A Review of the Role of ESG Performance of Listed Companies on Financial Performance: Theory, Effect, Influencing Factors and Path

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Abstract: With the ongoing evolution of sustainability concepts, ESG has increasingly captured the spotlight in academic discourse. Therefore use citespace software to analyze previous trending in ESG, and sort out their relation by literature review. Results: (1) Scholars mainly use stakeholder theory, resource dependence theory, signal theory, agency theory, shareholder supremacy theory and cost-benefit theory when researching the relationship between the ESG performance and financial performance; (2) Currently, scholars have three perspectives regarding the impact of ESG performance on financial performance: positive relationship, inverse relationship and nonlinear relationship; (3) The ESG performance's influencing factors on financial performance are primarily reflected like the enterprise, geographical location; (4) When enterprises fulfil their ESG-related responsibilities, they mainly affect their financial performance through four paths: reducing information asymmetry, improving corporate innovation ability, increasing media attention and reducing the tax burden.

Keywords: ESG; Financial Performance; Theoretical Rationale; Impact Pathway; Impact Factors

1. Introduction

As global industrial pollution escalates, labor disputes rise, and sustainable development gains prominence, the capital market increasingly prioritizes companies' environmental, social responsibility, and corporate governance factors. Under this trend, the green development of enterprises has become a hot spot of social concern, especially the ESG concept with sustainable development as the core has attracted people's attention.

The ESG concept originated from CSR and was introduced by the United Nations Compact in 2004 to integrate it into investment decisions. Unlike the traditional financial evaluation system, which primarily concentrates on a company's financial data and economic interests, ESG evaluates non-financial aspects, comprising three key components: environmental impact, social responsibility, and corporate governance. Following this, the United Nations Principles for Responsible Investment, launched in 2006, incorporated environmental, social, and governance (ESG) factors into investment strategies. In 2018, the IASB deliberated on the formulation of unified standards for environmental, social, and corporate governance.

2. Materials and Methods

2.1 Data Materials

This paper selected the data of Chinese journals from CNKI journal database, the search conditions were the subject or keyword "ESG", the journal source category was selected EI, Peking University Core, CSSCI, CSCD, a total of 702 related journals were retrieved, and then the papers unrelated to the research topic were manually eliminated, and 468 valid papers were obtained. The foreign database selects the WOS core database, the search criteria are the subject or abstract "ESG", and the subject categories are Business Finance, Environmental Sciences,

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Green Sustainable Science Technology, Business, Management and Economics. In addition, 2086 papers were selected as SSCI and 2086 valid papers were obtained after screening out duplicates.

2.2 Research Methods

As shown in the Figure 1, the timeline chart of ESG-related research progress was visualized using citespace software, and it was found that domestic research on ESG mainly began in 2019. In addition, the main research topics of scholars include eight aspects: corporate value, corporate innovation, corporate governance, green innovation, green finance, information disclosure, environmental value and agency cost. At the same time, we can see through the pictures that ESG research first started with green finance, but in recent years it has shifted to corporate value and performance.

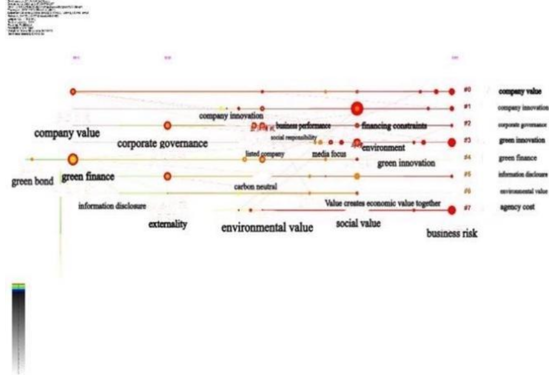

Figure 1. A Topic Timeline Diagram Using Valid Journal Articles Retrieved on CNKI.

