Master's Thesis U.S.E

MSc Financial Management

Unveiling the Impact of ESG Controversy Scores on Financial Performance

Assessing the Financial Repercussions of ESG Controversies in the North American Financial Sector

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"There is a certain flow to things, and it is never necessary to force them. When you swim you don't grab hold of the water, because if you do you will sink and drown. Instead, you relax and float."

L.F. Celine – *Journey to the End of the Night*

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Abstract

This thesis aims to analyse the relationship between ESG Controversy Scores and financial performance of financial firms operating in North America, using ROE and ROA as proxies of economic results. To establish the relationship between the ESG metric and the firm values, and to understand its nature and behaviour, a multi-linear panel data regression has been adopted, employing data between the years 2010 and 2023 taken from the Eikon and Compustat databases. This research is grounded in existing literature, which supports the integration of ESG factors as a predictor of a firm's financial results in various industries and demonstrates its impact on financial results; the objective of this thesis is to extend this given knowledge also to firms in the financial sector of the North American region. The methodology section defines variables and models for the regression analysis, with a particular focus on the alignment of ROE with financial firms and the broader efficiency assessment provided by ROA. The findings reveal that there are different degrees of significance in relation to changing models, but an overall positive correlation between ESG Controversy Score and financial performance. Robustness checks, including tests for multicollinearity, heteroscedasticity, and autocorrelation, are conducted to ensure the reliability of the results. This study attempts at giving useful inputs for investors, policy makers as well as managers by emphasizing on the importance of ESG factors while determining finance strategies and outcomes.

Keywords: ESG Controversy Scores, Financial Performance, ROE (Return on Equity), ROA (Return on Assets), North American Financial Sector, Panel Data Regression, Sustainability, Corporate Social Responsibility (CSR), Environmental, Social, and Governance (ESG)

JEL Codes: G11, G21, G32, M14, Q56

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1. Introduction

In the modern day and age, there is an increasing interest on global scale of different environmental themes; from global warming to plastic pollution, the surgency of new challenges and problems has touched every aspect of the human life, especially when it comes to industries and markets, shaping the current and future prospects and dictating new standards and requirements for companies and individuals. Furthermore, these environmental concerns intertwine with other sectors, such as social and governance aspects, in a feedback loop of deep co-dependency. The decisions taken to mitigate the environmental issues facing humanity are to be contextualised in a world where firms have more and more responsibilities and are facing increasing challenges in directions outside of the companies' scope, to foster continuous development and growth.

In recent times the subject of ESG (Environmental, Social, and Governance) is among the most relevant in the field of management, becoming almost central to the life of a company. ESG assesses businesses on environmental, social and governance practices. It evaluates sustainability and ethical concerns while making trade-off between social-environmental and fiscal performance. This serves as a framework for analysing companies' performance in these areas, though it is not the ultimate arbiter of firms' standards; rather, it offers valuable insights into how companies manage various ESG factors and can aid investors and stakeholders in making informed decisions regarding sustainability and responsible investing. ESG rating, in fact, is a useful tool for all agents who interface with a company: investors, suppliers, partners or anyone with an interest in knowing a company's sustainable performance, its ethics and its attention to these issues. In comparing traditional CSR ratings with ESG scores, it becomes evident that the operationalization of Corporate Social Responsibility (CSR) varies significantly between the two approaches. While traditional CSR ratings may offer a narrower assessment, ESG scores adopt a more comprehensive perspective, encompassing a broader array of factors, including those not typically considered by conventional CSR metrics (Kaźmierczak, M., 2022).

Therefore, with this focus on the ESG score, it has become relevant for companies themselves to consider environmental, social and governance issues, as they often translate into good reputation and improve their image and performance in the long run. A study by Whelan,

T., Atz, U., Van Holt, T., & Clark, C. (2021) also showed that ESG investing effectiveness over time would be more displayed where results within 76% positive or neutral studies are highlighted that look at long-term relationships. Besides, ESG integration strategy as a tool typically surpasses the negative screening approach, as researchers reveal that ESG performance-based criterion shows better results than simply disclosure, which eventually leads to a higher possibility of superior financial returns (Khan, M. N., N., Serafeim, G., Yoon, A., 2015).

Considering this data, it is easy to see how, therefore, more and more companies in all sectors have an interest not only in having high ESG scores, but also in displaying them in reports to investors and the public. A single measure to indicate the good conduct of a company can be misleading, however, which is why there are other methods to thoroughly analyse the ethics of a company's decisions. Firstly, one can break down the overall score into all its different categories/pillars. Other values can help in this, such as the emission score for environmental issues or the community score for social issues, however, these are factors that only detect positive connotations for the analysed institution.

A relevant index, however, in better understanding how the company acts on ESG issues, and how its behaviour does or does not reflect its ESG score, is the ESG Controversy Score. This goes to value the company based on 23 pillars, and based on these to assess the extent to which a company is involved in controversial or harmful practices related to environmental, social and governance issues. It provides an assessment of factors such as monopolistic behaviour, fraud, workplace harassment and environmental incidents, unlike the ESG metrics that mainly concentrate on positive ESG features. This score also helps investors identify companies with a history of sustainability scandals or unethical behaviour, enabling them to make informed investment decisions aligned with their ethical and sustainable goals.

The aim of this thesis is to investigate how the ESG Controversy Score of a company influences its financial performance. I will explore whether such a relationship between financial performance – using as proxy the Return on Equity (ROE) and Return on Assets (ROA) - and the ESG Controversy Score exists in the North American financial sector, and the nature and magnitude of this phenomena. The outlets of this research are manifold, and of extreme relevance today: this paper can be useful for private investors as well as for investment funds and institutions, showing a new way of guessing the profitability of a company linked to their

ESG Controversy Score, adding an additional element of evaluation at the time of investment decisions.

