

The Impact of Green Financial Policies on Corporate Accounting Systems: A Case Study of the European Union

أثر السياسات المالية الخضراء على الأنظمة المحاسبية للشركات: دراسة حالة الاتحاد الأوروبي

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Abstract:

This study aims to analyze the impact of green financial policies on corporate accounting systems in the European Union during the period from 2020 to 2024, utilizing a descriptive-analytical approach and a case study method to elucidate the changes, challenges, and benefits resulting from these policies. The study finds that EU green financial policies have imposed significant modifications on corporate accounting systems by adapting accounting practices to new environmental requirements. This adaptation has contributed to improved environmental transparency and increased corporate adherence to environmental standards. The study recommends enhancing training and education, developing unified green accounting standards, encouraging innovation, and improving environmental disclosure to achieve better alignment with green financial policies.

Keywords: Accounting Systems; Environmental Sustainability; Green Financial Policies; Renewable Energy; Sustainable Environmental Projects.

JEL Classification Codes: M41, Q56, G28, H23, O13.

ملخص:

تهدف هذه الدراسة إلى تحليل تأثير السياسات المالية الخضراء على الأنظمة المحاسبية للشركات في الاتحاد الأوروبي خلال الفترة من 2020 إلى 2024، بالاعتماد على المنهج الوصفي التحليلي وأسلوب دراسة الحالة لتوضيح التغيرات والتحديات والفوائد الناتجة عن هذه السياسات. توصلت الدراسة إلى أن السياسات المالية الخضراء للاتحاد الأوروبي فرضت تعديلات جوهرية على الأنظمة المحاسبية للشركات وذلك من خلال تكيف ممارساتها المحاسبية مع المتطلبات البيئية الجديدة، مما أسهم في تحسين الشفافية البيئية وزيادة التزام الشركات بالمعايير البيئية. أوصت الدراسة بضرورة تعزيز التدريب والتعليم، تطوير معايير محاسبية خضراء موحدة، تشجيع الابتكار، وتحسين الإفصاح البيئي لتحقيق تكيف أفضل مع السياسات المالية الخضراء.

كلمات مفتاحية: أنظمة محاسبية؛ استدامة بيئية؛ سياسات مالية خضراء؛ طاقة متجددة؛ مشاريع بيئية مستدامة.

تصنيفات JEL : M41، Q56، G28، H23، O13.

Introduction:

In recent years, the world has witnessed a significant shift towards environmental awareness and sustainability, driven by noticeable climate changes and an increasing understanding of the importance of preserving natural resources (IPCC, 2021). This shift has led to the adoption of a range of green financial policies aimed at promoting sustainability and reducing the negative environmental impact of economic activities (European Commission, 2020). The European Union, as one of the largest economies in the world, plays a pivotal role in leading these initiatives by formulating and implementing green financial policies designed to steer the economy towards a more sustainable path (European Commission, 2021). The green financial policies in the European Union aim to achieve several key objectives, including reducing greenhouse gas emissions, promoting the use of renewable energy, and stimulating innovation in clean technologies. (European Environment Agency, 2020)

To achieve these objectives, the European Union relies on a variety of financial and regulatory tools, such as imposing carbon taxes, offering incentives to companies that adopt environmentally friendly practices, and developing accounting standards that enhance transparency in environmental performance disclosure (Sullivan, R. & Gouldson, A., 2020, p. 45). This approach requires companies to reconsider and adapt their accounting systems to meet new requirements, such as integrating environmental reports within financial reports, analyzing the environmental impact of operations, and estimating the environmental costs of economic activities. (Gray, R., 2021, p. 87)

However, many companies face significant challenges in this context, as adapting to these policies requires substantial investments in technology and infrastructure, as well as training employees in new accounting practices (Parker, L. D., 2019, p. 102). Nevertheless, these challenges also present opportunities to improve operational efficiency and enhance innovation in clean technologies. (M. E. Porter; Claas van, der Linde, 1995, p. 109)

Additionally, companies in the European Union strive to balance compliance with green financial policies while maintaining their competitiveness in the market. Achieving this balance requires adopting innovative accounting strategies that contribute to improving environmental performance without negatively impacting financial performance (Simnett, R., 2020, p. 58). By studying the case of companies in the European Union, it is possible to understand how accounting systems can be adapted to meet these challenges and achieve both environmental and economic goals simultaneously.

