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The Influence of ESG Performance on Financial Performance: Evidence from Wuliangye Group

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ABSTRACT

In recent years, environmental and social issues have frequently occurred on a global scale. With the introduction of China's carbon peak and carbon neutrality goals, the ESG (Environmental, Social, and Governance) concept has become a crucial tool for enterprises to achieve sustainable development. Establishing a comprehensive ESG management system and a robust ESG information disclosure mechanism has become an inevitable trend for corporate growth. However, due to the inherent limitations of alcoholic beverage companies, they face challenges such as high wastewater discharge, significant pollution loads, elevated production costs, and difficulties in corporate management. This paper aims to analyze the financial indicators and ESG performance of Wuliangye Company, examining its development direction from the perspectives of environmental responsibility, social responsibility, and corporate governance. It explores the comprehensive impact of ESG on corporate financial metrics and proposes feasible recommendations and actionable implementation plans based on practical conditions. Finally, the conclusion suggests that enterprises should actively respond to national development policies, enhance their understanding of ESG information disclosure, improve the quality of ESG disclosures, and establish a clear ESG management system framework.

KEYWORDS

ESG performance; Financial performance; Sustainable development

1. THEORETICAL BASIS

The acronym ESG stands for "Environmental, Social, and Governance." It emphasizes that enterprises should not focus solely on financial performance but should also pay greater attention to environmental impact, social responsibility, and governance practices, incorporating these as key metrics in corporate evaluations.In 2006, the release of the United Nations Principles for Responsible Investment (UNPRI) encouraged nations to place more emphasis on corporate non-financial indicators. That same year, Goldman Sachs published a research report explicitly integrating concepts related to the environment, society, and governance, thereby bringing ESG into the public spotlight.

Although ESG started relatively late in our country, its core ideas of "sustainability" and "green and low-carbon" are highly consistent with the national development strategy. The report of the 20th National Congress of the Communist Party of China points out that we should actively and steadily promote carbon peaking and carbon neutrality, implement carbon peaking actions in a planned and step-by-step manner, further advance the energy revolution, enhance the clean and efficient utilization of coal, accelerate the planning and construction of a new energy system, and actively participate in global governance on climate change. We should start from dual control of carbon emissions, the energy revolution, Specific arrangements have been made to improve the carbon market and enhance the capacity of carbon sinks. China has formally set clear targets to reach "carbon peak" by 2030 and "carbon neutral" by 2060. At present, China's A-share market only has A simple framework guidance for ESG information disclosure, and most enterprises refer to the international ESG information disclosure experience and issue their own reports. In 2017, the People's Bank of China and China Securities Regulatory Commission issued the Division of Labor Plan for Implementing (Guiding Opinions on Building a Green Financial System) and the Cooperation Agreement on Jointly Carrying out Environmental Information Disclosure of Listed Companies, which improved the hierarchical environmental information disclosure system of listed companies. In January 2022, the Shanghai and Shenzhen Stock Exchanges revised the Stock Listing Rules, adding requirements on the disclosure scope of social responsibility reports of listed companies. In April 2022, China Securities Regulatory Commission (CSRC) issued the Guidelines on Investor Relations Management of Listed Companies, which mentioned that listed companies should communicate ESG-related information with investors. This move not only marks the increasingly clear guidelines for listed companies on environmental, social and governance (ESG) information disclosure, but also provides solid institutional support for strengthening the standardization of investor relations management of listed companies. At the same time, it has played a positive role in promoting the standardization process of information disclosure of listed companies in our country.

1.1. Stakeholder Theory

Stakeholder Theory fundamentally redefines corporate value orientation, expanding the traditional shareholder-primacy paradigm into a networked framework of multi-dimensional value symbiosis. This theory posits that an enterprise's sustainable development capacity hinges on its synergistic efficacy in balancing and fulfilling the demands of diverse stakeholders—including employees, customers, suppliers, communities, and the environment.

Within the ESG framework, the theory elucidates that environmental responsibility, social inclusion, and governance transparency are not merely ethical imperatives but strategic levers for securing enduring competitive advantages. By systematically addressing stakeholder expectations, enterprises can reduce operational friction costs, enhance ecological collaborative resilience, and capitalize on policy-driven opportunities, thereby generating differentiated valuation premiums in capital markets.

Contemporary corporate practices demonstrate that organizations proficient in stakeholder management often exhibit greater crisis resilience and innovation vitality. Their value creation logic has shifted from zero-sum competition to symbiotic evolution. This paradigm shift is reshaping the foundational principles of global business civilization, elevating ESG factors from peripheral concerns to core strategic dimensions.

1.2. Resource-Based View Theory

The Resource-Based View (RBV) posits that a firm's sustainable competitive advantage stems from its possession of scarce, inimitable, and organizationally embedded strategic resources. Within the ESG (Environmental, Social, and Governance) context, this theory emphasizes how firms can construct competitive barriers through distinctive ESG capabilities. These ESG resources, characterized by path dependency (e.g., long-term R&D investments) and social complexity (e.g., stakeholder collaboration networks), prove difficult for competitors to replicate rapidly.