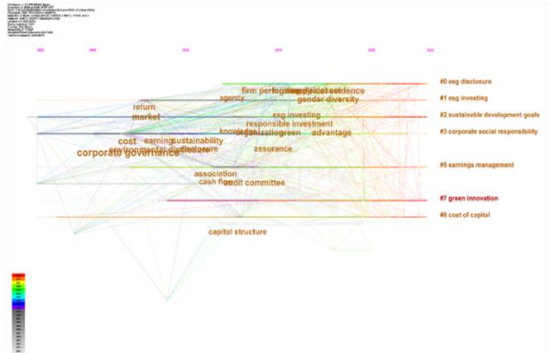

Figure 2: A Topic Timeline Diagram Using Valid Journal Articles Retrieved on the Web of Science

As shown in the Figure 2 above, using citespace software to visualize the timeline chart of ESG-related research progress, it is found that foreign research on ESG mainly started around 2000. The main research topics include ESG disclosure, ESG investing, sustainable development goals, corporate social responsibility, earnings management, green innovation and cost of capital.

In summary, research on ESG in China began later compared to foreign countries, with both domestic and international studies primarily concentrating on ESG performance and financial outcomes. However, there exists a divergence in the current research directions between China and abroad. Presently, Chinese research predominantly centers on assessing the impact of ESG performance on company finances, whereas foreign research emphasizes enhancing ESG frameworks and promoting sustainable development. Various approaches exist for companies to fulfill ESG-related responsibilities concerning financial performance, with different influencing factors either magnifying or mitigating the effects of ESG on financial outcomes. Hence, this paper aims to investigate how ESG performance influences company financial performance, systematically examining their theoretical underpinnings, effects, pathways, and influencing factors. This endeavor seeks to address the systematic deficiencies present in current literature reviews.

3. Findings

3.1 The Theoretical Rationale for the Role of ESG Performance on Financial Performance

Stakeholder theory, introduced by Freeman (1984), posits that stakeholders are individuals or groups who can influence or be influenced by the attainment of corporate objectives. This theory underpins research examining the relationship between ESG performance and financial performance, encompassing studies advocating both positive and negative, or nonlinear, associations. Advocates of the positive relationship argue that enhancements in a company's ESG performance—pertaining to environmental, social responsibility, and corporate governance—contribute to cultivating a favorable corporate image and fostering constructive relationships with governmental bodies. Consequently, this fosters the attraction of top-tier talent, enhances operational decision-making efficiency, reduces costs, and ultimately

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augments financial performance.

The resource dependency theory was proposed by Pfeffer and Salancik (1978), which believes that the survival of enterprises must constantly obtain resources from the outside and be interdependent with the surrounding ones. Through the lens of resource dependence theory, scholars observe that enterprises prioritize medium and long-term interests over short-term gains when fulfilling their ESG responsibilities. Consequently, integrating ESG concepts into the production and operational activities of enterprises proves advantageous in garnering increased investment and financing opportunities, curbing operating costs, enhancing the sustainable development capabilities of enterprises, and ultimately bolstering their financial performance.

Signal theory, initially formulated by American economist Spence in the 1970s, primarily elucidates the concept of information asymmetry. When applying signal theory to analyze ESG responsibility performance, scholars observe a positive correlation between ESG performance and financial performance. They note that under the ESG framework, enterprises prioritize non-financial information alongside financial data. Consequently, when companies disclose their ESG responsibilities, they tend to divulge more non-financial information. This action signals to the market that enterprises are committed not only to short-term gains but also to long-term interests. Moreover, this disclosure reduces information asymmetry, instilling greater confidence in investors and thereby enhancing companies' access to financing opportunities, ultimately boosting financial performance.

In the late 1960s and early 1970s, certain economists grew discontent with the "black box" theory and embarked on more extensive investigations into the phenomena of information asymmetry and incentive issues within enterprises. When analyzing the performance of enterprises to fulfil their ESG responsibilities based on agency theory, scholars found that because the ESG performance disclosed by enterprises will convey the non-financial information of enterprises, this also makes the short-term arbitrage behaviour of corporate managers subject to public supervision, which in turn forces enterprises to pay more attention to long-term interests, reduce information asymmetry and improve financial performance.