In this context, analyzing the impact of green financial policies on the accounting systems of companies in the European Union is crucial for understanding current dynamics and identifying best practices that can help companies effectively adapt to new environmental requirements (Bebbington, J. & Larrinaga, C. pp. 395-405). Based on the above, the following main question can be posed:

How do the green financial policies imposed by the European Union affect the accounting systems of companies? Specifically, How do companies adapt to these policies to meet new environmental requirements without impacting their financial performance?

To answer the main question, we will try to answer a set of the following sub-questions:

- What are the green financial policies implemented by the European Union?
- How do these policies affect the accounting systems of companies?

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- What challenges do companies face in adapting to these policies?
- What are the potential long-term benefits of adopting green financial policies?

Hypothesis: This study is based on the following hypotheses:

- Companies adopt new accounting policies to meet the requirements of green financial policies;
- Companies face challenges in adapting to green financial policies due to additional costs;
- Green financial policies contribute to improving companies' environmental performance without negatively impacting their financial performance.

Importance of the Study:

The importance of this study stems from the need to understand the impact of green financial policies on the accounting systems of companies in the European Union. With the increasing global pressure to achieve sustainable development and reduce the environmental impact of economic activities, companies are required to adopt accounting practices that align with these goals. Analyzing how green financial policies affect accounting systems provides valuable insights for companies, governments, and policymakers on how to better adapt to these policies.

Objectives of the Study:

This study aims to achieve several key objectives, including:

- Analyzing the green financial policies in the European Union and their impact on the accounting systems of companies;
- Identifying the challenges that companies face in implementing these policies;
- Evaluating the potential long-term benefits of adopting green financial policies.

Literature review:

In recent years, the impact of green financial policies on corporate accounting systems has become a central topic in research related to sustainability and green finance. Many studies have examined the relationship between these policies and accounting practices, concluding that the implementation of green financial policies can lead to significant changes in the way environmental accounts are managed within companies.

One important study that addressed this topic is the study by (Shakour, A. & al, 2018), entitled: "**The Role of Environmental Accounting in Sustainable Development: An Empirical Study**", This research analyzes how environmental accounting practices are employed by organizations to support sustainable development. The study concluded that firms integrating environmental accounting such as tracking environmental costs, carbon pricing, and ecosystem service valuation enhance their sustainability performance and better align operational strategies with environmental objectives. It recommended strengthening environmental accounting practices, particularly by improving measurement frameworks and reporting standards, to assist companies in managing environmental impacts more effectively and contributing to broader sustainable development goals.

On the other hand, a study by (Grimaldi, F. & al, 2020), titled: "**Sustainability Engagement and Earnings Management: The Italian Context**", found that companies operating under the new environmental disclosure regulations in Italy are increasingly required to integrate sustainability considerations into their financial reporting systems.

According to the study, compliance with these green financial policies has compelled firms not only to adapt their accounting frameworks but also to enhance transparency by incorporating non-financial indicators related to environmental and social performance. The research highlights that such changes reduce earnings manipulation practices and push companies to invest in more advanced accounting practices, aligning financial systems with broader sustainability goals.

In addition to these two studies, the study by (Khalid, F. M., 2023), entitled with: **"Environmental Management Accounting Practices: A Review of the Literature"**. Drawing on 72 articles, it highlighted how firms are progressively integrating environmental cost and revenue recognition into accounting frameworks. The review underscored that while environmental management accounting (EMA) fosters transparency and helps measure eco-efficiency, adoption remains moderate especially among SMEs. The author called for targeted capacity-building, simplified reporting mechanisms, and stronger policy incentives to accelerate EMA uptake.

Furthermore, the study by (Saqr Ali Saleh, H. & al, 2024), titled: **"Innovating for sustainability: the role of environmental management accounting in driving environmental performance"**. The study examines how organizations, particularly SMEs, adapt their accounting systems under green financial policies by integrating environmental performance metrics and management accounting tools. It found that such adaptation leads not only to improved transparency and compliance with environmental regulation but also to operational cost savings and innovation in clean technologies. The study emphasizes the importance of government enforcement and stakeholder pressure as key drivers, recommending capacity-building initiatives to support SMEs during the transition.

