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Research on Green Finance Facilitating Enterprise ESG Development

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Abstract: While past studies have focused on the emergence and application of green finance as a contemporary financial concept, little attention has been given to its relationship with environmental, social, and governance (ESG) performance. Green finance and ESG intertwine systematically and complexly, making it essential for organizations to employ suitable coordination frameworks to facilitate the control of the relationship. This research paper aims to explore how advancements in green finance research facilitate ESG development. Using a secondary research literature review approach, the research paper expounds on the conceptual foundation of green finance and ESG, the intersection between green finance and ESG, and the influence of green finance in environmental stewardship, corporate social responsibility, and enhancing organizational governance. The assessment identifies and outlines the future investment consequences of green financing, including how it will influence the establishment of circular economies at the organizational and national levels. The results underline the crucial importance of facilitating further research on green financing.

Keywords: green finance, ESG development, corporate social responsibility, development goals

1. Introduction

The global community has acknowledged that the move to a greener economy by promoting green finance is essential to sustainable growth. Green finance refers to activities related to the interaction between the sustainability of the environment and corporate finance. Moreover, green finance refers to making the financial system sustainable internationally. Sustainable finance comprises processes that consider environmental, social, and governance (ESG) factors in investment decisions. Green finance seeks to promote long-term investments in sustainable economic projects. ESG acts as a matrix for accessing the sustainability of financial investments. Green finance and ESG development are intertwined, with research on one field promoting the advancement of the other. The relationship between the two concepts supports economic growth while minimizing adverse effects on the environment that lead to climate change. It is anticipated that companies will experience increased regulatory and sociocultural pressures to implement sustainable finance, thus the need to clarify the future direction of green finance and ESG development.

This research examines how green finance promotes increased adoption and application of enterprise ESG. The research paper begins with a literature review of the existing body of research

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related to green finance, followed by the research body. The literature review introduces the conceptual foundations of green finance and ESG and the intersection between the two financial concepts. The research body evaluates the role of green finance in environmental stewardship and how green finance supports corporate social responsibility. The research body also looks at how green finance facilitates advancements in ESG practices. Against this backdrop, the research body asserts that green finance, characterized by investments into sustainable and environmentally friendly initiatives, has emerged as a fundamental driving force behind the enhancement of enterprise Environmental, Social, and Governance (ESG) development.

2. Literature Review

2.1. Conceptual Foundation of Green Finance and ESG

Sustainability was not a priority in the financial world three decades ago as it is today. While several companies focused on socially responsible investing, most were philanthropic trusts and religious societies [1]. However, the growth of capital markets in the 1980s and 1990s prompted companies to improve their corporate governance. Despite the increased recognition of governance's role in company performance, little emphasis was given to the environmental and social issues present at the time. Maria et al. lament this late acknowledgment of social and environmental factors in corporate management in the 1990s [2]. Maria et al. argue that investors and financial advisers should have made the connection between the environment and sustainable economic growth during the last recession [2]. Fast forward to 2023, the 2008 financial crisis has reshaped the economic environment [1]. Attitudes have changed with increasing environmental awareness.

The growth of green finance and ESG influences in business has been incremental over the last few decades. In 2000, leading economies and financial institutions agreed to raise awareness and provide a framework for the financial system under the UN Millennium Development Goals (MDGs) [1]. The agreement led to the financial sector increasing its understanding of how sustainability is defined using economic, social, and environmental objectives. The MDGs were updated in 2015, with the 5DGs taking a more expansive approach to ESG issues [1]. The financial sector also started making concerted efforts toward sustainable finance. Maria et al. highlight various companies using different indices, such as the Energy Statistical Yearbook and the Dow Jones Sustainability Index, to identify companies focusing on sustainability and ESG [2]. Cooper also discusses how the United Nations' Principles for Responsible Investment (PRI) that help investors meet their environmental commitments to broader ESG goals [1].