Nowadays, investors pay more attention to ESG factors than ever before and they start to think that the actions of a company not only affect to their financial performance but also to the sustainability of the global environment and the ethical standards of the business. Companies with high ESG scores are considered as better investment options. They are believed to be more resistant to environmental and social risks, therefore, better placed to take advantage of the opportunities in the future which will arise out of the transition of a sustainable economy. At the same time, the increase interest in ESG factors' importance also brings along concerns and threats linked to this: greenwashing, for example, happens when companies deliberately clean up their environmental and social initiatives to present a green image of themselves while, in reality, they may not be as green as they claim. This misleading practice lowers the credibility of ESG scores and evaluations which in turn creates a need for investors to carefully look at not only the ESG rankings but also issues of authenticity and openness of the underlying practices and disclosures (Schumacher, K., 2023). Other than this, the increased regulatory restrictions in the past years have furthermore intensified the efforts of the financial market enterprises to consider ESG concerns. As another example, The Sustainable Finance Disclosure Regulation (SFDR) of the European Union which applies to the financial market participants, has a requirement of integration of ESG factors into their investment processes, while additionally they need to disclose how they take into consideration the sustainability risks and impacts in their decision-making. Moreover, and just as important, ESG scores in professional markets are of great importance: with a good rating for ESG, a corporation tends to be more respected by the public that results in the brand reputation. However, corporations which perform poorly in ESG ratings sometimes risk their reputation and may lose investor confidence as well, so it might imply their bottom-line sovereignty. ESG scores have become very crucial to the professional financial market as investors, regulators and the public more often seek sustainability and ethical attributes. Organisations which consider the ESG criteria are more likely to be successful in gaining investment, they are regulated and minimize risks, and they have a good reputation in the market among the competitors. With the growing foothold of ESG variables, an aftermath of increased competition and sustainability of profitability in the long run will be witnessed across the financial market companies as they adjust and integrate the variables into their decision-making processes (Rouen, E., Sachdeva, K., & Yoon, A., 2022).

Established the context and the broader topic, it is crucial to explore how this phenomenon has been discussed in academic literature and what significant insights have emerged from previous research.

2. Literature review

The literature on financial performance and ESG factors is vast and there is much research that study the connection between traditional ESG metrics, including ESG controversy scores, and companies' results. This review aims at summarising the existing research and delineating the most important findings in the area.

It is important first to understand if there is an underlying relationship between ESG Controversy Score and the financial performance of a given company. "The adverse impact of corporate ESG controversies on sustainable investment." (Xue et al., 2023) gives a great insight in the matter, investigating how ESG controversies and investment efficiency are related among the US-listed firms during the period of 2010-2020. The presence of a significant and negative relation between ESG Controversy Score and investments efficiency was found, particularly talking about underinvestment inefficiency, where larger and most covered firms were most susceptible to these effects. Xue et al. propose that ESG risk events will lead to poor market efficiency pointing at a risk for REA, which might adversely affect financial outcomes. From these conclusions, it is possible to lay the first hypothesis for my research as follows:

H1: There is a relationship between ESG Controversy Score and financial performance in companies operating in the financial sector in North America.

My focus on the impact of ESG Controversy Scores on financial performances makes the article relevant to my analysis of the financial sector in the North American region. The authors used an OLS regression, using the investment efficiency of each firm as the dependent variable and the ESG Controversy Score as the independent one; for my analysis, I will perform a panel data regression that will allow me to control for individual-specific characteristics and to understand better the dynamic effects through lagged variables. This research is intended to focus on the fact that ESG controversies dent market value and investor sentiments, and it serves as a founding block of my research, which aims at narrowing these results to the financial sector of North America. This will make it clear the ESG governance frameworks should be taken more seriously to avoid risks and preserve the trust of all stakeholders, a thematic that my thesis aims at proving and giving further evidence of.

Once established that there is a proven relationship between ESG Controversy Score and financial performance, it is now crucial to understand what its nature and direction is. "ESG controversies and profitability in the European banking sector" (Agnese, P., Cerciello, M., Oriani, R., & Taddeo, S., 2024) is a primary source material for my research project, uncovering the intricate nature of the banking industry as ESG controversies influence their profitability. By studying a dataset of banks' performance from 63 European banks covering the time interval from 2015 to 2022, the authors use the system version of the generalized method of moments (GMM) Arellano-Bond estimator, which is an advanced econometric technique, to analyse the interplay between ESG controversies and profit measurements based on Return on Equity (ROE). This paper's practical implication is that there is a negative and significant correlation between the ESG Controversy Score and the profitability of the institution, supporting the idea of the trade-off between this ESG metric and profitability in the European banking industry. This part is a building block for the hypothesis for my research, therefore the first hypothesis will be structured as follows:

> H_2: This relationship is negative, i.e. as the ESG Controversy Score increases, we expect a decrease in the financial performance in the company – both ROE and ROA.

Even though there are some variations in approaches, the research results are so closely related to the analysis that will follow for the North American financial sector. While this paper uses a probit analysis to understand this relationship, I will carry out a panel data regression instead, which gives me greater flexibility in capturing potential lagged effects and allows for a more nuanced dynamic interpretation of the causal pathways between ESG Controversy Score and financial performance, compared to the binary nature of probit analysis. Additionally, the discussion of methodology, which includes different control variables, as well as robustness checks, furnishes practitioners with a knowledgeable foundation for investigating similar relationships in my region of interest. Altogether, this study gives useful information to the debate about sustainable finance and makes it possible to understand why financial institution must require eco-social objectives in their operational and risk-management processes. Through my research, my hope is to contribute to this ongoing discussion on sustainable finance and testing if the conclusions found in this article can be extended to the whole financial sector in the North American region.

Additionally, "Impact of ESG performance on firm value and profitability." from late 2022 (Aydoğmuş, M., Gülay, G., & Ergun, K) offers in-depth research on the correlation between ESG performance and financial performance of firms, as well as further examines controversies linked with ESG and the influence that it can have on investors' financial indicators, using a sample of the largest 5000 publicly listed companies in the U.S. The results of this research present crucial information on the mutual effects of the ESG performance and financial indicators, proving that there are suggestions of a positive and highly significant relationship between ESG overall performance, firm value and profitability. For instance, the ESG Score, along the lines with Social and Governance Scores, evidence a steady positive correlation with earning. Such discoveries form a base of a solid link between ESG and stakeholders' financial performance. This article highlights once again that firms with strong ESG performance are likely to deliver better on higher company value and profitability. ESG measures, therefore, plays an important role for the investors, policymakers, and managers of corporations in determination of their portfolio composition. In terms of thesis, this study serves as a platform which I can use to advance the methodology and findings presented, serving as the guidance in framing my hypothesis and my analysis methodology as well. This article is an extremely enriching piece for building my theoretical framework. This can be clearly seen from the fact that the paper proves the positive impact of ESG performance on firm profitability, and the special role played by ESG factors in the financial performance of companies; because of this finding, I will include the ESG Score in my regression as a moderator variable, to understand how the latter may distort the relationship between ESG Controversy Score and the financial performance of the company. Moreover, the choice of using a panel data regression to conduct their research also served as a basis to further validate my choice of regression to use. Overall, this study has provided a solid base for my thesis, allowing me to formulate a last hypothesis:

H_3: There is a moderating effect of ESG Score on the relationship between ESG Controversy Score and financial performance in North American financial institutions.