From these studies, it can be concluded that there is a noticeable positive impact of sustainable finance on environmental accounting practices in large companies, as these companies tend to improve their practices and reduce their environmental impact. However, the implementation of green accounting policies faces several challenges, most notably the lack of clear understanding of green accounting standards, increased compliance costs, and a shortage of necessary skills.

Based on these findings, it is clear that raising awareness of the importance of sustainable finance, providing necessary training for accountants, and developing unified accounting standards are essential steps to help companies improve their environmental practices and achieve effective compliance with green financial policies.

Study Methodology:

This study relies on the descriptive-analytical method to clarify the concept of green financial policies, their objectives, and tools, and to analyze their impact on accounting systems. This approach aims to create a comprehensive theoretical framework on the subject. Additionally, a case study method is employed to examine the impact of green financial policies on the accounting systems of companies in the European Union.

Contribution of the Study:

This study contributes to provide insights into the practical implementation of green financial policies and a deeper understanding of their impact on corporate accounting systems in the European Union. It contributes to bridging the knowledge gap regarding how companies adapt to the requirements of sustainable accounting while enhancing efforts to

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achieve sustainable development. The findings highlight the challenges and opportunities companies face in aligning their accounting practices with environmental goals, thereby contributing to the development of more standardized and efficient green accounting models.

1- Green Financial Policies:

In recent years, there has been increasing interest from countries and global organizations in environmental issues and sustainability, leading to the development of green financial policies aimed at reducing negative environmental impacts and promoting sustainability. This section outlines the definition of these policies, their objectives, and the tools used to achieve these objectives.

1-1 Concept of Green Financial Policies

Among the definitions provided for green financial policies are the following: "Green financial policies are those policies aimed at achieving a balance between economic development and environmental sustainability by encouraging environmentally friendly investments and reducing harmful emissions" (Jones John, 2019, 45), Another definition states, "Green financial policies include financial and regulatory measures adopted by governments to promote the green economy and stimulate environmental projects" (Smith, 2020, p. 110), They can also be defined as "a comprehensive strategy aimed at reducing negative environmental impacts through the use of various financial tools such as environmental taxes and investment incentives". (OECD; 2017, p. 3)

In the European Union, these policies encompass a wide range of measures, such as imposing environmental taxes, providing financial incentives for environmental projects, and setting strict industrial emission standards. (Jones John, 2019, 45)

Accordingly, and based on the aforementioned information, green financial policies are a set of measures and policies that seek to achieve a balance between economic development and environmental sustainability. These policies aim to encourage environmentally friendly investments and reduce harmful emissions through the use of various financial tools such as environmental taxes and investment incentives. They also include the financial and regulatory measures adopted by governments to promote the green economy and stimulate environmental projects. In the European Union, these policies are manifested in the imposition of environmental taxes, the provision of financial incentives for environmental projects, and the establishment of strict industrial emission standards, all within a comprehensive strategy aimed at reducing negative environmental impacts.

1-2 Objectives of Green Financial Policies

Green financial policies aim to achieve a set of primary objectives, which include:

- **Enhancing Environmental Sustainability:** Improving environmental quality by reducing carbon emissions and protecting natural resources; (Lawrence, 2021, p. 53)
- **Supporting the Green Economy:** Encouraging investments in environmentally friendly technologies and projects that contribute to job creation and economic growth; (Smith, 2020, p. 112)
- **Stimulating Innovation in Environmental Technologies:** Supporting research and development in new environmental technologies that help achieve long-term environmental goals; (Jones John, 2019, 47)

- **Reducing Carbon Emissions:** Implementing financial policies aimed at reducing carbon emissions through the imposition of environmental taxes and the execution of emission reduction programs. (OECD; 2017, pp. 30-40)

1-3 Tools of Green Financial Policies

Green financial policies utilize a variety of tools to achieve their objectives, including:

- **Environmental Taxes:** Imposing taxes on activities that contribute to environmental pollution with the aim of reducing harmful emissions and encouraging companies to adopt better environmental practices; (Jones John, 2019, p. 48)

- **Financial Incentives:** Providing financial support to companies and projects that invest in environmentally friendly technologies and renewable energy, thereby encouraging the shift towards more sustainable practices; (Smith, 2020, p. 113)

- **Strict Environmental Standards:** Establishing and enforcing stringent environmental standards to limit industrial emissions and ensure compliance with environmental regulations; (OECD; 2017, pp. 41-50)

