue(%)	47.12	-9.53	-8.77	8.66	12.37
Year-on-Year Growth Rate of Net Profit(%)	34.10	25.91	-36.12	-44.16	39.78
Net Profit Attributable to Parent Company(%)	99.93	98.69	97.81	87.44	100.22

Goldwind Science & Technology's net profit growth rate exhibits significant volatility, plummeting by 44.16% in 2023 before rebounding sharply to 39.78% in 2024. Concurrently, the proportion of green technology revenue increased from 25% in 2020 to 51% in 2024.

The ESG rating has demonstrated a pivotal role in driving this growth inflection point: Following the ESG rating's recovery to grade A in 2024, the net profit rebounded by 39.78% year-on-year, indicating that ESG performance improvements directly enhanced market confidence. The environmental dimension score of 88.99 facilitated policy dividends, with the company securing 32% more green subsidies in 2024.

However, deficiencies in the governance dimension constrain sustainable development: During 2023 when the governance score was 83.09 (BBB), R&D investment reached 2.265 billion yuan, yet the patent conversion rate stood at merely 18%, below the industry average of 25%. This reflects how governance gaps in ESG frameworks can lead to suboptimal innovation efficiency.

6. Conclusion

This study examines the impact of ESG performance on financial statements by analyzing ESG disclosures and financial reports of Goldwind Science & Technology from 2020 to 2024. The findings reveal a dynamic bidirectional relationship between ESG performance and corporate financial performance.

On the environmental dimension, Goldwind achieved sustained reductions in carbon emissions and improved resource utilization. While short-term green technology investments exerted downward pressure on gross margins, long-term energy efficiency optimization offset these costs, as evidenced by a 12.9% year-on-year decline in carbon emissions following improved environmental scores in 2024.

Regarding the social dimension, decreased employee turnover reflected internal management optimization, though fluctuations in volunteer activities indicated strategic reprioritization of non-core operations. In governance, increased R&D investment correlated with patent growth, yet governance deficiencies in 2023 resulted in below-industry patent conversion rates, highlighting governance efficiency's critical role in innovation outcomes.

Financial dimensions exhibited significant dual ESG effects:Profitability: ESG compliance costs temporarily depressed margins (e.g., 2023 environmental violations drove net profit ratios to troughs), while green technology investments established long-term competitiveness; Operational capability: Governance scores directly influenced working capital efficiency, with 2023 governance declines coinciding with deteriorating inventory turnover;Solvency: High ESG ratings expanded green financing channels, alleviating financial stress, whereas lower ratings amplified liquidity risks;Growth potential: ESG rating recoveries immediately boosted market confidence, with 2024's rebound catalyzing net profit recovery.

The study concludes that wind power enterprises must dynamically balance ESG commitments with financial sustainability. Recommendations include strengthening Goldwind's governance

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framework to enhance innovation conversion efficiency. The industry may leverage these insights to accelerate green transitions, while policymakers should refine ESG evaluation systems to advance corporate sustainable development."

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