Governments have also significantly influenced the growth and evolution of green finance. For instance, several countries issue green and social bonds to sovereigns and corporations [1]. The European Investment Bank was the first to launch green bonds, which offer corporations a new financing tool for climate-related projects [1]. China has then since overtaken other countries in issuing green bonds. In 2020, the country issued over $25.5 billion in green bonds [3]. Since the introduction of MDGs, it is evident that the evolution of green financing and ESG has occurred at governmental and industry levels. Policy and practice transformations have helped sustainability efforts gain traction in the financial sector.

2.2. Intersections of Green Finance and ESG

The broader cultural shift towards an ESG-conscious society has been one of the primary motivators for shareholders to view businesses through a sustainability lens. While ESG is a matter of regulatory compliance for some companies, others understand its importance on corporate performance. For instance, some supply chain processes have underlined environmental concerns.

Companies in the apparel industries have been criticized for their exploitation of child labor, while mining companies have been scrutinized over water and land management. The reputation and performance of companies within these industries are directly linked to their financial and ESG performance. Accordingly, companies in these industries and other industries as well are rethinking how they do business, from their relationships with suppliers to the nature of the finished product.

A recent Governance and Accountability Institute report highlights how organizations prioritizing ESG issues, such as workplace diversity and inclusion, benefit from enhanced company performance [4]. Aramonte and Zabai also associate the increased emphasis on ESG with improvements in corporate performance. Aramonte and Zabai use the findings in the report to make claims that ESG issues motivate enterprises to increase their commitment to green financing [5]. The enhanced compliance with ESG issues can be seen in the number of high-profile organizations releasing sustainability reports. According to the Governance and Accountability Institute report, 65% of companies in the Russell 1000 Index published their sustainability studies [4]. Each company reviews its annual performance to ensure noticeable and tangible improvements in its sustainability report. As the companies improve on their green financing strategy, they promote further ESG development.

Green finance reforms positively impact ESG scores. Aramonte and Zabai discuss how climate change is a common topic in sustainable finance [5]. Addressing the global rise in temperature is perceived as an imperative act to prevent companies from experiencing physical risks associated with adverse weather-related events. The shift to electric power is inevitable to reduce and prevent transition risks. Companies must shift from fossil fuels to electric fuels to prevent losses associated with changes in the price and value of stranded assets, such as oil-based motor vehicle engines [5]. The delayed acknowledgment of these risks could be detrimental to investors, further incentivizing them to apply ESG considerations in their investment portfolios. Therefore, the more effort a company or investor puts into enhancing their level of sustainability, the better their ESG score.

2.3. Case Studies of Green Finance Facilitating ESG Development

Using an experiment on issuing green credit to several Chinese non-financial companies, Gao and Liu found that green credit policies improve ESG performance [6]. The experiment included a longitudinal review of data, which showed that introducing green credit increased ESG investment ideas. Chinese companies are increasingly trying to become sustainable [6]. The higher the level of sustainability in a company, the more likely it is to access green credit. Such financing criteria led to Chinese companies strengthening their disclosure of ESG-related information. As highlighted by G&A, many high-profile organizations commit to publishing sustainability reports [4]. The practice responds to investor’s need for disclosure of non-financial information.

The results of Yu et al.’s quantitative research reinforce findings on how green financial reforms promote ESR development [3]. The authors used data from Chinese companies from 2007-2021 to highlight how green finance policies impact ESR adoption. The policies were found to have a positive effect by reducing financial constraints, increasing attention to corporate social responsibility, and enhancing the number of available government subsidies received by businesses [3]. The Chinese government introduced green financial policies to regulate the conduct of businesses and used financial institutions as its enforcer. The government also introduced incentive measures, such as discounted interests and re-lean support in its green policy reforms. The generous provisions provided additional reasons for Chinese firms to increase their commitment to ESG development.

Wang et al. conducted a quasi-natural experiment to find that the impact of green finance on ESG development varied depending on several factors [7]. Using fourteen-year-old data on Chinese companies and the Difference-in-Differences (DID) model, the authors found that biggest

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companies were incentivized to make ESG commitments [7]. The finding suggests that green financing policies are yet to reach or impact small, individual-owned enterprises. The results align with Yu et al.'s findings, where the government focused on the regulations of large Chinese corporations first in their commitment to corporate social responsibility [3]. Corporate size emerges as one of the important factors in the adoption of green finance and ESG. Therefore, there is a growing concern that small and medium enterprises lack the capital or stability to adopt green finance. Future studies should affirm the influence of company size on investments in sustainable and environmentally friendly initiatives.

