Green Financing, Corporate governance and Financial Performance of Commercial Banks in Kenya: A Review of Literature

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doi: https://doi.org/10.37745/ejaafr.2013/vol13n1110122 Published January 18, 2025

Citation: Oneya S.D. and Jemaiyo B. (2025) Green Financing, Corporate governance and Financial Performance of Commercial Banks in Kenya: A Review of Literature, *European Journal of Accounting, Auditing and Finance Research*, Vol.13, No. 1, pp.,110-122

Abstract: *This research examines the interplay between green financing and the financial performance of commercial banks in Kenya, with a particular focus on the role of corporate governance as a moderating variable. Green financing refers to the investment of financial resources in projects that foster environmental sustainability. As concerns regarding environmental issues grow globally, financial institutions are progressively incorporating green financing into their operational frameworks. This study aims to assess the implications of such practices on the financial stability and competitive positioning of banks within the Kenyan market. Through a comprehensive review of scholarly articles, reports from the Kenya Bankers Association, and various working papers accessed via Google Scholar, the findings indicate a favorable relationship between green financing initiatives and enhanced financial performance. Furthermore, the analysis highlights a general agreement among numerous studies that corporate governance plays a mediating role in the relationship between green financing and the financial outcomes of commercial banks. These findings emphasize the critical significance of adopting sustainable banking practices to bolster profitability while simultaneously advancing environmental sustainability.*

Keywords: financial performance, green financing, sustainability financing, lending in commercial banks.

INTRODUCTION

According to Chen et al.(2022),in recent years, the financial sector has undergone a notable transformation, driven by increasing awareness of environmental sustainability and the need to mitigate climate change. At the international level, countries have signed the Paris Agreement to limit global warning to below 2 or 1.5 degree Celsius while the members of the United Nations Climate

Change Conference of the Parties (COP26) have commitment to reduce greenhouse gas emissions(Chen et al., 2022). This demands mobilization of huge financial resources with Green finance acting as an innovative alternative. Green finance facilitates the distribution of funds to sustainable trade and investment activities, low-risk financing, and the development of green investment and financing instruments(Snigdhya et al., 2024).Furthermore, the most important idea to this transformation is the concept of green financing, which encompasses a range of financial products and services aimed at supporting environmentally sustainable projects and initiatives. This shift marks a significant departure from traditional banking practices, as financial institutions worldwide increasingly recognize the dual mandate of not only making profits but also being environmentally responsible(Rahman et al., 2023).

Additionally,Pathania and Kaushik(2024) observed that Green financing plays a crucial role in addressing global environmental concerns while fostering economic growth. It supports the achievement of SDGs, particularly those related to climate action (SDG 13), affordable and clean energy (SDG 7), and sustainable cities and communities (SDG 11). The increasing regulatory pressure and growing awareness among stakeholders about environmental issues have prompted banks to incorporate green financing into their operations(Agrawal et al., 2024).Moreover according to Were et al.(2022) in Kenya, green financing is gaining traction as the country seeks to meet its environmental goals and commitments under international agreements such as the Paris Agreement. Sources of green financing in Kenya mostly consist of foreign loans and grants from international institutions, which constitute 60%, while the national government allocates 40% from its own resources to green-related initiatives. Analysis of national budget data indicates that for the fiscal years 2017/18 and 2019/20, the government allocated KES 414.23 billion and KES 427.24 billion to climate change sectors, respectively. The magnitude of private sector contributions to green finance remains uncertain; nonetheless, it is tentatively expected to average KES 100 billion year, comprising approximately KES 30 billion from domestic sources and KES 70 billion from international organizations(Were et al., 2022). The Kenyan government, through various policies and incentives, has been encouraging financial institutions to support green projects(GoK, 2022). This study examines the impact of green financing on the financial performance of commercial banks in Kenya, aiming to provide empirical evidence on the economic benefits of sustainable banking practices.