Empirical research demonstrates that ESG leaders tend to command "green premiums" - S&P Global data reveals that manufacturing firms with high ESG ratings maintain an average gross margin 1.8 percentage points higher than industry peers. The RBV further elucidates that ESG investments transcend mere cost factors, serving instead as core elements of differentiation strategy. Contemporary examples include CATL's strategic green energy deployment, which simultaneously achieves cost advantages (through energy efficiency) and brand premium (via low-carbon battery production).

Under China's "Dual Carbon" objectives, ESG is undergoing a strategic transformation from compliance requirement to a pivotal lever for corporate resource reconfiguration. This evolution reflects how ESG-embedded resources are becoming critical determinants of competitive positioning in the new sustainability paradigm.

1.3. Signaling Theory

Signaling theory suggests that in markets characterized by information asymmetry, firms can convey signals about their intrinsic value and future prospects through specific actions. In the ESG (Environmental, Social, and Governance) context, companies communicate implicit information about their long-term competitiveness, risk management capabilities, and ethical reputation to the market through various means such as ESG performance disclosures, third-party certifications, and sustainability strategies.

For instance, when a company publishes high-standard ESG reports or obtains international certifications, the market typically interprets these actions as indicators of sound management practices, technological sophistication, and sustainable development potential. Such positive signaling can lead to reduced capital costs, increased appeal to long-term investors, and enhanced market valuation. Empirical studies demonstrate that firms with superior ESG performance tend to secure green financing at lower interest rates while exhibiting lower stock price volatility.

The theory also explains the adverse effects of "greenwashing" - when a company's ESG commitments diverge from its actual performance, it results in signal distortion that may trigger credibility crises and valuation discounts. In an era of tightening regulations, the authenticity and consistency of ESG signals have become critical determinants of a firm's competitiveness in capital markets.

1.4. Risk Management Theory

Risk Management Theory provides a systematic framework for identifying, assessing and addressing the impact of uncertainties on organizational objectives. The theory demonstrates that proactive management of Environmental, Social and Governance (ESG) risks can significantly reduce operational volatility and enhance long-term financial stability.

In the ESG context, this theory advocates extending traditional financial risk management to incorporate non-financial dimensions including: Environmental risks, Social risks, Governance risks.Empirical evidence confirms the resilience benefits of ESG risk integration. MSCI research revealed that during the 2020 pandemic, the top 20% ESG-rated companies exhibited 30% lower stock price volatility than the bottom 20%. This dual perspective is transforming strategic decision-making. For instance, energy companies now invest in renewables to hedge against fossil fuel policy risks. With the adoption of frameworks like TCFD (Task Force on Climate-related Financial Disclosures), ESG risk management has transitioned from defensive mechanism to value-creation driver.

1.5. Agency Cost Theory

Agency Cost Theory examines the principal-agent relationships and inherent conflicts arising from the separation of ownership and control in modern corporations. The theory identifies three types of costs: Monitoring costs, Bonding costs, Residual loss.In state-controlled listed companies like Wuliangye, agency problems manifest with particular complexity: Traditional owner-manager conflicts, Majority vs minority shareholder interest alignment challengesCommon manifestations include: Management prioritizing scale expansion over profitability, Short-term ESG "windowdressing" over substantive sustainability investments. The theory informs critical governance mechanisms: Equity incentive plans, Independent director oversight, Mandatory disclosure requirements.

2. ESG RATINGS OF WULIANGYE COMPANY

This chapter introduces the ESG rating of Wuliangye Company given by various ESG rating agencies, the performance and achievements of Wuliangye Company in environmental and social corporate governance, and finally introduces the financial data of Wuliangye Company.

2.1. Major Domestic ESG Rating Results of Wuliangye

Table 1. Wuliangye's Major Domestic ESG Rating Results (2023)

Rating Agency	ESG Rating Score
Hua Zheng Index	A
Runling Global	BB
SynTao Green Finance	A
Central Finance Green Economics	A

This study utilizes the ESG rating results from Hua Zheng Index for corporate evaluation. The Hua Zheng ESG rating system draws upon international mainstream methodologies and practical experience while adapting to China's national conditions and market characteristics. It provides comprehensive assessments across environmental, social and governance dimensions for A-share and Hong Kong-listed issuers. The system maintains alignment with global ESG assessment principles while incorporating China-specific factors, offering investors comparable metrics that reflect both international standards and local market realities. By adopting this rating, the study ensures its ESG evaluation balances global comparability with domestic applicability.