3. The Role of Green Finance in Environmental Stewardship

While some studies find that green finance has minimal implications on sustainability, other studies validate its positive effects. In recent years, Asia and the Pacific have paid more special attention to green bonds, whose results are associated with greater operational returns and higher risks [8]. For example, during the COVID-19 period, green bonds had better return than conventional bonds [9]. There was an increased uptake of green bonds by companies. A longitudinal study from 2009-2018 found that green bonds promote the increased adoption of sustainable energy projects [9]. The Asian banking sector has been more active in issuing green bonds as a strategy for product and service diversification. The approach is also associated with de-risking strategies. Therefore, it can be concluded that the issuance of green bonds facilitates environmental stewardship, enhancing ESG development.

Green finance is a gateway to sustainable corporate operations. Kumar et al. suggest that the aim of green finance is to enhance the involvement of the financial sector in preserving the environment by providing capital to companies that are ready to undertake environmentally friendly initiatives [10]. Green bonds and other forms of sustainable financing are emerging as the primary approach to companies addressing identifiable environmental problems. However, the effectiveness of the corporate approach remains to be determined due to the challenges caused by differences in green investment gaps [10]. As the literature review highlights, company size influences the commitment to green financing. In addition, there is a clear difference in the adoption of sustainability initiatives between public and private enterprises [3]. Corporate regulators still have a significant role in ensuring green finance implementation at the industry level and its application in corporate-funded sustainable initiatives.

There are no limits to the specific environmental projects that green finance can support. A large part of the excitement towards green financing is its endless opportunities for companies to invest in environmentally friendly initiatives. For example, in 2010, 194 nations created the Green Climate Fund (GCF), which provides financial support to efforts geared toward reducing global greenhouse gas emissions [11]. The primary goal of the investment is to promote and facilitate green finance worldwide. Companies need only to present their sustainability ideas to the managers of the GCF to access funding [11]. Corporations are free to develop and present different environmental offerings to the GCF. In such an approach, green finance facilitates the transition toward circular economies [11]. A diverse financial system improves the efficiency of a circular economy and promotes the development of new financial products.

The Asia and Pacific diversification of environmental sustainability projects highlights the limitless nature of green financing for sustainable investments. Fu and Irfan conducted a longitudinal observation of the various sustainability initiatives introduced by ASEAN economies from 2012-2019 [11]. The study found that green financing led to regional heterogeneity in commitments to reduce carbon emissions and effective waste management. For instance, Singapore recorded a 25.31% decrease in carbon emissions, while Indonesia recorded a 19.445% decrease [11]. Singapore and Indonesia have equally made significant reductions in their energy consumption.

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Over the same seven years, the Philippines also decreased energy use by 3.732% [11]. Through observations on ASEAN countries, it becomes apparent that green financing can support a diverse portfolio of sustainable operations and have a positive effect on ESG development.

4. Green Finance Supporting Social Responsibility

Green innovation is pivotal in facilitating Corporate Social Responsibility (CSR). Companies constantly look for cheaper, more effective, and visible solutions for their CSR [12]. Green innovation is one way to achieve cost reduction. A study comparing the relationship between CSR and corporate Environmental Performance (EP) found that green innovation was a considerable mediator. The information was collected from 357 bankers from commercial finance institutions and assessed through descriptions statistics [12]. The findings highlight that the level of green innovation within an enterprise is directly correlated with the success of its CSR. Therefore, green finance and CSR are important considerations in capturing EP [12]. Green finance is a strategic managerial tool for reducing the cost of CSR while enhancing its positive impacts. By improving the integration of green finance in corporate finances, a company will build its capacity to meet its CSR obligations.