Problem Statement

Despite the increasing adoption of green financing in Kenya, there is limited empirical evidence on its impact on the financial performance of commercial banks(Mwanu, 2021). While some studies suggest that green financing can enhance a bank's reputation and attract environmentally conscious customers, others argue that it may involve higher risks and costs (Rahman et al., 2023; Snigdhya et al., 2024). This study aims to fill this gap by analyzing the relationship between green financing initiatives and the financial outcomes of commercial banks in Kenya. By providing insights into the economic viability of sustainable banking practices, this research seeks to inform policymakers and financial institutions about the potential benefits and challenges associated with green financing in the Kenyan context.

Research Objectives

The primary aim of the study was to investigate the influence of green financing on the financial performance of commercial banks operating in Kenya. Additionally, it seeks to evaluate the correlation between carbon asset financing and the financial outcomes of these banks. Another objective was to explore the connection between environmental credit and the financial performance metrics within the Kenyan banking sector. Furthermore, the research analyzed the relationship between carbon emission allowances and the financial performance of commercial banks in Kenya. Lastly, the study objective was to assess the role of corporate governance as a moderating factor in the relationship between green financing and the financial performance of commercial banks in the country.

LITERATURE /THEORETICAL REVIEW

Theoretical foundation

The theoretical foundation of this study is based on stakeholder theory and the resource-based view (RBV) theory. Stakeholder theory suggests that organizations must consider the interests of all stakeholders, including customers, employees, investors, and the broader community. By engaging in green financing, banks can address the environmental concerns of their stakeholders, leading to enhanced reputation, customer loyalty, and potentially better financial performance(Mahajan et al., 2023).The RBV theory posits that firms can achieve a competitive advantage by leveraging unique resources and capabilities. Green financing can be viewed as a strategic resource that differentiates a bank from its competitors(Freeman et al., 2021).Additionally, Sharma et al.(2024) noted that by investing in environmentally sustainable projects, banks can attract new customers, enhance their brand image, and mitigate environmental risks. Resource dependence theory helps in explaining how green financing, as a strategic resource, impacts the financial performance of commercial banks in Kenya.

Conceptual Framework

The conceptual framework for this study links green financing activities (independent variable) to financial performance indicators such as return on assets (ROA), return on equity (ROE), and net profit margin (dependent variables). The framework also considers moderating factors such as regulatory environment, market conditions, and bank-specific characteristics (e.g., size, market share, and risk management practices).