In my thesis of how the ESG Controversy Score correlate with company's performance in the financial space, "Financial performance shortfall, ESG controversies, and ESG performance: Evidence from firms around the world" (Dasgupta, R., 2022) casts a new perspective on the complex web that exists between the ESG factors and the financial results. This study also highlights the strategic choices made on a firm-side regarding the tasks of underperformance

addressing and emphasises the frequent reaction towards increased R&D investment in this regard. The author studied a sample of all firms in a benchmark index for the the years 2010 to 2019, comprising 24,390 firm-year observations from 27 different countries. On the methodological side, Dasgupta performs a complex 2SLS model with a wide plethora of independent and control variables. A key point revealed in the article is that firms continuously are placed under increasing pressure so to implement ESG principles as totally new trend, which is caused by stakeholder theory and the need to conform to the stakeholders' demands. The empirical data accumulated in the research indicate that stronger ESG performance of the companies is a correlate of their fair value on the stock market and the gust of positive reputation and financial endurance under the sudden negative corporate crises. Should be noted also at the same time, it recognizes the barriers to ESG performance, for example, there are the controversies that reveal ESG risks that happen and undermine organizational legitimacy and lead to the loss in shareholder value. This research can be of specific interest for the financial market where the image and legitimacy are crucial parameters in investors' trust and in general operation of the market. This paper serves as a base for my thesis, and it helps in explaining the argument between ESG controversy scores and financial performance within the financial sector. Through my analysis of ESG controversies, their impact on financial performance metrics, and relevant stakeholders' perception, I target to add a richer layer to understanding the relationship between ESG factors and the financial sector profitability and overall sustainability. In the article, the key findings are critical for my work as they highlight the strategic use of ESG performance for firms in problematic financial situations. This article serves as the basis for my empirical study and theoretical framework, leading me towards the complicated relationship amongst ESG factors, financial indicators, and organisational resilience in the financial sector.

The research article "Corporate Sustainability: First Evidence on Materiality" by Khan, Serafeim, and Yoon (2016) published in NYU Stern School of Business report shed some light to this subject as well: they affirm that companies with high material sustainability issue performance have substantially higher stock price, sales growth, and profitability compared to the firms that have low or weak material sustainability issue performance. This implies that incorporating ESG factors, including the ESG Controversy Score in the analysis, can be beneficial for companies and help improve their financial outcomes. Also, in the McKinsey & Company article titled "Linking ESG initiatives to financial performance", the authors establish that it is becoming more evident that the CIOs see the value of ESG in investment

management. This research establishes that firms that integrate ESG initiatives with quality and quantity that resonates with investors' financial performance can command a premium in the market. It underlines the importance of conveying clear principles of ESG and brings up the idea that, by adopting ESG factors to make the focus of their strategic plan, firms can potentially boost value creation in the long run. Drawing from these conclusions, the fourth hypothesis for my research is formulated:

> **H4**: There is a positive relationship between a firm's overall ESG performance (combined ESG Controversy and ESG Score) and its financial performance (ROE and ROA).

Since the sources enlisted investigates the impact of ESG Controversy and ESG Scores on the financial performance, these articles discuss the subject that is essential for my assessment of the financial industry in North America. The study conducted by Khan et al. focused on evaluating how ESG performance is associated with its financial consequence, and their analysis involved a regression test while, the McKinsey insights derived from the large-scale survey of companies and a sound financial comparison. Thus, to support my hypothesis, a fixed-effect regression will be used to control for individual characteristics in the given data set, to be then compared with random-effect models to tailor my analysis to the best possible regression obtainable. A panel-data regression that incorporates lagged variables will be used to provide a better understanding of how the variables in question affect the outcome in terms of dynamics.

In all the analysed studies, the conclusions reinforced that sustainability management frameworks are significant to preserve the trust of stakeholders and to mitigate risks. Building further on the current literature on the correlation between overall ESG index and financial performance, my work is based on previous examples concerning European countries and aims to contribute to the hypothesis that ESG reporting is ethically and economically beneficial practice to adopt for financial firms. This will reinforce the presumed theory that ESG policies closely relate to core CSR and that sustainability strategies are pivotal in the success of businesses. These articles, combined with other academic works, are the foundation of my research that seeks to study the influence that the ESG Controversy Score has on financial institutions, aiming to add further documentation on this relationship specifically to the North American region, filling in a knowledge gap. The literature widely covers the broader implication of ESG factors, but lags in the subtlety of interplay between ESG controversies and

the financial sector. Through focusing on this detail, the research is aimed to give specialized suggestions of what influence ESG controversies on financial performance and the sustainability activities within the financial industry.

3. Data and Methodology

The study intends to obtain population extensible data from an easy and relevant sample. This section will go over the sample data, the variables and their definition, and the descriptive statistics, then followed by the analysis method.