- **Environmental Legislation:** Enacting laws and regulations aimed at protecting the environment and promoting sustainable practices, providing a legal framework that supports green financial policies. (Lawrence, 2021, p. 55)

Therefore, based on the above, it can be said that green financial policies in the European Union aim to enhance environmental sustainability through a range of financial tools and regulations that encourage investment in environmentally friendly projects. These policies contribute to achieving strategic goals including reducing carbon emissions, supporting the green economy, and stimulating innovation in environmental technologies. Thanks to these policies, companies can adapt to increasing environmental requirements, thereby enhancing their competitiveness in the global market and achieving sustainable development.

2- Impact of Green Financial Policies on Accounting Systems:

Green financial policies represent a fundamental part of efforts to enhance environmental and economic sustainability. These policies directly impact companies' accounting systems, necessitating adjustments in accounting practices to meet new requirements. This section addresses the changes that have occurred in accounting systems due to these policies, discusses the challenges companies face in implementing them, and evaluates the potential benefits that companies can gain from these changes.

2-1 Changes in Accounting Systems

Green financial policies necessitate significant adjustments to companies' accounting systems, which are reflected in the following points:

- **Modification of Environmental Cost and Revenue Recording Methods:** Green financial policies require adjustments in how environmental costs and revenues are recorded in accounting records. This includes documenting environmental costs, which may involve compliance costs with environmental standards, such as costs for processing and environmental reporting. It also requires documenting revenues generated from sustainable activities or renewable energy projects; (E, Taygashinova; M, Akhmetova, 2019, p. 5)

- **Inclusion of New Elements in Financial Reports:** To meet the requirements of green financial policies, companies must include additional information in their financial reports, such as environmental costs and assets related to sustainability. This involves disclosing the environmental impact of operations and estimating environmental assets like environmental

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licenses and sustainable assets, which contributes to improving the accuracy of sustainability-related reporting; (W. M, Baloyi, 2021, pp. 1-14)

- **Introducing New Standards for Measuring Environmental Performance and Evaluating Environmental Assets:** Green financial policies require companies to develop new standards for measuring environmental performance. This includes a thorough evaluation of environmental assets such as investments in renewable energy and pollution control technologies. This assessment enhances transparency and environmental accountability, ensuring that financial reports align with the company's environmental goals; (R. L, Burritt; C , Saka, 2006, p. 253)

- **Modifying Accounting Models to Include Costs Associated with Compliance with Environmental Regulations:** Companies face increasing challenges under modern environmental regulations, necessitating adjustments to their accounting models to include costs associated with compliance. This includes costs related to verifying compliance, such as procedures required for auditing environmental activities and adhering to established environmental standards. Additionally, accounting models should incorporate environmental certification costs, which involve inspections and certifications from recognized bodies to ensure adherence to environmental standards. These adjustments contribute to providing a comprehensive and accurate picture of environmental compliance costs, helping companies manage their resources more effectively and plan for environmental obligations more efficiently. Including these costs in accounting models enhances transparency and aids in assessing the financial impact of environmental regulations on the company's operational and financial activities. (J, Christensen; A P. J, Mol, 2015, p. 42)

2-2 Accounting Challenges

Companies face a range of challenges when applying green financial policies to their accounting systems. Some of the prominent challenges include:

- **Difficulty in Accurately Identifying and Estimating Environmental Costs:** Environmental costs, such as those related to compliance with environmental regulations, are often challenging to define and measure due to their sometimes intangible nature; (Ahmed Sarah, 2021, p. 88)

- **Challenges in Balancing Compliance Costs with Operational Needs:** Companies may struggle to balance the costs associated with environmental compliance with their other operational needs, which can impact financial and investment decisions; (OECD, 2021, p. 3)

- **Difficulty in Evaluating Environmental Assets:** Evaluating assets related to sustainability can be complex, as it requires new valuation techniques and sometimes unfamiliar standards. (M , Benavides; J, Restrepo, 2024, p. 22)

2-3 Benefits of Green Financial Policies for Accounting Systems

Despite the challenges, green financial policies offer several benefits to accounting systems. Some of the key benefits include:

- **Improved Transparency in Financial Reporting:** Green financial policies enhance the transparency of financial reports, which builds investor trust and strengthens the company's reputation; (Kava Markus, 2023, p. 112)