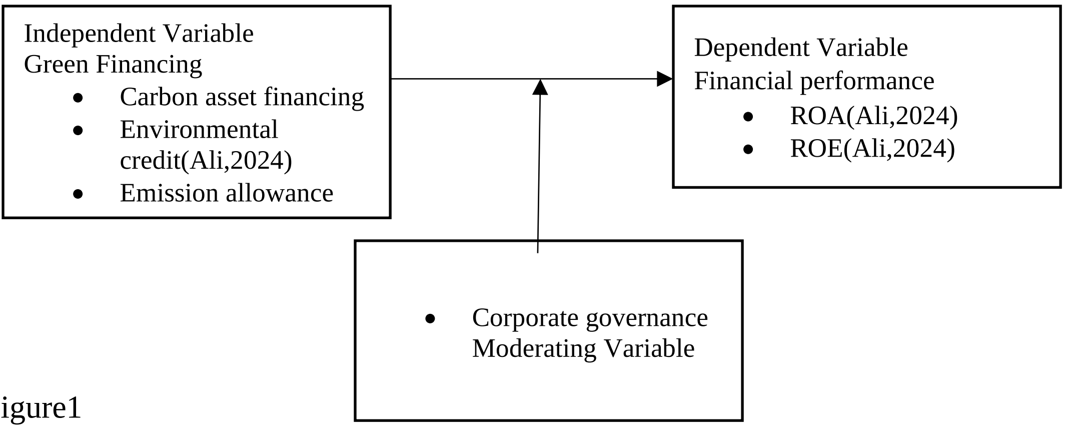

Figure1
Conceptual Framework
Source: Author

Conceptual Review

Green Financing

Green financing encompasses a range of financial products and services that support environmental sustainability. These include green bonds, green loans, and investments in renewable energy projects. Green bonds are debt securities issued to finance projects that have positive environmental benefits. Green loans are similar but are typically extended to specific projects or companies engaged in sustainable practices(Flammer, 2021). Additionally, adopting green financing, banks The concept of green financing aligns with the broader paradigm of sustainable banking, which integrates environmental, social, and governance (ESG) criteria into financial decision-making processes can mitigate environmental risks, enhance their reputation, and capitalize on new market opportunities(Valavan, 2024).

Carbon asset financing

The study conducted by Purwanti et al.(2022) provides valuable insights into the financial performance of state-owned enterprises (SOEs) listed on the Indonesia Stock Exchange, particularly in relation to their carbon emission disclosure practices. The researchers found that there is no substantial relationship between the level of carbon emissions disclosed by these enterprises and their return on assets (ROA). This finding suggests that, at least within the context of Indonesian SOEs, transparency regarding carbon emissions does not significantly influence the financial returns generated by these companies. This could imply that investors may not prioritize carbon disclosure as a critical factor when evaluating the financial health or investment potential of these enterprises, or that other factors may overshadow the impact of carbon emissions on financial performance(Purwanti et al., 2022).

Additionally, research conducted by Yu(2024) highlights another critical aspect of financial performance, specifically focusing on the implications of renewable energy supply interruptions. Yu's study found that disruptions in the supply of renewable energy can lead to a decrease in return on assets for companies reliant on this energy source. This finding underscores the importance of a stable and reliable energy supply for maintaining financial performance. When renewable energy supply is inconsistent, it can hinder operational efficiency, increase costs, and ultimately affect profitability, thereby impacting the ROA.

Environmental credit

Ali(2024)asserts that green finance does not impact financial performance, a position that stands in opposition to the conclusions drawn by P. Yu et al.(2022). While Ali argues that the integration of environmentally sustainable practices and investments does not necessarily translate into improved financial outcomes for companies, P. Yu et al. present a contrasting viewpoint, suggesting that green finance initiatives can lead to enhanced financial performance through various mechanisms. These mechanisms may include increased operational efficiency, access to new markets, and improved brand reputation, which can ultimately drive profitability. The divergence in these perspectives highlights an ongoing debate within the field of finance regarding the tangible benefits of adopting green finance strategies. This discussion is critical as it influences corporate decision-making, investment strategies, and policy formulation aimed at promoting sustainability in the financial sector. As the discourse evolves, further empirical research is needed to clarify the relationship between green finance and financial performance, potentially reconciling the differing views presented by Ali and P.Yu et al.

Emission allowance

A study conducted by P. Yu et al.(2022) provides valuable insights into the relationship between carbon emission allowances and the financial performance of companies. The research indicates a significant correlation, suggesting that organizations that effectively manage and reduce their carbon emissions are likely to experience improvements in their financial outcomes. This correlation can be attributed to several factors. Firstly, companies that invest in sustainable practices and technologies often enhance their operational efficiency, leading to cost savings. For instance, by adopting energy-efficient processes or renewable energy sources, these companies can reduce their energy costs, which directly impacts their bottom line. Additionally, the study highlights that companies with lower carbon footprints may benefit from improved brand reputation and customer loyalty. As consumers become more environmentally conscious, they are more likely to support businesses that demonstrate a commitment to sustainability. This can lead to increased sales and market share, further enhancing financial performance