There is a mutually beneficial relationship between CSR and green finance. While green finance enhances a company's ability to achieve its CSR obligations, CSR improves the chances of an enterprise adopting green finance. A study on the regular disclosure of financial and CSR reports found that companies consistent with disclosing their sustainability efforts are likelier to adopt green finance [5]. The finding acts as an incentive for companies to commit to financial disclosures beyond regulatory compliance. From another perspective, green finance entails enterprises providing consumers with environmentally friendly financial products. These financial products include items and services built by or run on green technologies. Access and availability of these provisions align with CSR obligations because they reduce a company's negative impact on the environment while improving the positives.

There is sufficient scholarly evidence on the positive association between sustainable investments and positive financial returns. Bassett considers this relationship to be the primary driver of green and social finance growth [13]. Bassett claims are based on his study on the concept of Social Returns on Investment (SROI) [13]. The measure captures both monetary returns and environmental and social ones. Green financing places a monetary value on social and environmental outcomes. A diversity of strategic approaches is applied to achieve the desired outcomes. In some ways, diversification improves SROI in the same way conventional diversification benefits ROI [13]. However, SROI takes a different and more expansive approach than ROI in investment decisions, making it more beneficial to an investor.

Investments in sustainable projects tend to be less return sensitive as they demand more patient capital. Investors who invest in sustainable projects seek long-term projects with higher returns and less risk [13]. Past studies on mutual funds highlight that they become more persistent and less sensitive to market shocks when they invest in responsible assets. Therefore, the companies that issue green bonds are likely to record increments in the long-term in their investments. In addition, social capital has been found to pay big dividends during market crises, where investor confidence is low, and there is a loss in trust value [13]. As seen, green finance will encourage a business to focus on environmental investments as part of their CSR because it helps mitigate the risks linked to sustainability concerns. Consumers and investors acknowledge the investments, resulting in positive implications for the company.

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5. Green Finance in Enhancing Governance Practices

Green financing introduces financial constraints to a company's financial plan that tend to improve its overall governance. For instance, an integrated green governance framework for energy-intensive industries can introduce financial constraints that lower the carbon emissions of America and Europe's oil and gas industry. Green finance implies the rejection of certain fiscal practices and strategies in favor of scaling up green investments [14]. One way to facilitate this transition is the use of fiscal constraints. A five-year longitudinal study in China involving high-polluting enterprises found that green finance practices enhanced conventional corporate governance. In the study, the included companies documented increased financial disclosures and enhanced environmental performance [14]. The findings highlight the importance of financial constraints in facilitating industrial transformations, especially regarding reducing carbon emissions. Therefore, green financing will have a significantly positive effect on the governance practices of energy-intensive industries.

Green financing is prompting the emergence of green governance as a concept in corporate policymaking. Basic economic research has already affirmed that green financing reduces operational costs associated with CSR while increasing a company's environmental performance. It has also been established that green financing results in higher SROI. Such an understanding has prompted the separation of green governance as a distinct managerial field. The concept outlines that social, economic, and environmental ESG concerns should be considered in every aspect of corporate decision-making. However, it is important to note that the concept of green governance goes beyond the policymaking done in companies because it also includes government policies. Countries are taking the necessary steps to ensure that all the decisions of government institutions embody ESG principles. The objective is to have an economy characterized by eco-friendly goods and services.

The link between green finance and corporate governance explains the increased participation of central banks in promoting the transition to sustainable financing. The United Nations Environment Program (UNEP) has sought ways to advance policy options for green and inclusive economies. One of the cited solutions in its 2017 working paper was the involvement of central banks in normalizing green financing innovations [15]. According to the environmental body, central banks have the ability and capacity to establish a sustainable global financial system characterized by shared green policies and practices [15]. Central banks are known to impact corporate governance using policies on credit allocation, financial disclosure, capital requirements, and investments. By making the case for sustainable development through increased participation by central banks, UNEP clarifies the impact of green financing on corporate governance.

Ultimately, this research study has shown that green finance, characterized by investments into sustainable and environmentally friendly initiatives, is a fundamental driving force behind ESG development. This research finds that green financing promotes the development of ESG more than ESG promotes the acceptance of green financing. Previous research has affirmed that green financing policies and practices foster sustainable performance and innovation. Consistent with these studies, this research also finds that green financing can improve the foundations of a company's ESG performance. Contemporary investors will look at ESG scores to determine whether a company is socially and environmentally responsible. Therefore, companies are financially incentivized to adopt green financing to improve their ESG ranking. Apart from attracting investments, there is also the governance incentive to embrace green financing. Green financing has improved several governance practices, including financial disclosures, credit allocation, and waste management. The various improvements in governance result in reduced operational costs and higher returns in SROI, characteristic of enhanced ESG performance.