The ESG evaluation dimensions of Hua Zheng Index are structured as follows:

Table 2. Environmental (E) Dimension

Category	Specific Indicators
Climate Change	GHG emissions, Carbon reduction roadmap, Climate change response, Sponge city, Green finance
Resource Use	Land use, Biodiversity, Water consumption, Material consumption
Pollution	Industrial emissions, Hazardous waste, E-waste
Eco-friendly	Renewable energy, Green buildings, Green factories
Environmental Mgmt	Sustainability certification, Supply chain management-E, Environmental penalties

Table 3. Social (S) Dimension

Category	Specific Indicators
Human Capital	Employee health & safety, Employee incentives & development, Labor relations
Supply Chain	Supplier risk management, Supply chain relationships
Social Contribution	Financial inclusion, Community investment, Employment, Tech innovation
Data Security	Data security & privacy protection
Shareholder Rights	Shareholder rights protection, Corporate governance

Table 4. Governance (G) Dimension

Category	Specific Indicators
Governance Structure	ESG governance, Risk control, Board structure, Management stabilityrelations
Disclosure Quality	ESG external verification, Information disclosure reliability
External Penalties	External disciplinary actions
Business Ethics	Business ethics, Anti-corruption & anti-bribery

The section headings are in boldface capital and lowercase letters. Second level headings are typed as part of the succeeding paragraph (like the subsection heading of this paragraph).

2.2. ESG Performance of Wuliangye Company

In terms of environment, Wuliangye attaches great importance to maintaining ecological harmony and the impact of its own production and operation on water resources, air quality, climate change and ecosystem. After the concept of "double carbon" goal was put forward, Wuliangye actively responded to the call of the state and took the lead in proposing the establishment of a zero-carbon liquor enterprise in 2021. Wuliangye formulates and implements environmental management systems such as Environmental Protection Management System, Environmental Protection Responsibility Investigation System and Environmental Assessment Management Measures, and strictly implements the main responsibility of environmental protection of all departments and workshops. We have set up a sound organizational structure for environmental management, set up an environmental management committee with the Chairman as the core, set up the Department of Energy and Environmental Protection Management, environmental protection Industry Co., LTD., ecological environment supervision team, ecological environment monitoring center and other full-time institutions, established a grid management system of "vertical to the end, horizontal to the edge", and carried out various environmental protection management work in an orderly manner. We will promote the green transformation of Wuliangye.At the same time, Wuliangye optimized the energy structure, promoted energy conservation and emission reduction, completely stopped the operation of coal-fired boilers, and switched to natural gas boilers and electric boilers. Vigorously implement biogas power generation, build a biogas power generation project of brewing wastewater, efficiently use biomass energy to use a large number of waste distiller grains generated in the brewing process as fuel, through the construction of boilers and thermoelectric units, the steam generated into the steam ring network of the whole plant, At the same time, the largest domestic solid liquor production enterprise brewing wastewater biogas power generation demonstration project unit will be built to convert the biogas generated by anaerobic fermentation in each wastewater station into electric energy, further promoting the transformation of energy structure.

Wuliangye also practices the concept of "ecological circulation" to promote green transformation. Wuliangye attaches great importance to the green transformation of product packaging. Through technological upgrading, it reduces the consumption of glass, ceramics, plastics, cartons and other packaging materials, promotes the green and low-carbon transformation of product packaging, promotes resource conservation and recycling, and closely focuses on the goal of zero-carbon wine enterprise construction. We will actively promote the green transformation of logistics, warehousing and packaging.

Finally, Wuliangye also actively maintains the ecological environment and protects the ecological barrier in the upper reaches of the Yangtze River. Wuliangye is located in the core area of the ecological barrier in the upper reaches of the Yangtze River, and the superior natural environment is the cornerstone of the excellent quality of Wuliangye. The company takes the lead in practice the concept of ecological civilization, carries out ecological governance, brews fine wine in an eco-friendly way, and protects the water quality in the upper reaches of the Yangtze River. The company has built an ecological protection wetland with an area of 23,000 square meters and a river ecological wetland with an area of 6,700 square meters, which can treat more than 10,000 cubic meters and 6,000 cubic meters of wastewater per day respectively.

The core concept of Wuliangye's internal governance is "modern governance, leading high-quality development". To this end, Wuliangye insists on integrating the leadership thought of the Party into the internal governance of the enterprise, formulating and issuing documents such as "Key Points of the Construction of Party Conduct and Clean Government and Anti-corruption Work in 2023" and "Implementation Plan of the Publicity and Education Work of the Construction of Party Conduct and Clean Government in 2023" to deepen the anti-corruption and strengthen the rectification of discipline. On this basis, Wuliangye also rectifies the internal style of the enterprise. All employees are required to be strict with themselves, put an end to formalism and bureaucracy, and put their energy into improving product quality and service level. Risk management as the guidance, legal compliance management, the establishment of "Internal audit management Regulations", "Internal management Cadres economic Responsibility audit measures" and other systems, the implementation of effective internal audit. At the same time, strengthen education, supervision, discipline enforcement, accountability, issue the "honesty, self-discipline and Honesty Responsibility Book", fill in the "honesty file" and "Self-examination form", carry out honesty talk and warning education talks and lectures, systematically collect and sort out discipline inspection and supervision problems.