Financial performance

According to Tudose et al.(2022) the assessment of financial performance is a critical component in understanding the overall health and operational success of banking institutions. This evaluation is essential not only for internal management purposes but also for external stakeholders, including investors, regulators, and customers. By analyzing financial performance, stakeholders can gauge how well a bank is utilizing its resources to generate profits and sustain growth. Furthermore, Tudose et al. noted that a variety of metrics are employed in this assessment, each providing unique insights into different aspects of a bank's operations. Among these metrics, return on Assets (ROA) and Return on Equity (ROE) are particularly significant. ROA measures a bank's ability to generate profit relative to its total assets, indicating how efficiently the institution is using its resources to produce earnings. A higher ROA suggests that the bank is effectively managing its assets to maximize returns, which is crucial for maintaining competitiveness in the financial sector. On the other hand, ROE assesses the profitability of a bank in relation to its shareholders' equity. This metric is vital for investors as it reflects the bank's ability to generate returns on their investments. A strong ROE indicates that the bank is not only profitable but also capable of delivering value to its shareholders, which can enhance investor confidence and attract further investment(Tudose et al., 2022).The importance of these indicators is underscored by their widespread use in financial analysis and decision-making processes. For instance, regulatory bodies often scrutinize ROA and ROE to ensure that banks are operating within safe and sound parameters, thereby safeguarding the financial system's stability. Additionally, these metrics can influence a bank's stock price, as investors typically favor institutions that demonstrate strong financial performance through high ROA and ROE figures(Tudose et al., 2022).

Return on Asset and Return on equity

Return on Assets (ROA) measures how effectively a bank utilizes its assets to generate profit. It is calculated by dividing the net income by the total assets. A higher ROA indicates that the bank is more efficient in converting its investments into earnings, which is crucial for maintaining competitiveness in the financial sector. This metric provides insights into how well the bank is managing its resources and can signal to investors and stakeholders the institution's operational efficiency(Ali, 2024).Additionally, Ali noted that Return on Equity (ROE), on the other hand, assesses the profitability of a bank in relation to the equity held by its shareholders. It is calculated by dividing net income by shareholder equity. A high ROE suggests that the bank is effectively using shareholders' funds to generate profits, which is an attractive proposition for investors. This metric is particularly important for assessing the bank's ability to provide returns to its investors and can influence investment decisions and market perceptions. Together, ROA and ROE serve as essential indicators in assessing the financial stability and overall health of banking institutions. They provide a comprehensive view of how well a bank is performing in terms of profitability and efficiency. Investors, regulators, and analysts closely monitor these metrics to gauge the bank's operational performance, risk management practices, and long-term sustainability(Ali, 2024).

Corporate governance

In this research, corporate governance is identified as a moderating variable that influences the relationship between green financing and financial performance. This means that the effectiveness of corporate governance practices can either enhance or diminish the impact that green financing initiatives have on a company's financial outcomes(Schematic et al., n.d.). A study conducted by Daniel (2023) provides evidence that a strong commitment from management to uphold corporate governance principles can lead to improved financial performance. This suggests that when management prioritizes transparency, accountability, and ethical decision-making, it can create a conducive environment for green financing efforts to thrive. Such a commitment may involve integrating sustainability goals into the company's strategic framework, fostering a culture of innovation, and ensuring that stakeholders are engaged in the process. As a result, companies that exhibit robust corporate governance are likely to experience better financial results when they invest in green financing initiatives(Daniel, 2023).

On the other hand, findings by Ali (2023) present a contrasting perspective, indicating that effective corporate governance within banks does not significantly influence the distribution of green credit.

This suggests that while corporate governance may play a role in other areas of financial performance, its impact on the allocation of green financing by banks is limited. This could be due to various factors, such as regulatory constraints, market dynamics, or the inherent risk associated with green projects that may not align with traditional banking practices. Consequently, even with strong governance structures in place, banks may still face challenges in effectively distributing green credit, which could hinder the overall impact of green financing on financial performance(Ali, 2024).