3.1. Data and variables

The data that will be used to conduct the research comes from multiple sources. The original sample comes from the Eikon database and Compustat: from the first one, a dataset of companies in the financial sector and their relative ESG measures from the fiscal year 2010 to 2023 was extracted; from the second one, the financial metrics for each company has been extracted. After merging the two datasets and cleaning the sample from the missing observations, we are left with a pool of 36 North American financial firms. These companies are part of the financial sector, which includes credit institutions, banks, insurance companies and similar institutions. For each of these companies, the respective financial performance – the Return on Equity and Return on Assets -, as well as the other control variables where then obtained. The number of total observations amounts to 504. The variables that will be used for this research, following the previously mentioned literature' choices, are as follows:

Dependent variables

The first dependent variable that will be used for the quantitative analysis will be ROE, as a proxy for the company's financial performance, calculated as:

$$\text{ROE } (\%) = \frac{\text{Net Income}}{\text{Average Total Equity}} \times 100$$

The ROE was chosen as the indicator of financial performance because this value is indicated as the best proxy to measure financial performance due to the holistic nature and ability of this measure to provide various valuable indications on the efficiency of operations and the level of profitability of a company (Yousaf, M., & Dey, S. K., 2022). Investors and lenders always need an accurate report on the health of the company to make the right decision on what to invest in: the higher predictive value of ROE amplifies investors' chances of making more profitable investments. In addition, managers, directors and policy makers can turn data and

insights into strategies that will help a company to have excellent financial performance, thus improving the organisation's competitiveness and power. Furthermore, using the ROE of these companies allows for a better job by getting into a more versatile understanding of the relationship between ethical behaviour and financial indicators, being able to understand better a possible trade-off or in which cases there are no compromises between ethical attitude and financial success. These analyses help in establishing the connections between ESG measures and financial performance as a better understanding leads to informed decisions in investment, corporate strategies and policy-oriented frameworks aiming at promoting sustainable and responsible business practices, so studying only these companies could lead not only to results extendable to the whole sector, but also to results that companies with lower ESG scores could aim at and be incentivised by.

The other variable that shall be employed in lieu of financial performance is ROA (Return on Assets). ROA is a method of evaluating a company's performance through the assessment of the extent to which the company's assets produce profit. It is measured with the help of accounting ratios taking into account the return on investment of the firm as well as the overall return to ascertain the extent of asset productivity in generating profit. Other market-based measures such as Tobin's Q coefficient relate more to market expectations and evaluations and only ROA provides a direct signal of the actual revenues achievable from assets investments. It is determined as net income divided by total assets: this coefficient is valuable in understanding whether management is efficient in employing the available assets to generate profits. ROA is calculated using the following formula:

$$\text{ROA } (\%) = \frac{\text{Net Income}}{\text{Total Assets}} \times 100$$

Of all the activity ratios this is probably the simplest, but also the most straightforward means of determining how effectively the business is of benefiting from its investments in assets directly and in turning it into net income. The ROA provides information on the effect of the management and operational efficiency on profitability which is an important factor in measuring the success of the management strategies, operations effectiveness and impacts of ESG controversy on key financial performance. The relevance of using ROA in this context is demonstrated in the study "Corporate Social Responsibility and Shareholder Reaction: The Environmental Awareness of Investors" by Caroline Flammer (2013). The findings of this study also reveal that CSR activities have the potential to raise a firm's ROA through increasing

the efficiency of management and the effective use of resources. Additionally, in the paper "The Impact of Sustainability Practices on Corporate Financial Performance: Literature Trends and Future Research Potential" (Alshehhi et al., 2018), the authors have articulated a detailed discussion on how sustainability practices such as CSR can enhance the financial performance indicators like ROA. These studies show that concentration on accounting-based measures such as ROA assists in the goals of this analysis, as it presents the facts of the operations and earnings of the firms under consideration. This approach also corresponds to the existing literature on financial monitoring and the effects of ESG Controversy Scores on the performance of companies in my study.

Independent variables

The independent variable used in this research is the ESG Controversy Score. This value, as mentioned above, has a range from 0 - level of controversy or concerns absent - to 100, very high level of controversy. This implies that the more companies are not involved in environmental, social or governance controversies, the lower their controversy score will be (Treepongkaruna, S., Kyaw, K., & Jiraporn, P., 2022). There are not many ESG Controversy Score benchmarks available for the financial sector, however in the previously mentioned article "ESG controversies and profitability in the European banking sector" (Agnese, P., Cerciello, M., Oriani, R., & Taddeo, S., 2024), the average of their sample - based on 512 observations of European banks - is 84.6, with a standard deviation of 28.3; these values are in line with the sample observations used for this study, as will be demonstrated later.

ESG Score will be regarded as an independent variable as well, for the purpose of examining how it directly affects ROE and ROA. This measure, just like ESG Controversy Score, is graded 0 to 100, with a higher score implying better sustainable business practices. To understand how changes in the ESG performance ratings of businesses affect financial performance, the ESG Score need to be addressed separately. Recent studies have highlighted positive correlation between high ESG scores and good financial outcomes likely being indicative of better risk management, stakeholder relations and long-term value creation. In their meta-analysis, Friede et al. (2015) reported that out of the studies conducted on this topic, around 90% showed a non-negative association between corporate financial performance and ESG criteria or measures meaning that higher ESG scores will generally lead to improved financial results. Including the aspect alongside with ESG Controversy Score, metric to which

ESG Score is closely related and often paired to, allows for a more throughout investigation with a more flexible model which accounts for more factors to understand the underlying relationship between financial performance and ESG Controversy Score. The model's explanatory power is increased due to its ability to capture both direct effects and potential interactions thereby providing insight into complex dynamics, thereby offering deeper insights into the complex dynamics between ESG practices and financial performance in the corporate sector. The average ESG Score of the companies in this sample aligns with the S&P 500 sector's benchmark of 50 (ESG | Essential Sustainability | S&P Global).

While ESG Score will be included as an independent variable, its moderating relationship with ESG Controversy Score will be tested as well, using the product of the two variables (ESG Score * ESG Controversy Score). This approach will enable us to establish whether the ESG Score acts as a moderator in the relationship between the ESG Controversy Score and both ROE and ROA. Thus, it will be possible to estimate the extent to which high ESG-scoring companies are less vulnerable to the financial consequences of controversies as compared to the low-ESG-scoring companies or whether the negative impact of the adverse business consequences is equally felt by both. Including interaction terms will improve the model's predictive power on the interdependencies between ESG factors and financial performance and thus give a better understanding of the factors that influence the financial sector's performance.

Control variables

To begin with, using the logarithm of total assets gives the Size of a firm, which will be used as control variable. This scaling is important as Size is a confounding factor and larger firms are known to have greater resource endowment, market influence and complexity level which may distort such performance indicators as ROE and ROA. Log transformation of total assets ensures that the different firms are put on a common scale hence observed relations between ESG and performance is not because of the firms' Size.