The theory of shareholder supremacy began to germinate as early as the beginning of the 20th century, and was further developed by Friedman in the 70s of the 20th century, and the theory was widely respected by the market at that time. The shareholder primacy theory posits that managers are accountable to shareholders, who bear the residual risks of the company, and management's objective is to maximize shareholder value. When analyzing the performance of ESG responsibilities on the basis of the theory of shareholder supremacy, scholars find that in the short term, the performance of ESG responsibilities cannot create direct benefits for shareholders, and in the long run, there is great uncertainty in the performance of ESG responsibilities, so this may violate the goal of maximizing the interests of shareholders of enterprises, it is difficult to create corresponding value for enterprises, and finally it is possible to reduce shareholder wealth. In addition, the fulfillment of ESG responsibilities will increase the cost of corporate behavior, which is not conducive to concentrating economic resources into the production and operation process of enterprises, and ultimately is not conducive to the improvement of financial performance.

The cost-benefit theory was first proposed by the French economist Julius Papat in the 19th century and was further developed by the American economists Nicolas Calder and John Hicks in 1940. The cost-effectiveness theory refers to the fact that under the conditions of a market economy, the ultimate goal of an enterprise is to pursue maximum economic gains. When analyzing the performance of enterprises to fulfill their ESG responsibilities based on cost-benefit theory, scholars find that the return on ESG-related investment of enterprises is largely uncertain, and when enterprises invest relevant economic resources in ESG activities, they may have small short-term returns and uncertain future returns, which will eventually lead to a decline in the financial performance of enterprises.

In general, contemporary scholars draw on stakeholder theory, resource dependence

theory, signal theory, and agency theory to explore the relationship between ESG performance and financial performance. They predominantly find a positive correlation between ESG performance and financial outcomes. However, some scholars, based on stakeholder theory, shareholder supremacy theory, and cost-benefit theory, argue for a negative relationship between ESG performance and financial performance. Additionally, there is evidence from certain scholars, leveraging stakeholder theory and cost-benefit theory, indicating a non-linear relationship between ESG performance and financial performance.

3.2 The Effect of ESG Performance on Financial Performance

After reviewing relevant global literature, it is evident that the impact of ESG performance on financial performance has not been conclusively determined. Some studies indicate a positive relationship between ESG performance and financial outcomes. They argue that improved ESG performance reduces information asymmetry and associated costs within the enterprise, thereby enhancing resource accessibility and ultimately leading to better financial performance. Conversely, other studies suggest a negative relationship between ESG performance and financial performance. They contend that as ESG performance improves, financial performance worsens. Finally, there are research findings supporting a non-linear relationship between the two factors.

On a theoretical basis, although different scholars have researched different theoretical grounds, they mainly focus on four theories: stakeholder theory, resource dependence theory, signal theory and agency theory.

With the continuous deepening of research, scholars now tend to analyze the ESG impact to financial performance as a whole. In terms of research methods, scholars used similar research methods, namely regression analysis, fixed-effect model and random-effect model. In direct empirical research, several scholars have approached ESG holistically, conducting empirical analyses to demonstrate a positive correlation between ESG performance and financial performance [1-3], and some scholars have demonstrated the positive effect of ESG performance on financial performance by examining the three dimensions of ESG separately. In indirect research, scholars have employed fixed effect and random effect models to establish a positive correlation between ESG performance and Economic Value Added (EVA), leveraging stakeholder theory, signal theory, and agency theory. Furthermore, a researcher conducted a study incorporating stakeholder theory and principal-agent theory, discovering that ESG certification diminishes enterprises' cost of capital. Consequently, this reduction significantly elevates their Tobin Q value, ultimately augmenting the market value of the enterprises [4].