LITERATURE REVIEW

Globally, empirical research concerning green financing demonstrates a beneficial influence on the financial performance of banks and corporations alike. This body of work highlights the growing recognition of sustainability as a critical factor in investment decisions and corporate strategy. For instance, institutions that issue green bonds typically witness an improvement in market valuation and an increase in investor confidence, as evidenced by the findings of Li and Lin (2024). Their research underscores the notion that green bonds not only serve as a tool for raising capital for environmentally friendly projects but also enhance the issuer's reputation in the eyes of investors. Flammer (2021) conducted a comprehensive study that further supports this perspective, indicating that companies that issue green bonds experience a notable rise in stock prices and overall market value. This trend implies that investors increasingly view green financing as a favorable indicator of a company's commitment to sustainability and responsible business practices. The positive market response to green bond issuance suggests that stakeholders are willing to reward companies that prioritize environmental considerations, thereby reinforcing the financial viability of sustainable initiatives.

Similarly, Daniel (2023) found a direct and significant relationship between green finance practices and the sustainability of firms. This relationship highlights the importance of integrating environmental, social, and governance (ESG) criteria into corporate strategies, as firms that actively engage in green financing are likely to achieve better sustainability outcomes. The findings suggest that adopting green finance practices not only aligns with ethical imperatives but also enhances long-term financial performance. In a related vein, Purwanti et al. (2022) observed that the return rate on operating assets does not significantly influence the extent of carbon emissions disclosure. This finding raises important questions about the motivations behind corporate transparency in environmental reporting and suggests that factors beyond immediate financial performance may drive companies to disclose their carbon emissions.

Research conducted by J. Yu (2024) highlighted that return on assets (ROA) serves as a vital indicator for evaluating a company's sustainability, particularly in the context of supply chain disruptions. These disruptions often result in a decrease in ROA within the renewable energy sector, indicating that companies must navigate complex challenges to maintain their financial health while pursuing sustainability goals. This underscores the need for firms to develop resilient strategies that can withstand external shocks while remaining committed to sustainable practices. Additionally, the study by Wang et al. (2023) indicated that the environmental concerns of top management significantly moderate the relationship between corporate governance and sustainable performance. This finding suggests that leadership commitment to environmental issues plays a crucial role in shaping corporate governance structures and practices, ultimately influencing a firm's sustainability outcomes

In the context of Kenya, recent research conducted by Agutu and Githira(2023) has shed light on the relationship between Environmental, Social, and Governance (ESG) reporting and the financial performance of publicly listed financial institutions in the country. Their findings reveal a significant and positive correlation, suggesting that banks and financial institutions that prioritize ESG reporting tend to experience better financial outcomes. This correlation underscores the importance of sustainable practices in enhancing not only the ethical standing of these institutions but also their profitability and overall market performance. Building on this theme, a study by (Mulandi and Mwania(2022) delves into the impact of corporate governance practices on the engagement of banks in green financing initiatives. The researchers found that robust corporate governance frameworks are crucial in driving banks to adopt environmentally friendly financing strategies. The study emphasizes the need for improved cohesion and coordination between government policies and the green financing strategies employed by banks. By fostering a collaborative environment, the study advocates for the development of policies that encourage increased flows of green finance within the Kenyan economy, ultimately contributing to sustainable development and environmental conservation.

Moreover, a report from the Kenya Bankers Association(2024)highlights a significant challenge facing the banking sector in Kenya: a considerable number of banks do not produce integrated sustainability reports. Among those that do, there is a lack of standardization in the reporting processes, with many institutions utilizing varying frameworks and guidelines. This inconsistency complicates the comparability of sustainability efforts across different banks, making it difficult for stakeholders, including investors and regulators, to assess the true impact of these institutions' sustainability initiatives. The report calls for a more unified approach to sustainability reporting, which could enhance transparency, accountability, and ultimately, the effectiveness of green financing efforts in the country.

METHODOLOGY

The research employed a comprehensive desk review, also known as a meta-analysis, to systematically gather and synthesize information on the latest advancements in green finance, various financial instruments, and the barriers to their adoption. This approach involved a thorough analysis of empirical studies and relevant journal articles, focusing on existing data rather than conducting new fieldwork. By leveraging previously published research, the methodology not only proved to be cost-effective and time-efficient but also enhanced the reliability of the findings. The desk review allowed for a broad examination of the landscape of green finance, encompassing a wide range of sources. The study included governmental papers, which provided insights into policy frameworks and regulatory environments; peer-reviewed articles, which offered rigorous academic perspectives; published reports from reputable organizations, which highlighted industry trends and best practices; and statistical data, which supplied quantitative evidence to support the analysis.