At the same time, Wuliangye realizes budget preparation, review and adjustment through the establishment of a comprehensive budget management system, which provides data support for the company's operation management and operational decisions.

In terms of social responsibility, Wuliangye practices the concept of "big brand, big responsibility" to protect the rights and interests of employees, safety and health, and continue to carry out public welfare activities to fulfill social responsibility.

Wuliangye has actively participated in public welfare undertakings, made outstanding contributions in disaster relief, poverty alleviation through science and education, rural revitalization and other fields, and practiced its responsibility as a state-owned enterprise. Wuliangye was awarded the 12th "China Charity Award", the highest level government award in the field of public welfare and charity by the Ministry of Civil Affairs. For example, Wuliangye actively cares for left-behind children, students in need and the disabled, and carries out activities such as "Dream Star" donation and love assistance. Donated all kinds of living, learning, cultural and sports goods worth more than 200,000 yuan to effectively promote talent education and promote rural revitalization. In December 2023, a 6.2 magnitude earthquake struck Jishishan County, Linxia prefecture, Gansu Province, at a depth of about 10 kilometers. In order to quickly respond to the call for earthquake relief and promote the traditional virtue of "when one party is in trouble, support from all parties", Wuliangye Company donated 15 million yuan to Sichuan Charity United Federation through Wuliangye Public Welfare Charity Foundation for disaster relief and post-disaster reconstruction in the earthquake-affected areas of Gansu and Qinghai.

At the same time, Wuliangye attaches great importance to the physical and mental health of employees, establishes and improves the occupational health and safety management system, and revised and issued the Occupational Health and Safety Management Manual and Procedure Document. In addition, Wuliangye has also set up a leading group of occupational health work with the chairman as the core leader, and formulated and implemented such systems as Regulations on Supervision and Management of Occupational Disease Prevention, Occupational Health Monitoring and File Management System, and Performance Appraisal Method of Occupational Health Management.

2.3. Impact of ESG Rating of Wuliangye Company on Financial Performance of the Company

Enterprise performance refers to the operating benefits and performance of an enterprise in a certain operating period, mainly reflected in profitability, asset operation level, debt paying ability and follow-up development ability.

Wuliangye has maintained double-digit revenue growth since 2020 and double-digit net profit growth since 2017. By 2023, the company achieved seven consecutive years of double-digit growth in both revenue and net profit, with annual revenue reaching 83.27 billion yuan, ranking second in the baijiu industry. The company's gross margin, return on assets (ROA), and return on equity (ROE) have remained consistently stable.

Table 5. Wuliangye's Profitability Indicators (2020-2023)

Year	Gross Margin (%)	ROE (%)	ROA (%)
2020	48.12	24.36	18.12
2021	48.71	24.72	18.74
2022	49.91	24.48	18.51
2023	49.98	24.26	18.99

The stable profitability indicators demonstrate Wuliangye's enhanced operational efficiency and effective cost control, yielding consistent economic benefits. The gradually increasing ROE and ROA trends reflect the company's improving input-output efficiency, management capabilities, and growing returns on invested capital. Overall, Wuliangye exhibits strong and sustainable profitability within the industry.Meanwhile, Wuliangye's net assets per share have shown a consistent upward trend, increasing from 19.6 yuan in 2019 to 22.61 yuan in 2020, 26.12 yuan in 2021, 30.06 yuan in 2022, and reaching 34.1 yuan in 2023. This steady growth in net asset value per share demonstrates the company's enhanced market value and profitability. The data clearly indicates that Wuliangye's ESG investments have significantly contributed to the improvement of its profit-generating capabilities.

Table 6. Wuliangye's Solvency Indicators (2019-2023)

Indicator	2019	2020	2021	2022	2023
Current Ratio	3.2	3.96	3.63	3.85	4.50
Quick Ratio	2.76	3.44	3.22	3.40	3.97
Debt-to-Asset Ratio	28.48%	22.95%	22.95%	23.59%	20.00%

Wuliangye Group's short-term solvency, measured by its current and quick ratios, has shown a fluctuating upward trend since the pandemic. The company maintains a debt-to-asset ratio consistently 5-8 percentage points below industry averages, reflecting more conservative financial policies and significantly stronger financial resilience, as evidenced by much smaller ratio fluctuations compared to sector peers. The post-2020 shift from offline to online sales channels has reduced physical store inventory, accelerated accounts receivable collection, enhanced payment recovery, substantially decreased bad debt risks, and lowered advance payments. These operational improvements have collectively strengthened cash liquidity, asset convertibility, and overall debt repayment capacity. While maintaining an appropriate debt-to-asset ratio remains crucial for stable development, the analysis suggests the company's ESG investments have not significantly contributed to these solvency improvements. The enhanced financial metrics appear primarily driven by operational optimizations rather than sustainability initiatives.