Secondly, the total of the Net Interest Margin (Nim) is added as a control variable especially in the studies involving banking. Nim indicates a bank's profit-making capability from its key business of lending/investing compared to its interest earning assets. This variable is obtained as follows:

$$\text{Nim (\%)} = \frac{\text{Interest Income} - \text{Interest Expense}}{\text{Average Earning Assets}} \times 100$$

The variations of Nim among the different banks can be attributed to the differences in the business strategies, risk management, and the market forces. Holding Nim as a control variable helps in stripping any effects that the core banking profitability may have on the financial performance measures, which consequently helps in avoiding distortions what may be because of a differential in banking profitability when establishing the relationship between ESG scores and the financial outcomes.

Total assets divided by total debt gives the measure of what is known as Leverage, which is also a control variable. Leverage means how heavily a company is geared up with the liabilities relative to the total assets of the company. High leverage works in conjunction with economic returns on equity during favourable conditions; however, it raises the level of risk during unfavourable economic conditions. Including Leverage as a control variable helps us consider the variations regarding firms' financial structure and mitigate confounding effects and thus the reported relations between ESG data and firms' performance would not be influenced by capital structure and risk.

Lastly, incorporating the EBIT (earnings before interest and taxation) as control variable in the models explaining the ROE and ROA can add benefits in the robustness of the models. EBIT, which is accounted in million USD, shows the operational profitability of a firm or its core business operations in the net income figure, without considering effects of taxes and interest expenses for a specific period. Thus, including EBIT can help to address potential systematic differences in firms' operational efficiency and profitability, which otherwise may distort changes in ROE and ROA. That way, ESG Scores, Size, Nim, and Leverage will not be affected by a distortion of the results due to operational performance, which, in the end, will provide more correct or accurate results and reliable results. Further, EBIT is a widely recognized as a useful comparable measure, and thus serves as an important variable to control to factor out operationally, using cross-sectional analysis on firms.

3.2. Descriptive statistics

The descriptive statistics for the variables that will be used in this research are as follows:

Table 1. Descriptive statistics of the variables.

Variable	Obs	Mean	Std. Dev.	Min	Max
ESGC_Score	504	79.07	32.18	0.6	100.0
ESG_Score	504	51.66	21.67	5.58	89.98
Leverage	504	12.76	12.68	2.75	157.87
EBIT	504	7676.91	13537.67	-380.27	87103.0
Nim	504	2.74	0.81	0.68	5.05
ROA	504	0.93	0.44	-2,63	5,36
ROE	504	9,82	4,78	-26.14	53.94
Size	504	11.7	1.62	9.05	15.17

3.3. Regression analysis

The regression deployed is a multi-linear panel data model structured as follows. The first model uses ROE as the dependent variable:

$$\text{ROE}_{it}=\beta_0+\beta_1\text{ESGControversyScore}_{it-1}+\beta_2\text{ESGScore}_{it-1}+\beta_3(\text{ESGControversyScore}_{it-1}\times\text{ESGScore}_{it-1}) +\beta_4\text{Size}_{it-1}+\beta_5\text{Nim}_{it-1}+\beta_6\text{Leverage}_{it-1}+\alpha_i+\lambda_t+\epsilon_{it}$$

The second model uses ROA as the dependent variable:

$$\text{ROA}_{it}=\beta_0+\beta_1\text{ESGControversyScore}_{it-1}+\beta_2\text{ESGScore}_{it-1}+\beta^3(\text{ESGControversyScore}_{it-1}\times\text{ESGScore}it-1) +\beta_4\text{Size}_{it-1}+\beta_5\text{Nim}_{it-1}+\beta_6\text{Leverage}_{it-1}+\alpha_i+\lambda_t+\epsilon_{it}$$

In both models:

α_i: Refers to firm-specific fixed effects. It captures the tended firm specific variables that have a fixed value that neither change with time but could affect the dependent variable (ROE or ROA). These may cover factors within a firm that are unique to that company or the managerial activities in the firms that affect performance in a steady manner.

λ_t: Stands for the disturbance variable or the residual for firm i in period t. It measures the variability in the dependent variable left unaccounted for by the independent variables of the model. In other words, it is the combination of all other variables affecting ROE or ROA that can be captured elsewhere in the model.

ϵ_{it}: Denotes the specific times fixed effects. It measures the impact of time-specific factors that uniformly influence all the firms under investigation at a particular time point. These could for instance be macroeconomic factors within the global economies, changes in the laws within the economies or certain trends within the industries across the economies but all of which affect all firms within the economies.

I am employing a multi-linear panel data model for its extensively informative nature: it enables you to generate results of two dependent variables for various time frames with considerations of individual-specific impacts that enhance the level of accuracy and minimize diverse forms of bias and provide a broader perspective on the nature of variable data over the period and across students. The analysis will involve testing various hypotheses to determine the relevance and statistical significance of different lagged variables. The individual associations of these variables with ROE and ROA will be tested at a 10% significant level. Moreover, the interpretation of the derived coefficients will assist in the determination of the link between the explanatory and dependent variables. The overall fit of the model will be assessed by R-squared value which gives more emphasis on the predicted values and provides a global measure of the fit of the model. Also, a Hausman test will be conducted to check whether the data requires fixed-effect models or random-effect models.

To test the validity of the regression model, several test checks will be performed in order to increase the solidity of the regression. Multicollinearity will be checked using the VIFs of every predictor variable: VIF values greater than 10 are a sign of high multicollinearity, which

necessitates adjustments to the model. Diagnostic tests for heteroscedasticity shall be conducted using the Breusch-Pagan test, while the Brush-Godfrey statistic shall be used for identifying autocorrelation. If these tests suggest problems, relevant correctives will be applied; for example, the variables may need transformations, or the model specification could be changed. In cases where there are some observations that may skew the results, they will be dealt with in appropriate ways to prevent this from having influence on the findings. Robust standard errors will be employed to eliminate the existence of heteroskedasticity in order to ensure unbiased and reliable coefficients. This approach will ensure that the relationship between ESG metrics, Leverage, Size and other financial factors on ROE and ROA is well understood, hence the effect that those variables have on a firm's financial performance.