The selection of these materials was primarily guided by their relevance to the fields of finance and economics, ensuring that the information gathered was credible and applicable to the research objectives. This careful curation of sources facilitated a robust understanding of the current state of green finance, enabling the researchers to draw logical conclusions and formulate actionable recommendations. Ultimately, the findings of the study contribute to the ongoing discourse on sustainable finance, providing valuable insights for policymakers, financial institutions, and stakeholders interested in promoting environmentally responsible investment practices.

FINDINGS

The comprehensive review of the existing body of literature has yielded several noteworthy insights that contribute to our understanding of the relationship between green financing and the financial performance of commercial banks. A substantial number of studies have consistently demonstrated a robust association between green financing initiatives and the financial outcomes of commercial banks, both in international contexts and within domestic markets. Notable contributions to this discourse include the works of Rahman et al. (2023), Valavan (2024), J. Yu (2024), and Zheng et al. (2021), all of which provide empirical evidence supporting the notion that banks engaged in green financing tend to experience enhanced financial performance. In addition to the general findings on green financing, the literature also emphasizes the positive impact of carbon asset financing on financial results. This suggests that investments in carbon-related assets not only contribute to environmental sustainability but also yield favorable financial returns for banks. Furthermore, the beneficial relationship between environmental credit and financial performance has been documented in various studies, such as those conducted by Chen et al. (2022), indicating that banks that prioritize environmental credit initiatives may enjoy improved financial metrics.

However, it is important to note that not all research has reached a consensus on the benefits of green finance. Some studies, including those by Ali (2024) and Purwanti et al. (2022), have failed to establish a significant link between green financing and financial returns. This divergence in findings highlights the complexity of the relationship and suggests that further investigation is warranted to understand the conditions under which green financing may or may not lead to improved financial performance. Moreover, the reviewed studies collectively affirm that carbon emission allowances have a discernible impact on the financial performance of commercial banks. This finding, as reported by Gilchrist et al. (2021), underscores the importance of regulatory frameworks and market mechanisms in shaping the financial outcomes associated with carbon emissions. Lastly, the analysis reveals a prevailing consensus among numerous studies that corporate governance plays a crucial mediating role in the relationship between green financing and the financial performance of commercial banks. Research by Daniel (2023), Gunturu and Abidi (2023), and Wang et al. (2023) suggests that effective corporate governance practices can enhance the positive effects of green financing on financial performance, thereby highlighting the importance of governance structures in facilitating sustainable financial practices.

DISCUSSIONS

Primarily, a substantial number of studies suggest a notable correlation between green financing initiatives and the financial performance of commercial banks globally(Rahman et al., 2023; Valavan, 2024; J. Yu, 2024; Zheng et al., 2021). This correlation indicates that banks that actively engage in green financing—such as providing loans for renewable energy projects or sustainable agriculture—tend to experience improved financial outcomes(Chen et al., 2022). This trend highlights the growing recognition of the importance of sustainability in the banking sector and suggests that environmentally conscious lending practices can enhance profitability and market competitiveness(Chen et al., 2022). Additionally, the literature indicates a favourable impact of carbon asset financing on financial outcomes(Gilchrist et al., 2021). Carbon asset financing refers to investments made in projects that generate carbon credits, which can be sold in carbon markets. The studies reviewed suggest that banks that participate in carbon asset financing not only contribute to environmental sustainability but also benefit financially from the sale of these credits, thereby enhancing their overall financial performance(Gilchrist et al., 2021).