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6. Conclusion

Changes in the global business environment make it critical for enterprises and institutions to adopt environmentally sustainable practices. This research paper finds there are tangible social and economic benefits in embracing green financing. The concept is known to enhance an enterprise's green performance and innovation, resulting in an improved bottom line. The study also finds that green financing and ESG development should be considered intrinsically intertwined. None can advance without the growth of the other. However, green financing is one of the main driving forces for the adoption of sustainable management practices and implementation of ESG policies. Green finance policies act as the pillars of a company’s ESG performance. The size of an enterprise, its business structure, and its level of risk are some of the factors that will influence its green finance, in turn affecting its ESG performance. Therefore, further research on pilot policies is required to tighten the environmental, social, and economic impacts of green financing while ensuring they are asymmetric across different types of organizations. Such studies should help academia better understand the implications of green finance on ESG development.

References

[1] Cooper, S. (2019, February 5). The evolution of sustainable finance. Standard Chartered, https://www.sc.com/en/feature/the-evolution-of-sustainable-finance/

[2] Maria, M. R., Ballini, R., & Souza, R. F. (2023). Evolution of green finance: A bibliometric analysis through complex networks and machine learning. Sustainability Journal, 15(2).

[3] Yu, H., Zhao, Y., Qiao, G., & Ahmad, M. (2023). Can green financial reform policies promote enterprise development? Empirical evidence from China. Sustainability Journal, 15(3).

[4] Governance and Accountability Institute. (2020). 65% of the Russell 1000 Index published sustainability reports in 2019.

[5] Aramonte, S. & Zabai, A. (2021, September 20). Sustainable finance: Trends, valuations, and exposures. BIS Quarterly Review.

[6] Gao, W. & Liu, Z. (2023). Green credit and corporate ESG performance: Evidence from China. Finance Research Letters, 55.

[7] Wang, Z., Shahid, M., Binh, N., Shahzad, M., & Samad, Z. (2021). Does green financing facilitate firms in achieving corporate social responsibility goals? Economic Research, 35(1), 5400-5419.

[8] Xia, L., Liu, Y., & Yang, X. (2023). The response of green finance toward the sustainable environment: The role of renewable energy development and institutional quality. Environmental Science and Pollution Research, 30(32), 59249-59261.

[9] Kumar, L., Nadeem, F., Sloan, M., Restle-Steinert, J., Deitch, M. J., Ali Naqvi, S., Kumar, A., & Sassanelli, C. (2022). Fostering green finance for sustainable development: A focus on textile and leather small, medium enterprises in Pakistan. Sustainability, 14(19), 11908.

[10] Kumar, B., Kumar, L., Kumar, A., Kumari, R., Tagar, U., & Sassanelli, C. (2023). Green finance in a circular economy: a literature review. Environment, Development and Sustainability, 2(3), 1-41.

[11] Fu, W. & Irfan, M. (2022). Does green financing develop a cleaner environment for environmental sustainability: Empirical insights from Association of Southeast Asian Nations Economies. Frontiers in Psychology, 13(904768), 1-14.

[12] Dai, X., Siddik, A. B., & Tian, H. (2022). Corporate social responsibility, green finance, and environmental performance: Does green innovation matter? Sustainability, 14(20), 13607.

[13] Basset, F. (2023). The evaluation of social farming through social return on investment: A review. Sustainability, 15(4), 3854.

[14] Liu, P. J., Song, C., & Xin, J. (2022). Does green governance affect financing constraints? Evidence from China’s heavily polluting enterprises. China Journal of Accounting Research, 15(4), 1-24.

[15] United Nations Environment Programme. (2017). On the role of central banks in enhancing green finance. Inquiry Working Paper 17/01, 1-27.