- **Reduction of Environmental Financial Risks:** By directing investments towards environmentally friendly projects, companies can reduce risks associated with negative

environmental impacts and improve their financial sustainability; (A, Shafiq Minhas; N, Maqsood; T, Ahmad Shahid, 2023, p. 33)

- Enhanced Long-Term Financial Performance: Green financial policies contribute to better financial performance by reducing environmental costs and promoting financial sustainability. (Turner, 2022, p. 92)

Therefore, based on the above, it can be said that green financial policies impose significant changes on accounting systems, requiring companies to adapt their accounting practices to align with these policies. Despite the challenges faced, such as accurately determining environmental costs, compliance costs with environmental regulations, and the difficulty in evaluating environmental assets, these policies offer potential benefits. These benefits include improving the transparency of financial reports, enhancing investor trust, and reducing environmental financial risks, which support the long-term goals of companies in achieving sustainable development.

3- Green Financial Policies in the European Union:

Green financial policies in the European Union are an integral part of the Union's strategy to achieve sustainable development and address climate change. These policies focus on promoting investments in renewable energy, implementing strict environmental disclosure standards, and providing incentives for companies that adopt sustainable practices. This section aims to examine the case of the European Union and clarify the impact of green financial policies on the accounting systems of major companies in the region.

3-1 Concept of Green Financial Policies in the European Union

Green financial policies in the European Union are part of ongoing efforts to enhance environmental and economic sustainability. These policies aim to advance environmental sustainability and achieve the climate goals set out in the Paris Agreement, which was adopted on December 12, 2015, during the United Nations Conference and came into force on November 4, 2016. The policies focus on several areas, including improving energy efficiency, supporting renewable energy, and reducing carbon emissions (European Commission, 2021), to encourage companies and investors to adopt sustainable practices through a range of financial and legislative tools, such as tax incentives and concessional loans for green projects. Among the countries that have excelled in implementing these policies are Germany, France, and the Netherlands. Germany has provided tax incentives for companies investing in renewable energy (Federal Ministry for the Environment, 2021), France has focused on developing strict environmental disclosure standards: “firms listed on a regulated market ... must publish information in their management report on how they are dealing with the social and environmental consequences of their activities (OECD, 2012, p. 14), and the Netherlands has pursued carbon taxes to reduce emissions: “Netherlands introduced a levy ... a charge equal to any positive difference between an escalating target price ... and the prevailing EU ETS price”. (International Monetary Fund; CO₂ Industry Levy, para. 11)

3-2 Impact of Green Financial Policies on the Accounting Systems of Major Companies in the European Union

Green financial policies have significantly impacted major companies in the European Union by imposing requirements for environmental risk disclosure and encouraging investment in green projects. This has forced companies to restructure their strategies to align

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with environmental goals, thereby enhancing sustainable economic growth and improving their image with investors and customers. (Porter Michael, 2022, p. 78) Below are some examples of how companies in the EU have adapted to the requirements of green financial policies during the period 2020-2024:

- **BMW:** BMW has made significant progress in adapting to green financial policies through a series of investments and innovative measures. In **2020**, the company invested heavily in the development of electric and hybrid vehicles aimed at reducing carbon emissions. It launched several new models, such as the BMW iX3, and allocated substantial budgets for green technology development. The company also focused on building an electric vehicle charging infrastructure and incorporated the associated costs and investments into its accounting records to ensure the impact of these investments on its financial performance was recorded and analyzed. In **2021**, the company continued expanding its electric vehicle portfolio with models such as the BMW i4 and BMW iX, focusing on improving battery efficiency and reducing manufacturing costs, thereby strengthening its green accounting practices. This included detailed disclosures of research and development costs related to these technologies, supporting environmental transparency in its financial reports. In **2022**, BMW continued its environmental investments by focusing on battery recycling projects, aimed at promoting a circular economy in vehicle production. This trend helped reduce reliance on new raw materials and minimized waste, reflecting a strong commitment to sustainable practices. By **2023**, the company announced its goal to achieve carbon neutrality across its supply chain by 2030, setting specific strategies to reduce emissions at various stages of production and distribution, reflecting its long-term environmental ambitions. In **2024**, the company shifted its focus to developing hydrogen fuel cell technology for passenger cars, marking a new step toward diversifying clean energy solutions and enhancing innovation in sustainable transportation. These actions demonstrate how BMW has made green financial policies a fundamental part of its strategies, balancing environmental goals with financial performance. (Group, BMW, 2020-2024)