Furthermore, a positive relationship between environmental credit and financial performance was also observed. Environmental credit, which encompasses loans and financial products specifically designed to support environmentally friendly projects, appears to be a significant driver of financial success for commercial banks. This finding underscores the potential for banks to align their lending practices with environmental goals while simultaneously achieving better financial results(Chen et al., 2022).Moreover, the reviewed articles reveal that carbon emission allowances affect financial performance. Carbon emission allowances, which permit companies to emit a certain amount of carbon dioxide, can create financial opportunities for banks involved in trading these allowances. The literature suggests that banks that effectively manage and trade these allowances can enhance their financial performance, further emphasizing the intersection of environmental policy and banking profitability(Gilchrist et al., 2021).

Finally, the analysis revealed a consensus among many studies that corporate governance mediates the effect between green financing and financial performance of commercial banks. Strong corporate governance practices, which include transparency, accountability, and ethical decision-making, are seen as critical factors that influence how effectively banks can implement green financing strategies. The literature suggests that banks with robust governance frameworks are better positioned to capitalize on the financial benefits of green initiatives, thereby reinforcing the importance of governance in achieving sustainable financial performance(Daniel, 2023; Gunturu & Abidi, 2023; Wang et al., 2023).

CONCLUSION

The existing literature presents a compelling case for the positive relationship between green financing and the financial performance of commercial banks in Kenya, highlighting the roles of carbon asset financing, environmental credit, carbon emission allowances, and corporate governance in this dynamic. These findings not only contribute to the academic discourse on sustainable finance but also provide practical insights for banking institutions aiming to enhance their financial performance through environmentally responsible practices.

Implication to Research and Practice

The research presents several key recommendations aimed at advancing the field of green finance and promoting sustainable investment practices. These recommendations are as follows:
i). Creation of a Comprehensive Green Finance Database. It is essential to establish a robust and comprehensive database that consolidates information on green finance initiatives. This database should be integrated into the operational frameworks of public policy institutions and procurement processes. It is crucial that this integration encompasses a wide range of entities, including international financial institutions, central banks, and development banks. By doing so, stakeholders can access reliable data that informs decision-making and fosters collaboration across sectors.
ii). Implementation of Standardized and Mandatory Disclosure. To enhance transparency and accountability in green investments, there should be a requirement for standardized and mandatory disclosure of information related to green investment risks. This includes the establishment of a clear green taxonomy that categorizes and defines what constitutes a green investment. Additionally, transforming environmental factors into tradable assets can create new opportunities for investment and risk management, thereby incentivizing the market to prioritize sustainability.
iii). Promotion of Knowledge Enhancement in Green Finance. It is vital to invest in the development of knowledge and competencies related to green finance at all organizational levels. This can be achieved through targeted training programs, workshops, and educational initiatives that equip individuals and organizations with the necessary skills to navigate the complexities of green finance. By fostering a culture of learning and innovation, organizations can better adapt to the evolving landscape of sustainable finance.
iv). Introduction of Tax Incentives. To encourage the growth of environmentally sustainable projects, the introduction of tax incentives is recommended. These incentives can take various forms, such as tax credits, deductions, or exemptions for businesses and individuals that invest in green initiatives. By reducing the financial burden associated with sustainable investments, policymakers can stimulate greater participation in green projects and drive the transition to a low-carbon economy.
v). Establishment of Carbon Capital Markets. The creation of Carbon Capital Markets is essential for evaluating the green components of investments in relation to financial risks. This can be achieved through strategic partnerships with credit rating agencies to develop green stock indices and facilitate green initial public offerings (IPOs). By providing a platform for the trading of carbon credits and green assets, these markets can enhance liquidity and attract a broader range of investors interested in sustainable finance.
vi). Trading of Financial Instruments Associated with Green Finance. The development and trading of various financial instruments related to green finance are crucial for mobilizing capital towards sustainable initiatives. This includes instruments such as green insurance, green bonds, green credit, green venture capital

1 Future Research

Further investigation is warranted to understand the conditions under which green financing may or may not lead to improved financial performance.

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