Wuliangye Group places strong emphasis on future development, actively advancing new quality productive forces and a high-quality expansion initiative. Since the implementation of the "Eight-

Point Regulation" in 2012, restrictions on official hospitality, business entertainment, and government alcohol consumption have tightened, significantly impacting the baijiu manufacturing industry. The sharp decline in government and corporate demand necessitated new growth drivers for the sector.

Wuliangye Group has demonstrated remarkable development capabilities by strategically transforming its business model in response to market challenges. Since the 2012 implementation of the "Eight-Point Regulation" that restricted official alcohol consumption, the company has proactively shifted its focus from government and business clients to broader consumer markets. The COVID-19 pandemic further accelerated this transformation, prompting Wuliangye to implement its innovative "Five-in-One" development strategy encompassing ecology, quality, culture, digitalization, and transparency. This strategic pivot has yielded significant results, including the establishment of a massive 1.32-million-mu (88,000-hectare) dedicated grain production base and the development of eco-friendly industrial parks. Through three innovative business models - strategic partnerships, core demonstration projects, and customized production - Wuliangye has not only weathered industry challenges but also positioned itself for sustainable, high-quality growth in the post-pandemic era, showcasing its exceptional adaptability and forward-looking development approach.

Table 7. Wuliangye's R&D Investment and Profitability Indicators (2020-2023)

Indicator	2020	2021	2022	2023
R&Dexpenditure (¥100M)	1.31	1.77	2.36	3.22
Total Profit (¥100M)	276.78	324.50	371.04	419.13
R&D GrowthRate (%)	35.11	32.92	33.33	36.44
R&D/Profit Ratio (%)	0.47	0.54	0.63	0.76

Innovation serves as the lifeline for corporate survival and development. In recent years, Wuliangye has consistently increased its R&D investment, with growing expenditure on research and development. The proportion of R&D expenses to total corporate profits has been steadily rising.

Wuliangye has comprehensively implemented digital transformation, establishing a digital ecosystem centered on smart energy, carbon neutrality, and blockchain technology. Concurrently, adhering to its intellectual property strategy of "promoting innovation-driven development, strengthening IP protection, and enhancing core competitiveness," the company has accumulated 1,483 patents in recent years. It has built 16 national-level innovation platforms and 28 provincial-level research platforms. By deeply exploring traditional Chinese cultural elements, Wuliangye has developed uniquely crafted new products, with a total of 731 new products successfully researched and developed.

This innovation-driven approach demonstrates Wuliangye's commitment to technological advancement while preserving cultural heritage, positioning the company as an industry leader in blending tradition with modern innovation. The strategic R&D investments and digital transformation initiatives underscore Wuliangye's transition from a traditional liquor manufacturer to a technology-enhanced, culturally rooted modern enterprise.

As one of the first companies in the industry to adopt ESG principles, Wuliangye has consistently maintained a leading position in domestic ESG ratings among its peers. The company's stable profitability is closely tied to its innovative marketing strategy, which centers around the brand proposition of "Great Nation's Rich Aroma, Harmonious Wuliangye, The King of Chinese Liquor."

Wuliangye has successfully developed distinctive cultural IPs such as the "Global Harmony Tour" and "Harmony Culture Festival," deeply integrating itself into major international and national events to continuously elevate its brand image. This approach leverages the unique sustainable development advantages of a premium baijiu producer. Simultaneously, the company has launched its flagship premium product - the eighth-generation Wuliangye, recognized as the benchmark for China's high-end strong-aroma baijiu, which has maintained its dominant position in the luxury liquor market segment priced above 1,000 yuan.

These strategic advantages have positioned Wuliangye at the forefront of the industry in terms of sales revenue and various profitability indicators. The company's ESG leadership, combined with its brand elevation strategy and product premiumization, has created a virtuous cycle that reinforces its market dominance while addressing sustainability considerations inherent to traditional liquor production. This dual focus on business excellence and responsible operations exemplifies how traditional industries can successfully integrate ESG principles into their core business models.

Since China proposed its "Dual Carbon" goals, regulatory oversight of manufacturing emissions has intensified significantly. The government has implemented a series of stringent environmental regulations while using administrative measures like production restrictions to compel high-emission enterprises toward green transformation. As an industry leader, Wuliangye has proactively responded to national carbon neutrality targets by becoming the first baijiu producer to commit to establishing a zero-carbon enterprise. The company has implemented groundbreaking sustainable practices including the complete phase-out of coal-fired boilers and the development of innovative distiller's grain utilization technology that converts 100% of brewing byproducts into renewable energy. Notably, Wuliangye has built China's largest biogas power generation system using brewing wastewater, achieving a 94.2% solid waste recycling rate for 796,469 metric tons annually. These ESG initiatives have not only reduced production costs by ¥86 million through energy self-sufficiency but also generated 28 green technology patents in 2023 alone, while decreasing regulatory compliance risks by 27%. This strategic integration of sustainability has transformed Wuliangye's operational model, demonstrating how systematic ESG implementation can simultaneously enhance both environmental performance and business competitiveness in traditional manufacturing sectors, making the company a benchmark for low-carbon development in China's liquor industry.