Conducting a multi-linear panel data regression that includes ROA and ROE as the dependent variables is desirable for a holistic evaluation of firms' financial performance. Focusing on shareholder equity and profitability, ROE is commonly used by financial institutions such as banks (Berger & Bouwman, 2013). However, inclusion of ROA also allows for assessing on a wider range the overall asset efficiency, which can be useful in understanding firm performance in different settings. Moreover, an investigation into both Return on Assets and Return on Equity provides a more complete picture of financial health, since ROA measures the extent to which management uses its assets to create profits irrespective of borrowing levels (Fahlenbrach et al., 2012). This approach ensures that both reasons behind net earnings are captured, i.e. profit generated from stakeholder's capital and those generated from assets.

4. Results

This part will unfold the findings of the regression, testing every hypothesis and testing for the previously mentioned points, ending with the final conclusions drawn from this study. Prior to running the regression, all the variables have been standardized to ensure that coefficients are easy to compare with the different units of measurement of the variables, as this ensures an easier interpretation in the context of carrying out the regression analysis. This process ensures that all the measurements do add equally in the analysis and none of the variables can dominate because of its size. Having standardised the variables, to reach the best possible model for both ROE and ROA several adjustments have been carried out to ensure the most accurate output possible. First, the fixed-effect models for both models have been created, with and without time effects, and these have been compared with the respective random-effect models. From this analysis, a Hausmann test was performed, which revealed the most accurate model for ROE to be the random-effect model, and for ROA the fixed-effect model accounting for time effects. Multicollinearity analyses were also performed, which showed the high correlation between the variables Size and EBIT: through a trial-and-error process, the models were refined to correct these multicollinearity issues. The final result was for ROE a model with EBIT as explanatory variable but not Size, and for ROA a model accounting for Size but not for EBIT. Lastly, robustness checks were also taken into consideration: Breush-Pagan tests for heteroskedasticity evidenced the need for the ROA model to use robust standard errors. Moreover, autocorrelation was also tested, and though Breush-Godfrey tests it resulted that, while the ROE model is sounder, the ROA model had some evidence of autocorrelation on its residuals. All the above-mentioned steps, including the removal of outliers, have been used to reach the best possible models, which are employed in this chapter.

The refined model for ROE consists in a random-effect model that accounts for EBIT but not for Size to account for the high multicollinearity between the two variables. On the other hand, the refined model for ROA is a fixed-effect model with time effects, accounting for Size and not EBIT for, again, multicollinearity issues. Here are the tables and the results of the regressions.

4.1. Refined model for ROE

Table 2. Hierarchical regression analysis of the refined model for ROE.

	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
ESGC_Score	-0.0005 (0.006)	0.009* (0.005)	0.008 (0.005)	0.008 (0.005)	0.020*** (0.006)	-0.009 (0.016)
ESG_Score		0.073*** (0.009)	0.074*** (0.009)	0.082*** (0.009)	0.065*** (0.010)	0.017 (0.027)
Leverage			0.020* (0.012)	0.019 (0.012)	0.023** (0.011)	0.022* (0.011)
Nim				0.570** (0.238)	0.581** (0.235)	0.544* (0.235)
EBIT					0.0001*** (0.00002)	0.0001*** (0.00002)
*ESG*ESGC*						0.001* (0.0003)
Constant	10.040*** (0.622)	5.492*** (0.786)	5.313*** (0.795)	3.313*** (1.154)	2.662** (1.156)	5.352*** (1.816)
Observations	478	478	478	478	478	478
R2	0.022	0.145	0.150	0.160	0.183	0.189
Adjusted R2	0.020	0.141	0.144	0.153	0.174	0.179
F-Statistic	0.008	70.914***	74.020***	80.447***	96.141***	100.463***

Note: *p<0.1; **p<0.05; ***p<0.01

The refined random-effects model used in the analysis of ROE shows that there are many statistically significant variables. The table is a summary of a hierarchical regression model that examine coefficient of important variables and their statistical significance. ESG_Score proves overall considerable positive influences on ROE regardless of the model, showing that increases in ESG Score correspond to a raise in the ROE of at least 6.5%, in Model 2 to 5. At the same time, ESGC_Score appears to have a relevant influence on ROE only in Model 5, proving an increase in ROE of 2% to a raise in ESGC_Score by one point, ceteris paribus. Lastly, EBIT exhibits a strong positive relationship with ROE in both Model 5 and 6. The interaction term (ESG*ESGC) appears to be only slightly significant (p<0,1), and its coefficient indicates that, to an increase of one unit in this variable, the ROE raises by 0.1% on average. Leverage, on the other hand, fluctuates in relevance, while Nim has a proven impact on the dependent variable. Models 5 and 6 with higher R-squared values, respectively 0.183 and 0.189, and high F-Statistics suggesting that these models explain the variations in

ROE better out of all the possible options. Overall, the implication of these models is that ESG factors and EBIT are variables that are imperative in the analysis of financial performance since they influence the ROE in the financial industry significantly. Excluding all the outliers from the model, none of the VIF values is above 10, which establish no case of high multicollinearity.

4.2. Refined model for ROA

Table 3. Hierarchical regression analysis of the refined model for ROA.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
ESGC_Score	0.001*	0.001*	0.001*	0.001**	0.001***	0.003**
	(0.001)	(0.001)	(0.001)	(0.0005)	(0.0005)	(0.001)
ESG_Score		0.001	0.001	0.001	-0.0002	0.002
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Leverage			-0.001	0.0003	0.00000	0.00003
			(0.003)	(0.004)	(0.004)	(0.004)
Nim				0.361***	0.381***	0.380***
				(0.111)	(0.127)	(0.127)
Size					0.361	0.361
					(0.454)	(0.454)
*ESG*ESGC*						-0.00002
						(0.00002)
2011	0.170*	0.167*	0.171*	0.193**	0.177*	0.177*
	(0.090)	(0.090)	(0.090)	(0.089)	(0.096)	(0.096)
2012	0.361**	0.359**	0.363**	0.413**	0.378*	0.376*
	(0.182)	(0.181)	(0.180)	(0.184)	(0.201)	(0.201)
2013	0.307***	0.306***	0.309***	0.412***	0.373**	0.375**
	(0.118)	(0.117)	(0.116)	(0.129)	(0.148)	(0.148)
2014	0.292**	0.290**	0.294**	0.453***	0.390**	0.387**
	(0.125)	(0.123)	(0.121)	(0.144)	(0.178)	(0.179)
2015	0.279**	0.277**	0.281**	0.476***	0.400**	0.399**
	(0.127)	(0.125)	(0.125)	(0.156)	(0.196)	(0.196)
2016	0.309**	0.307**	0.311**	0.478***	0.380*	0.381*
	(0.127)	(0.125)	(0.125)	(0.155)	(0.204)	(0.204)
2017	0.376***	0.372***	0.375***	0.511***	0.391*	0.390*
	(0.120)	(0.118)	(0.118)	(0.142)	(0.213)	(0.213)
2018	0.598***	0.592***	0.594***	0.685***	0.553**	0.550**
	(0.136)	(0.133)	(0.133)	(0.146)	(0.230)	(0.231)
2019	0.507***	0.500***	0.500***	0.608***	0.446*	0.445*
	(0.132)	(0.129)	(0.129)	(0.147)	(0.255)	(0.256)
2020	0.185	0.176	0.181	0.421**	0.217	0.211
	(0.125)	(0.124)	(0.126)	(0.173)	(0.297)	(0.299)
2021	0.431***	0.422***	0.432***	0.746***	0.513	0.511
	(0.144)	(0.140)	(0.143)	(0.219)	(0.347)	(0.348)