Some studies confirm that ESG performance has a negative effect on financial performance. On a theoretical basis, most of these studies are based on stakeholder theory, shareholder supremacy theory and cost-benefit theory. In terms of research methods, scholars used similar research methods, namely regression analysis, fixed-effect model and random-effect model. Some scholars do not consider time lag and directly use empirical analysis methods to prove that ESG performance harms financial performance [5]. Another part of the scholars is considering the time lag to conclude that ESG performance harms financial performance [6].

Additionally, a limited body of literature advocates for a non-linear relationship between ESG performance and financial performance. The theoretical underpinnings of these studies predominantly draw from stakeholder theory and cost-benefit theory. Scholars typically employ similar research methodologies, including regression analysis, fixed-effect models, and random-effect models. Some researchers have identified an inverted U-shaped non-linear relationship between ESG performance and financial performance. This suggests that initially, increasing ESG investment may lead to higher costs and lower financial performance. However, once ESG responsibility performance surpasses a certain threshold, value enhancement and creation effects become more pronounced [7]. Some scholars have further found there is a nonlinear relationship between the effect of ESG performance on financial performance due to time lag. The other part is to directly demonstrate through empirical analysis that

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ESG performance is not related to financial performance [8]. Some scholars have further found that this is due to the lack of interest in ESG performance in the local capital market.

Overall, although there is no consensus in the academic community, most of the literature supports the conclusion that ESG performance has a positive relationship with financial performance. In addition, the reasons for the inconsistency of different empirical studies are mainly due to the differences in the time range of study selection and the selection of samples. This is because the effect of ESG performance on financial performance takes a long time to be realized. However, when a shorter time frame is selected, the improvement of ESG performance due to the time lag has an inverse effect on financial performance or presents a non-linear relationship. In addition, different capital markets pay different attention to ESG information, resulting in the phenomenon that in some local capital markets, although the ESG performance of enterprises is not very good, their financial performance is still good. In addition, regardless of the empirical research on the relationship that is supported, the researchers adopt similar research methods, that is, the fixed effect model and the random effect model for empirical research. In terms of ESG rating sources, domestic scholars mainly choose the ESG rating of China Securities and Syn Tao Green Finance ESG rating, while foreign scholars mainly choose the ESG rating of the Thomson Reuters database, Datastream and Bloomberg.

3.3 Factors Influencing the Role of ESG Performance on Financial Performance

Some factors amplify the impact of ESG performance on financial performance, while others weaken. Through literature review, it is found that when scholars analyze the influencing factors, they mainly elaborate from the four perspectives of corporate nature, geographical location, industry nature and media supervision, but there is still no unified conclusion on whether some factors expand or weaken the effect of them, such as the nature of the industry and geographical location of the enterprise.

State-owned enterprises (SOEs) bear more economic responsibilities entrusted by the state, so their financial and financing methods are strictly supervised by the state and are also supported by special national policies. Hence, whether in the context of state-owned enterprises or non-state-owned enterprises, the impact of corporate ESG performance will be either amplified or diminished accordingly. At present, it is generally believed that the ESG performance of non-state-owned enterprises (SOEs) plays a greater role in financial performance than SOEs. This is because non-SOEs are more market-oriented and have a stronger incentive to improve ESG performance. In addition, non-state-owned enterprises hope to improve their environmental, social and governance capabilities, provide more information to the market and financial institutions that are beneficial to their image, take the initiative to reduce financing constraints, obtain external funds, improve corporate efficiency, expand business production, and achieve the goal of improving financial performance[2]. State-owned enterprises shoulder the economic tasks assigned by the state. Even if these enterprises perform poorly on ESG, investors will still not reduce their enthusiasm for investing in them, resulting in a smaller impact on financial performance [9].