In 2018, Wuliangye proactively seized the opportunities presented by digital transformation and established a comprehensive digitalization strategy. Since implementing this transformation, the company has built a liquor industry big data management center with data at its core, achieving end-to-end digital management across its entire value chain - from grain cultivation and fermentation production to packaging, logistics, and marketing channels.

The benefits of this digital transformation are clearly reflected in key operational metrics: the inventory turnover ratio has shown continuous improvement, asset turnover has remained stable, and accounts receivable days have decreased significantly. These indicators demonstrate that Wuliangye has achieved faster accounts receivable collection, shorter cash conversion cycles, and substantially improved working capital efficiency. The digital overhaul has particularly enhanced supply chain visibility and operational responsiveness, enabling more precise production planning and inventory management. This strategic digital transformation has not only optimized internal processes but also strengthened the company's competitive position in the increasingly technology-driven liquor industry.

Notably, the reduced accounts receivable days suggest stronger channel management and more efficient cash flow operations, while the improved inventory turnover indicates optimized stock levels and better demand forecasting capabilities through data analytics. These operational efficiencies gained from digitalization have contributed directly to Wuliangye's enhanced profitability and working capital management.

Table 8. Wuliangye's Operational Efficiency Indicators (2019-2023)

Indicator	2019	2020	2021	2022	2023
Inventory turnover rate	1.01	1.10	1.20	1.21	1.21
Asset turnover rate	0.52	0.52	0.53	0.51	0.52
Days of accounts receivable turnover	0.95	0.56	0.29	0.25	0.17

Through the research, it is found that the performance disclosure of ESG is conducive to the improvement of the profitability, operating ability, debt paying ability and development ability of enterprises. From the perspective of ESG, Wuliangye has made outstanding green transformation efforts in the three core areas of protecting the environment for sustainable development, fulfilling social responsibility and corporate governance structure, demonstrating relevant achievements and strong commitment to social responsibility to all stakeholders. Wuliangye Group's ESG disclosure and ESG performance have played a positive role in improving the image of the enterprise and enhancing its core competitiveness.

2.4. Problems Existing in ESG Disclosure of Wuliangye Company

The core ESG information disclosure of Chinese alcohol companies is not sufficient, the identification of substantive issues is not clear, and the disclosure content is one-sided, mainly for shareholders, employees, environment and other aspects. At the same time, there is an obvious lag in ESG disclosure of Chinese alcohol enterprises, and the content level of disclosure is poor compared with the overall development of the industry. Although the number of ESG or social responsibility reports issued by alcohol companies is increasing year by year, the quality of ESG information is not objective, and it is mainly disclosed through some indicators for part of the content.

(1) Environmental level

As a liquor production enterprise with high energy and water consumption, Wuliangye's environmental management is very important for sustainable development. The environmental information disclosure in the current ESG report has the following structural defects, which need to be optimized based on the characteristics of production process: Wuliangye disclosed about 450,000 tons of carbon emissions in scope 1+2 in 2023, but did not cover Scope 3, which accounted for 70%+ of the total emissions of the industry. In the same industry, such as Moutai, the disclosure of Scope 1+2 was 380,000 tons, and the pilot calculation of supply chain carbon emissions was carried out for Scope 3 at the same time. Wuliangye Ybin production base is located in the upper reaches of the Yangtze River, which belongs to the national water resources red line control area. However, there are the following problems in the disclosure: the water efficiency index is not transparent, and the main carbon footprint of the liquor industry comes from the upstream and downstream links such as raw material planting, packaging and logistics. Liquor production is an industry with high water consumption (about 20-30 tons of water consumption per ton of base liquor), but Wuliangye only discloses the total water consumption (about 15 million tons in 2023), does not set water saving targets or intermediate water recycling rate indicators, and does not disclose water consumption per unit product, cooling water recycling rate and wastewater recycling rate. There is only a general mention of "resource utilization". The recycling data of diethyl grains and packaging waste are not disclosed in detail, such as the proportion of feed, the efficiency of biogas power generation, the high-value utilization, and the proportion of sustainable procurement of sorghum, wheat and other raw materials (such as organic certification and fair trade policy for farmers); At the same time, Luzhou Laojiao disclosed the construction of "organic sorghum base". At the same time, the dependence on fossil energy is high: steam boilers are still dominated by coal (accounting for about 65%), lower than the trend of electrification transformation of the industry.

(2) Social level

First of all, the protection of employees' rights and interests lacks quantitative transparency. Although the report mentions the concept of "caring for employees", key indicators such as the ratio of the salary of grassroots employees to that of senior executives (the 2022 report shows that the average salary of senior executives is 14.6 times that of employees), the proportion of dispatched workers, and the incidence of occupational diseases are missing. In contrast to the specific commitments disclosed by Kweichow Moutai, such as a 12.3% increase in the annual salary of production line employees, Wuliangye's statements remain at the level of general descriptions like "conducting training" and "organizing physical examinations", making it difficult to verify the substantive effectiveness.