- **Shell:** Shell has made significant progress in adopting green financial policies through a series of sustainable investments and actions. In **2020**, Shell adopted new strategies for investing in renewable energy projects, including wind and solar power, while reducing its reliance on fossil fuels. The company allocated substantial funds to convert fuel stations into environmentally friendly ones and launched an ambitious plan to reduce its emissions by 30% by 2030. These investments represented significant changes to the company's accounting assets, as it became necessary to record and evaluate new green projects and the technologies used. Additionally, the company committed to providing regular reports outlining the impact of these investments on its financial performance. In **2021**, Shell continued expanding its renewable energy projects, particularly in offshore wind, such as the Borssele III & IV project. It also committed to annual disclosure of its direct and indirect carbon emissions, reflecting its commitment to transparency and environmental compliance. In **2022**, the company focused on developing a joint project for producing green hydrogen in the Netherlands, a strategic move to support the transition to more sustainable energy sources. In **2023**, Shell announced ambitious plans to reduce natural gas use in its operational facilities by

20%, as part of its strategies to lower carbon emissions and enhance environmental efficiency. In **2024**, the company began innovative trials with its first floating solar platform in Asia, reflecting its ongoing commitment to developing new technologies in renewable energy and enhancing its environmental footprint. These steps demonstrate how Shell has successfully restructured its strategies and investments to align with environmental goals, while achieving a balance between economic growth and sustainability; (Shell, 2020-2024)

- **Danone:** Danone has demonstrated a strong commitment to sustainability through a series of environmental initiatives and innovations, reflecting its vision to promote responsible business practices. In **2020**, Danone focused on enhancing its investments in sustainable farming practices, launching the Regenerative Agriculture Program aimed at reducing carbon emissions and improving biodiversity. The company conducted a thorough assessment of the financial impact of these initiatives and included them in its financial reports, thereby enhancing its environmental transparency. In **2021**, Danone expanded its investments in water management and recycling technologies within its production processes. These efforts included detailed reports showing a 20% reduction in water consumption at its main factories, reflecting a positive impact on environmental resources. In **2022**, the company focused on expanding the use of renewable energy to power its main factories in Europe, contributing to reducing reliance on traditional energy sources and improving its environmental efficiency. In **2023**, Danone launched initiatives to support local communities, focusing on enhancing sustainable farming projects that contribute to improving food security and biodiversity at the local level. In **2024**, the company took an innovative step by replacing traditional plastic packaging with 100% biodegradable alternatives, marking a significant shift toward achieving a circular economy and reducing plastic waste. These efforts highlight how Danone has aligned its strategies with global environmental goals, reflecting its commitment to achieving sustainable development and reducing its carbon footprint; (Danone, 2020-2024)

- **Total Energies:** Total Energies has demonstrated a strong commitment to developing renewable energy strategies and reducing carbon emissions through a series of sustainable initiatives and investments between 2020 and 2024, which positively impacted its accounting assets and environmental strategies. In **2020**, the company focused on solar energy projects with substantial investments in renewable energy plants in India and the Middle East. It launched strategies aimed at reducing emissions by 15% compared to 2015 levels, reflecting critical initial steps toward the transition to clean energy. In **2021**, the company increased its investments in offshore wind projects, particularly in Northern Europe, focusing on initiatives such as the Dunkirk Offshore Wind Project. It also committed to disclosing the operational costs and environmental benefits of these projects in its annual reports, enhancing transparency and environmental compliance. In **2022**, Total Energies announced ambitious plans to produce green hydrogen in France, marking a strategic move to reduce industrial emissions. This project represents a significant shift toward developing innovative and sustainable energy solutions. In **2023**, the company entered new partnerships to expand renewable energy plants in Africa, including joint ventures to increase solar and wind energy production in countries like South Africa and Kenya. In **2024**, Total Energies launched its first hybrid energy project combining wind and solar power in Europe, which represents an advanced model that combines resource efficiency with carbon neutrality goals. These initiatives highlight how Total Energies has reshaped its strategies to achieve environmental