Through the literature review, it is found that scholars have not yet reached a unified conclusion on whether the ESG performance of enterprises in economically developed regions has a greater role in financial performance or backward regions, but the vast majority of scholars support that the ESG performance of enterprises in economically developed regions has a greater role in financial performance. At present, scholars mainly consider the perspectives of financing constraints, investor attention, policy tilt and market recognition in different regions. One view is that the ESG performance of companies in economically developed regions has a greater impact on financial performance. Because for enterprises in economically developed regions, the market will pay more attention to the company[10], the pressure on environmental protection and social responsibility of enterprises is greater[1], there are more financing channels, there are more policy tilts and the legal system is more perfect [11], which ultimately leads to a greater effect. Another view is that the ESG performance of companies in economically

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disadvantaged regions has a greater impact on financial performance. This is because most companies have taken measures to improve their ESG performance, either actively or passively, in an environment where competition is high and government regulations are stricter in economically developed regions, so the benefits of continuing to engage in ESG-related activities are not significant [12].

Through literature review, it is found that the ESG performance of enterprises in polluting industries has a greater role in the financial performance of non-polluting industries, but most of the literature supports the view that ESG performance plays a greater role in financial performance when enterprises are in polluting industries. This is because corporate society and stakeholders in highly polluting industries are paying more attention [4]. Second, improving the ESG performance of companies in high-polluting industries can affect stakeholders and promote corporate innovation, which ultimately leads to a more significant impact than those in non-polluting industries [11]. Another perspective posits that the ESG performance of non-high-polluting companies exerts a more substantial influence on financial performance. This is due to the lack of attention to local polluting companies and the fact that non-polluting companies pay more attention to environmental protection and sustainable development, while the high-polluting companies themselves face greater pressure to be punished for environmental pollution [1].

Through the review of the literature, it is found that compared with traditional media, ESG performance plays a more significant role in financial performance under the supervision of online media. This is due to the network effect, which can swiftly and extensively influence operations, consequently accelerating the efficacy of ESG performance on corporate outcomes. As a result, the ESG performance of enterprises exhibits a heightened impact on financial performance.

3.4 The Impact Pathway of ESG on Financial Performance

Through the review of the existing literature, it is found that the current research on the effects of ESG and financial performance mainly focuses on the analysis of the relationship between them. In addition, when analyzing the relationship between the two, scholars mainly argue from four paths: information asymmetry, innovation ability, media attention and tax incentives. At present, scholars who support the positive relationship between ESG performance and financial performance believe that enterprises can reduce their information asymmetry, improve their innovation capabilities, increase their media attention enable them to enjoy more tax incentives when carrying out ESG-related activities, and ultimately improve their financial performance. However, since most of the scholars who support the inverse or nonlinear relationship between them analyze from the perspectives of time lag, imperfect ESG ratings, or the capital market do not pay much attention to corporate ESG behaviour, there is still a large gap in the path of this part of the research.

ESG performance can improve financial performance by reducing information asymmetry in companies. Since listed companies are compulsory to disclose their financial information, and most of the non-financial information is not compulsorily published, this has caused information asymmetry between enterprises and investors, which is more likely to cause fraud and fraud. The ESG report contains non-financial information on the environment, social responsibility and corporate governance. First of all, the disclosure of ESG reports can send a signal to the market that they are doing well, so that market investors can better understand the internal situation of the company and improve the transparency of the company through this information [13]. Second, it is conducive to improving investor confidence [12,14]. Investor confidence can affect investors' decision-making behavior in many ways through psychological emotions, which ultimately affects the company's stock price, financing ability, equity capital cost and other aspects. In general, when ESG performance improves, it improves investor confidence, helps attract more capital investment [15], relieves certain financing pressure, and ultimately improves financial performance [4].

ESG performance can improve financial performance by increasing a company's ability to innovate. First of all, since the ESG

concept pays more attention to non-financial factors, it requires enterprises to pay more attention to the concept model of financial factors and the co-development of environment, social responsibility and corporate governance. In the process of enterprises in the process of green and sustainable development, new ideas, new concepts, and new behaviours are fully reflected, which not only helps enterprises to obtain important resources in the innovation process[16], but also promotes enterprises to continuously innovate [10]. Second, the fulfilment of ESG-related responsibilities will increase the company's R&D expenditure, which in turn will promote the company's innovation [17]. Innovation is the source of enterprise development, and when an enterprise has enough innovation ability, it will help the stable growth of enterprise revenue, reduce operating costs, and finally help the increase of enterprise profit margin.