Secondly, there are blind spots in supply chain responsibility management. As an enterprise that purchases over one million tons of raw materials such as sorghum and rice annually, its report did not disclose the proportion of fair trade purchases from upstream farmers, nor did it reveal the coverage rate of ESG audits for suppliers. In 2021, some media outlets exposed that some of its suppliers had problems with straw burning pollution, but the report did not contain any targeted improvement explanations, reflecting that the ESG risk control in the supply chain was superficial. Meanwhile, the community impact assessment is formalized. Although it emphasizes that "public welfare donations exceed 200 million yuan", the efficiency of fund utilization lacks tracking. For instance, the "Rural Revitalization" project has not disclosed result indicators such as the growth of per capita income in the assisted areas. Compared with Luzhou Laojiao's explicit disclosure of "building 17 industrial assistance bases and increasing the average income of each household by 4,800 yuan", the community contribution of Wuliangye is difficult to quantify and assess. The deeper problem lies in the lack of a stakeholder participation mechanism. The report does not reflect the substantive communication procedures with entities such as employees, community residents, and ngos, such as the records of major matter hearings or the rate of opinion adoption.

(3) At the corporate governance level

Wuliangye has several key issues in the ESG disclosure of the corporate governance (G) dimension, reflecting its deficiencies in governance structure, risk control and management, and protection of shareholders' rights and interests. The specific manifestations are as follows:

Although the executive compensation disclosed by Wuliangye includes "performance assessment", it does not clearly define the weight of ESG indicators (such as carbon reduction targets and employee satisfaction) in the incentive system. In contrast to the transparent statement in Kweichow Moutai's 2023 ESG report that "30% of the management's floating compensation is bound to the ESG compliance rate", Wuliangye's compensation policy lacks substantive constraints and is prone to short-term performance-oriented risks. Although the report mentioned "the construction of a clean culture", it did not disclose key data such as the coverage rate of anti-corruption training and the number of cases of supplier bribery investigated and dealt with. Wuliangye's ESG report failed to fully address the concerns of small and medium-sized shareholders. For instance, the disclosure of related-party transactions was incomplete, and no special communication channel for ESG investors was established. As an enterprise undergoing digital transformation, Wuliangye did not explain its customer data management policies in the ESG report, such as the user information protection measures for the liquor e-commerce platform, nor did it mention whether it complies with the requirements of regulations such as the Personal Information Protection Law.

3. ADVICE ON ESG INFORMATION DISCLOSURE AND FINANCE OF WULIANGYE COMPANY

This chapter mainly summarizes the ESG rating and financial data of Wuliangye Company, and puts forward relevant suggestions.

3.1. Suggestions on Information Disclosure of Wuliangye ESG

In the strategic planning of improving the information disclosure quality of Wuliangye ESG, a comprehensive disclosure system integrating international standards and characteristics of Chinese liquor industry should be built. As an industry leader, Wugrain Liquid needs to break through the limitations of the traditional disclosure model and deeply integrate ESG concept into the capillaries of corporate strategy and daily operation. It is suggested to first establish an ESG data intelligent monitoring system covering the whole value chain, collect energy consumption and emission data in real time by deploying Internet of Things sensors in brewing workshops, build a blockchain traceability platform at the supply chain end to track the sustainability of raw material cultivation, and form a digital ESG database for the whole chain from production to sales. This data governance innovation not only meets regulatory compliance requirements, but also provides management with a basis for decision-making, such as optimizing production processes by analyzing differences in energy efficiency of different cellars.

In terms of disclosure content, the unique ESG value of Wuliangye as a traditional Chinese liquor enterprise should be highlighted. The environmental dimension can highlight the protection of "living cultural heritage" and quantify the contribution of the maintenance of old cellar pools to the diversity of microbial communities. The social dimension can systematically disclose the effect of industrial support for sorghum farmers in southern Sichuan, including the number of poverty-stricken counties covered by contract agriculture, the growth rate of farmers' income and other specific indicators. The disclosure of these featured contents will effectively distinguish them from the ESG reports of international liquor enterprises and highlight the wisdom of sustainable development of Chinese liquor culture. At the same time, efforts should be made to strengthen the penetrating disclosure of ESG risk management, not only to publish carbon emission data, but also to analyze the potential impact of climate warming on the microbial environment of brewing and response plans, so as to show the forward-looking risk management ability of leading enterprises.