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sustainability, focusing on innovation in renewable energy and the development of clean energy solutions that enhance its competitiveness and reduce its carbon footprint; (Total Energies, 2020-2024)

- **Unilever:** Unilever has followed a series of environmental initiatives aimed at reducing its environmental footprint and achieving sustainability in its operations. These initiatives included significant improvements in resource efficiency and carbon emission reduction, which positively impacted its accounting strategies. In **2020**, Unilever launched the Future Foods Initiative, which aims to reduce supply chain emissions by 30%. The company also analyzed the impact of its environmental initiatives on production costs and included these costs in its financial reports, enhancing transparency and providing investors with a better understanding of how sustainability affects financial performance. In **2021**, the company focused on improving energy efficiency in its industrial facilities, leading to an additional 10% reduction in carbon emissions compared to 2020. This improvement contributed to strengthening sustainability practices in its internal operations, and these improvements were disclosed in the company's annual reports. In **2022**, Unilever focused on achieving carbon neutrality across all its operational processes in Europe, a strategic goal reflecting the company's commitment to reducing emissions at all stages of production and distribution. In **2023**, the company announced plans to replace all plastic packaging with biodegradable materials by 2025, as part of its commitment to combat plastic pollution and promote a circular economy. In **2024**, Unilever invested in new technology to improve water efficiency by 15%, reflecting its ongoing efforts to enhance the sustainability of natural resources. Through these initiatives, Unilever has made notable progress in reducing its environmental impact by improving resource efficiency and reducing emissions, while also enhancing transparency in its financial reports to ensure the clear impact of these efforts on its financial performance; (Unilever, 2020-2024)

- **Enel:** Enel, the Italian energy company, has introduced a series of innovative initiatives in renewable energy and network efficiency improvements, focusing on solar and wind technologies and developing new solutions to support energy sustainability. In **2020**, Enel invested heavily in developing smart energy grids to improve energy transmission efficiency and reduce losses in the networks. The company also launched a project to analyze the carbon footprint across all stages of energy production, reflecting its commitment to evaluating the environmental impact of all its operations. In **2021**, Enel expanded its renewable energy projects, increasing its production capacity by 25% through new investments in solar and wind energy projects. This expansion demonstrates its ongoing commitment to reducing emissions and enhancing clean energy sources. In **2022**, Enel launched a green hydrogen production project in Europe as part of its efforts to support energy sustainability and reduce industrial emissions. This project represents a significant step toward enhancing clean energy in Europe. In **2023**, the company entered into new partnerships to expand its wind projects in South America, which helps boost renewable energy production in the region and strengthens Enel's ability to meet the growing demand for clean energy. In **2024**, Enel announced new solar energy projects aiming to increase its capacity by an additional 30%, reflecting its ongoing drive to improve renewable energy production efficiency and increase the

sustainability of its operations. These initiatives illustrate how Enel has strengthened its investments in renewable energy and achieved sustainable progress in the use of clean energy technologies. These actions have contributed to reducing the environmental footprint and improving energy transmission efficiency, further establishing Enel's position as a leader in the sustainable energy sector; (Enel, 2020-2024)

- **Airbus:** Airbus has undertaken a series of innovative investments in green aviation by developing new technologies for electric and hybrid aircraft aimed at reducing dependence on traditional fuels and cutting carbon emissions. It has also worked on improving fuel efficiency across various stages of manufacturing and operations. In **2020**, Airbus invested in the development of its first hydrogen-powered aircraft, with the goal of reducing emissions by 50% by 2035. Its environmental strategies included incorporating these projects into the company's green budgets to ensure dedicated funding for these sustainable innovations. In **2021**, Airbus expanded its investments in hybrid aircraft research and entered into agreements with sustainable fuel suppliers to support green aviation operations. These investments focus on improving fuel efficiency and reducing emissions during flight operations. In **2022**, Airbus announced the launch of its development of fully electric aircraft to support green aviation and reduce carbon dioxide emissions in the aviation industry. This development is part of the company's vision for a future free from emissions. In **2023**, Airbus expanded its operations to produce quieter, low-emission aircraft, improving engine technologies and structural designs, further enhancing the company's commitment to sustainable environmental practices. In **2024**, Airbus began testing its first hydrogen-powered passenger aircraft, marking a significant step toward achieving its environmental goals and reducing emissions in the aviation sector. Through these initiatives, Airbus continues to develop innovative solutions to reduce carbon emissions in the aviation industry, reinforcing its commitment to environmental sustainability and its ongoing pursuit of carbon neutrality in this vital sector. (Airbus, 2020-2024)

Discussion

It is evident from the case study of major companies in the European Union that green financial policies have a profound impact on their accounting systems. These policies have driven companies to restructure their strategies and develop accounting practices that align with environmental goals. For example, companies like BMW, Shell, and Danone have invested in renewable energy and green technology, which required adjustments in how they record and evaluate assets and expenses related to environmental projects, as well as providing accurate financial reports on the impact of these investments on their financial performance.