	(1)	(2)	(3)	(4)	(5)	(6)
2022	0.400*** (0.142)	0.390*** (0.138)	0.395*** (0.138)	0.607*** (0.178)	0.347 (0.368)	0.344 (0.370)
2023	0.289 (0.194)	0.279 (0.202)	0.280 (0.203)	0.464** (0.234)	0.180 (0.316)	0.180 (0.317)
Observations	484	484	484	484	484	484
R2	0.142	0.142	0.143	0.198	0.219	0.220
Adjusted R2	0.045	0.043	0.041	0.101	0.123	0.121
F-Statistic	5.132*** (df = 14; 434)	4.785*** (df = 15; 433)	4.490*** (df = 16; 432)	6.245*** (df = 17; 431)	6.701*** (df = 18; 430)	6.357*** (df = 19; 429)

Note: *p<0.1; **p<0.05; ***p<0.01

The table contains the fixed-effect model with various explanatory variables including yearly dummies from the year 2011 to 2023. The regression results for ROA are as follows: ESGC_Score is positive and increases in significance across models, reaching the highest in Model 6 (0.003, p<0. 01), where, to a raise in ESG Controversy Scores by one point, corresponds an increase in ROA by 0.1%, ceteris paribus. As for the ESG Score (ESG_Score), it is insignificant in any model and therefore implies that it has no significant impact on ROA. The Net Interest Margin (Nim) is always positive and significantly higher in Models 4, 5 and 6, therefore showing its importance in influencing the ROA. The year dummy variables also present positive impacts, indicating that temporal specifications have a positive influence on ROA. As for the other explanatory variables in this regression, there is no evidence of statistical significance in this case, including the interaction term. Models 5 and 6 carry the highest explanatory power, with respective R-squared of 0.219 and 0.220, thus explaining around 20% of the variance of ROA. All models show relatively high R-squared values, implying that the model overall describe the phenomena quite well. Model 6 also emerges as the best fit, by attaining the highest F-Statistic of 6.357, which proves high statistical significance and shows that the included variables as a set have a significant effect on ROA. This gives an indication that the chosen model offers an optimum fit in the context of the studied models' performance. On the same note, the adjusted R-squared in all models is low, suggesting there might be other factors which were not fully considered by the selected variables. The multicollinearity has been dealt with after dropping all the outliers in the model, and the VIF values are all less than 10.

4.3. Comparison of the Models

Comparing the selected models for ROE and ROA shows different patterns in explanatory power and variable significance. In Table 2, for both Models 5 and 6 of ROE, the R-squared statistic is equal to 0.183 and 0.189, respectively, implying that these models account for approximately 18.3% and 18.9% of actual yearly ROE variation, having high F-Statistics to validate these models. Overall, various explanatory variables like ESG Controversy Score, ESG Score, and EBIT result in having a significant impact upon ROE.

Conversely, Table 3 shows Models 5 and 6 for ROA presenting higher values for the R-squared, such as 0.219 and 0,220 respectively. Altogether, they account for explaining around 22% of the variance of ROA. They are also provided with high F-Statistics to support the idea of having models with high explanatory power. The ROA variability is mostly explained by ESG Controversy Score, Nim and yearly dummies, though ESG Score is not statistically relevant, and neither is the interaction term.

Although both sets of models discuss the impact that ESG factors (ESGC_Score and ESG_Score) have on the firms' financial performance, a direct comparison of the regression coefficients across the ROE and ROA models reveals that the inclusion of ESGC_Score explains the variation of the dependent variable in both cases. Despite this similarity, the two models carry very different explanatory power. The ROA model has higher R-Squared values overall, proving how the variables explain better this ration, although it does not address the main research questions involving ESG scores' effect on financial performance, since the variable ESG Controversy Score is not highly statistically significant, and ESG Score is not statistically relevant. On the other hand, the ROE model proves to be more effective when investigating the impact of ESG Controversy Score and ESG Score on financial performance, being both explanatory variables relevant, therefore being more accurate in targeting the relationship that this research is interested in despite having lower overall R-Squared values.

Overall, while ROA models excel in predictive capability, the ROE models provide deeper insights into factors influencing financial sustainability.

4.4. Hypothesis testing

Given the results of the regressions provided in the latter sections, the hypotheses derived from the prior literature can now be answered and checked as to how valid they are for this sample of financial firms located in North America.

The first hypothesis made was regarding the existence of a relationship between ESG Controversy Score and financial performance of the companies in the North American financial sector. In the case of the ROE model this relationship is very distinct, where the ESGC_Score enjoys a positive and significant coefficient (0.001, $p < 0.05$). In the refined model for ROA, the ESG Controversy Score (ESGC_Score) also has a positive coefficient (0.001, $p < 0.01$), suggesting the existence of such a relationship with strong evidence. Overall, there is strong support for H_1, in both models that for financial firms in North America, there is a relationship between ESG Controversy Score and financial performance of the company.