ESG performance can improve financial performance by increasing a company's media presence. Due to the development of network technology, new media plays an increasingly important role in society and life. In addition, with the improvement of public responsibility, the public has paid more attention to information on the ESG performance. Therefore, to meet the needs of the public, the media also report more information on the environment, social responsibility and corporate governance of enterprises. Most consumers are more inclined to buy products from companies that have the responsibility to bear environmental obligations, which makes companies with different corporate environmental responsibility performances get different economic returns. Therefore, media attention can act as a bridge in the impact of ESG performance on financial performance [18]. When a company's environmental and social responsibilities are fulfilled well, it helps to attract more media attention, which ultimately improves the financial performance [19].

ESG performance can improve financial performance by reducing the tax burden. The government has introduced many preferential tax policies in environmental protection and employee rights and interests protection to guide enterprises to play an active role in energy conservation and environmental protection and promote sustainable development. Therefore, enterprises can also enjoy certain tax incentives when carrying out environmental protection and purchasing environmental protection and energy-saving equipment, thereby reducing the actual tax burden of enterprises. Tax incentives can alleviate the financial pressure on enterprises, thereby improving the financial performance of enterprises [20]. In addition, when fulfilling ESG responsibilities, enterprises also meet the relevant green policies and regulatory requirements of the government, which can help improve the relationship with the government, communities and other stakeholders, and help enterprises gain more support from local government policies and the public.

4. Conclusion

At present, ESG-related concepts have reached wide recognition, and scholars at home and abroad mainly focus on the direction that can be concluded in the effect of ESG performance on financial performance. However, the research lacks a certain depth and breadth. First of all, in terms of sample selection for empirical research on the effect of ESG performance on financial performance, scholars take the local capital market as the research object and select a certain number of listed companies for analysis and research. However, the author believes that this selection of samples reduces the representativeness of the sample, and ultimately leads to the results being difficult to represent the overall situation. In addition, by combing the literature, it is found that the current empirical research mainly focuses on the effect of ESG performance on financial performance, while the path of ESG impact on financial performance is analyzed in the analysis of the role of ESG performance on financial performance, and few scholars have conducted more detailed empirical analysis alone. Finally, there is the rating and system specification of ESG. The authors find that when scholars conduct empirical analysis, the ESG rating data used by scholars come from different institutions, and different ESG rating agencies have inconsistent scoring standards for enterprises' ESG behaviour, which leads to inconsistencies in the calibre of the data, which may ultimately increase the error of the

empirical analysis.

Therefore, I would like to make three suggestions. The first is to refine the sample selection for empirical analysis. That is, in addition to selecting listed companies in the local capital market for empirical research, the sample size and sample representativeness can also be expanded for research, such as selecting different samples in countries or regions with the same or similar capital market conditions and social conditions.

The second is to increase the depth and breadth of empirical research. Because financial performance is a popular direction in ESG impact research, few scholars have conducted more detailed empirical research on the impact path of corporate ESG responsibility on financial performance. Therefore, scholars must do more empirical research on it. In addition, scholars can introduce more variables and analytical methods, thus expanding the breadth of research.

Finally, we need to improve ESG-related ratings and systems. ESG ratings are important data for conducting ESG-related empirical research, and many relevant empirical studies are based on them, but for now there are many ESG rating companies in the market, and each company has different evaluation criteria. Therefore, to be more standardized, the academic community should establish a complete and recognized ESG rating system to increase the comparability of information.

Acknowledgements

First of all, I would like to express my deepest gratitude to my supervisor for this dissertation writing guide. In this writing, they showed me the way and helped me through one difficult hurdle after another. Secondly, I would also like to thank my friends and family who have helped me and accompanied me all the time. Finally, I would like to thank Jilin International Studies University for providing various academic resources and academic platforms.

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