These policies demonstrate how companies have adopted new accounting practices, such as disclosing their carbon footprint and analyzing environmental risks, which enhance transparency and allow companies to provide clear data to investors and customers regarding the impact of their sustainability investments. For example, Shell continued to expand its renewable energy projects, Danone showed its commitment to sustainable agriculture, and Airbus developed hydrogen-powered electric aircraft.

Additionally, green financial policies have helped stimulate investments in sustainable projects, which strengthened companies' ability to adapt to future environmental and economic challenges. Furthermore, studies have shown that companies adopting sustainable

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practices achieve better financial performance in the long run, which enhances the company's value and reduces investment-related risks.

Thus, it can be concluded that the adoption of green financial policies by major companies not only contributes to enhancing environmental sustainability but also promotes sustainable economic growth and positively impacts companies' performance in global markets.

Results of the Study

This study has reached a number of conclusions, which are as follows:

- The green financial policies implemented by the European Union include imposing environmental taxes, providing financial incentives for eco-friendly projects, and setting stringent environmental disclosure standards;
- These green financial policies have imposed significant adjustments on corporate accounting systems, including the introduction of new environmental reports, modification of methods for recording environmental costs and revenues, and the development of standards for measuring environmental performance and evaluating environmental assets, including those related to renewable energy and environmental technologies. This also involves disclosing the financial costs and benefits of these investments, including the costs of transitioning to green technologies and their financial impact on the company's overall performance;
- Green financial policies have forced major companies to adjust their strategies to align with environmental goals, leading to a fundamental change in resource allocation and investments in green technology and sustainable practices;
- The main challenges companies face include the difficulty in accurately determining and estimating environmental costs, achieving a balance between compliance costs and operational needs, and the difficulty in evaluating environmental assets;
- Green financial policies offer numerous benefits, such as improved transparency in financial reports, reduced environmental financial risks, and enhanced financial performance over the long term;
- These policies have contributed to enhanced environmental transparency by imposing disclosure requirements for environmental risks and details about green project investments, improving the companies' image among investors and customers.

Based on the above results, the hypotheses formulated at the beginning of the study have been confirmed, which state that:

- Companies adopt new accounting policies to meet the requirements of green financial policies;
- Companies face challenges in adapting to these policies due to additional costs and difficulties in determining environmental costs;
- Green financial policies contribute to improving environmental performance without negatively impacting financial performance; rather, they enhance it in the long term.

Recommendations

To improve the effectiveness of implementing green financial policies and enhance transparency and integration in accounting and environmental practices, the study recommends the following:

- Provide necessary training for accountants and managers to understand and effectively apply new accounting and environmental requirements;
- Develop standardized green accounting guidelines related to environmental costs and revenues to facilitate adaptation to green financial policies and achieve transparency;
- Support innovation in environmental technologies and sustainable practices by offering financial and legislative incentives;
- Enhance environmental disclosure in financial reports to improve transparency and build trust between investors and clients.

Conclusion:

Green financial policies in the European Union are a pivotal strategic tool in addressing contemporary environmental challenges. These policies have led to significant updates in financial reporting and recording practices, introducing new standards for disclosing environmental performance and risks. This change has contributed to improved long-term financial performance, as companies have gained competitive advantages through better management of environmental risks. However, companies face challenges related to investing in updating accounting systems, training, and ensuring compliance with new standards. Technology plays a crucial role in this transformation, as modern tools enable efficient collection and analysis of environmental data, improving the accuracy of reports. Green financial policies are expected to continue evolving, requiring companies to continuously adapt and innovate their accounting systems. Furthermore, EU policies may inspire similar models in global markets, highlighting the importance of researching how accounting systems can adapt to these global changes.

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