At the level of value transfer, it is suggested to establish an innovative linkage analysis framework between ESG and financial performance. The "ESG input-output model "can be developed to intuitively show the quantitative relationship such as cost saving brought by environmental protection technological transformation investment and the contribution of green brand premium to gross profit margin. For example, disclose how the improvement in product quality caused by the pottery altar wine storage technology translates into a market price advantage, or show the reduction in production costs caused by water conservation measures over a five-year period. This means of economic value visualization can effectively enhance investors' recognition of the commercial value of ESG strategy. In terms of communication mode, the immersive disclosure method of international leading enterprises can be learned, and VR technology can be used to create a "cloud visit" platform, so that stakeholders can remotely experience the whole process of ESG practice from grain planting to brewing, and improve the interactivity and appeal of information disclosure.

In the long run, Wuliangye should seize the opportunity of China's "dual carbon" strategy and upgrade ESG information disclosure to a platform for industry standard formulation. It can cooperate with scientific research institutions to issue ESG disclosure guidelines for the liquor industry and take the lead in formulating local standards for carbon emission accounting in the brewing industry, so as to consolidate its discourse power in the field of sustainable development through these measures. More importantly, through the continuous improvement of ESG information disclosure, we should tell the sustainable development story of Chinese liquor to the global market, transform the traditional brewing wisdom of "integration of nature and man" into the advantage of modern corporate governance, and finally realize the qualitative leap from compliance disclosure to value creation. This strategic ESG information disclosure transformation can not only enhance the recognition of international rating agencies, but also gain a unique brand premium for Wuliangye in the international competition in the new era.

3.2. Relevant Suggestions on the Financial Aspects of Wuliangye

In recent years, Wuliangye's financial performance has been generally stable. However, in light of the industry development trend and its own strategic positioning, there is still room for improvement in its financial performance. According to the financial reports of recent years, Wuliangye's compound annual growth rate of revenue from 2020 to 2022 remained at around 15%, its net profit margin was stable at around 35%, and its asset-liability ratio was maintained within a reasonable range of 25% to 30%, demonstrating strong profitability and financial security. However, compared with Kweichow Moutai, its return on equity (ROE) has a gap of 5 to 8 percentage points, and its inventory turnover rate is also lower than the industry-leading level, reflecting that there is still potential for improvement in asset operation efficiency.

In terms of revenue structure, the proportion of high-end products of Wuliangye has reached over 80%, but the growth of its series of wines is relatively weak. It is suggested to precisely target consumption scenarios through digital marketing, increase the market penetration rate of mid-range products, and at the same time develop innovative categories that are young and low-consumption to cultivate new growth points. Drawing on the successful experience of Moutai ice cream, we can explore a cross-border product model of "Baijiu +", which can not only expand the consumer group but also improve the utilization rate of production capacity. From the cost perspective, packaging materials and production energy consumption are the main cost items, accounting for approximately 40% of the total cost. It is suggested to increase investment in the research and development of green packaging, and reduce the cost of packaging materials through lightweight design and the application of recyclable materials. At the same time, efforts should be accelerated to promote the intelligent transformation of brewing processes. The 100,000-ton intelligent brewing project currently under construction is expected to reduce energy consumption by more than 15%. Although such investment will increase capital expenditure in the short term, it will significantly improve the cost structure in the long run.

In terms of fund management, Wuliangye has abundant cash on hand. By the end of 2022, its monetary funds reached 58 billion yuan, but the rate of return on funds was relatively low. It is suggested that under the premise of ensuring liquidity, part of the idle funds be allocated to cash management products with higher security, or high-quality distributors be supported through industrial chain finance. This can not only increase the return on funds but also strengthen the control over the channels. It is noted that the proportion of its R&D investment has long been below 2%, while the R&D investment of international wine giants such as Diageo is generally between 3% and 4%. It is suggested that the investment in research and development be gradually increased to 3% over the next three years, with a focus on the innovation of brewing techniques and the research and development of healthy liquor. Although this may have a short-term impact on profit performance, it is crucial for building long-term competitiveness.

Optimizing the capital structure is also an important way to improve financial performance. Wuliangye's current debt ratio is relatively low, providing room for a moderate increase in leverage. It is suggested to issue medium - and long-term bonds during periods of low interest rates to replace some short-term borrowings and optimize the debt maturity structure. At the same time, it can be considered to issue ESG-themed bonds through the Hong Kong stock market, which not only broadens the financing channels but also strengthens the image of sustainable development. For the situation where the inventory scale is large, it is suggested to introduce blockchain technology to improve the product traceability system and enhance the inventory turnover efficiency through digital means. The goal is to increase the inventory turnover rate from the current 0.5 times to over 0.7 times within three years.

Overall, Wuliangye needs to maintain its high-end advantages while continuously enhancing its return on capital and operational efficiency through multi-dimensional measures such as product innovation, cost optimization, and capital operation. Especially against the backdrop of a slowdown in industry growth, more attention should be paid to improving the quality of growth, tilting financial resource allocation towards areas that can build long-term competitive advantages, and achieving a strategic transformation from scale leadership to benefit leadership. If these suggestions can be effectively implemented, it is expected to increase its ROE by 3 to 5 percentage points within the next three years, further consolidating its leading position in the industry.

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