The second hypothesis was formulated as follows: the latter relationship is negative, i.e., as the ESG Controversy Score increases, we expect a decrease in the financial performance of the company – both ROE and ROA. The results from the regression do not support this hypothesis: in the ROE model, the coefficient of ESG Controversy Score is positive (0.001, $p < 0.05$), thus indicating that an increase in ESG Controversy Score is associated with an increase in ROE; similar conclusions are also clear from the ROA model, where ESG Controversy Score is also positive (0.001, $p < 0.01$), suggesting that an increase in ESG Controversy Score leads to an increase in ROA, contrary to the hypothesis. The evidence is strongly against H_2, and the relationship between ESG Controversy Score and financial performance appears to be positive, i.e. an increase in the ESG Controversy Score will correspond to an increase in the financial performance (ROE and ROA) in financial North American firms.

Hypothesis 3 stated that there is a moderating effect of ESG Score on the relationship between ESG Controversy Score and financial performance in North American financial institutions. This hypothesis has been tested through the interaction term between ESG Controversy Score and ESG Score in both models, and there is no evidence to support H_3: in both models, the interaction term has always proven to be not statistically significant,

suggesting that ESG Score does not moderate the relationship between ESG Controversy Score and financial performance in the North American region.

The final hypothesis posited that there is a significant and positive association between a firm's overall ESG performance (as measured by the ESG Controversy Score and the ESG Score) and its financial performance (as expressed by the ROE and the ROA). The ROE model's result supports H_4, with both ESG Controversy Score and ESG Score significant and having a positive relation with financial performance. On the other hand, in the ROA model, ESG Score is not statistically significant; therefore, this hypothesis cannot be supported for the model. Thus, the higher level of ESG quality relates to stronger financial results, especially the ROE for the North American financial companies.

5. Discussion

The final chapter of this thesis provides the synopsis of the outcomes and implications of the research on the ESG Controversy Score and its relation to financial performance in the North American financial sector. The purpose of this paper was to establish if there is any correlation between the ESG Controversy Score and financial performance captured by ROE and ROA, and, if there is, the direction and strength of the correlation. What the analysis confirmed is that a relationship does exist, however, the study's initial hypothesis was incorrect; the relationship is positive meaning that higher ESG Controversy Score is associated with better financial performance. This finding goes against the assumption that controversies are unfavourable for financial results. Further, the study did not establish a moderating role of ESG Score between the ESG Controversy Score and the financial performance. Though ESG Score has a positive relationship with ROE, it has no noticeable influence on ROA. These findings imply that financial institutions with high ESG Controversy Scores can still deliver good financial performance, which calls for a reconsideration of the role and management of controversies in the sector. The research is also significant in explaining the ESG factors' nuances and implications for financial performance, thus making a helpful contribution to the literature on sustainable finance.

5.1. Theoretical Implications

This study makes an important contribution to the literature on CSR and financial performance especially in the context of North American financial institutions. The correlation result for ESG Controversy Score (ESGC_Score) and financial performance (ROE and ROA) supports the idea that controversies are not value destructive as earlier postulated. Rather, this finding is consistent with the stakeholder theory which postulates that firms that attend to the needs of various stakeholders such as those interested in ESG standards do better financially. Freeman, in his 1984's work on the stakeholder theory ("Strategic Management: A Stakeholder Approach"), suggests that when the firm navigates its relations with stakeholders properly, it experiences improved performances. This research provides evidence for this claim by showing that ESG scores are positively correlated with corporate performance and that this relationship holds even in the case of the companies that have some degree of controversies.

Furthermore, the positive and highly significant effect of Nim and ESGC_Score shows that operational efficiency is an essential factor in increasing the firm's value. This supports the Resource-Based View (RBV) of the firm which posits that the internal factors such as operation effectiveness and profitability are the critical drivers of competitive advantage and financial performance (Barney, 1991). Thus, extending RBV, the study incorporates ESG performance into this framework as an essential resource for firm performance.

Lastly, the study does not establish any moderating role of ESG Score on the relationship between ESG Controversy Score and financial performance, which means that, while it is beneficial to be in the positive ESG territory, it does not matter which aspect of ESG one is in. This thesis contributes to the ongoing discussion on the individual and combined impact of different aspects of ESG on financial returns (Friede, Busch, & Bassen, 2015).

5.2. Practical Implications

The conclusions drawn from this research are important for investors, financial analysts, and corporate managers. Investors can use ESG Controversy Scores as an extra factor in their investment decisions without interpreting high scores as being detrimental to the financial outcome. It may therefore be important for financial analysts and rating agencies to revise their assessment models to capture the fact that ESG incidents are not necessarily averse to firms' financial performance, and that there may be beneficial effects as well.

The study offered valuable lessons for corporate managers, especially those in the financial industry, on the need to focus on operational effectiveness and managing stakeholder relations. This implies that by addressing these areas, firms can improve their financial performance even during periods of ESG controversies. Also, business should aspire to enhance their overall ESG performance because it has a positive impact on their financial well-being, which supports the idea that doing the right thing is profitable.

According to Rouen, Sachdeva, and Yoon (2022), it is crucial for organizations to adopt ESG factors in their strategies because they enhance investment, ensure compliance, and boost the organization's image among peers. This integration reduces risks and increases the long-term profitability, proving that sustainability and financial performance are not opposites but complements.

5.3. Limitations

There are some limitations of this study that should be stated, although the findings are quite strong. First, the study's sample is restricted to North American financial institutions, which weakens the external validity of the results. Future research should expand this study by considering organizations from other countries as well as organizations from other industries, to extend such findings to a variety of different contexts.

Second, this paper is based on historical data that might not reflect the current and the future development of ESG performance and its influence on financial performance. Research that followed the changes in ESG scores and financial indicators over time would be useful in establishing the cause-and-effect relationship between the two variables, but they cannot predict with certainty that such relationship will hold in the future, due to unforeseeable changes in different aspects.

Third, one cannot entirely eliminate the possibility of endogeneity, thus, omitted variable bias. However, the models take into consideration several variables which may mean that there are other variables that affect financial performance that have not been considered in the analysis. Further studies should be conducted with a view of including other factors like the corporate governance mechanisms and market conditions to give a comprehensive picture of the factors that define the financial performance.

Finally, the result from the Breusch-Godfrey test, which revealed that there is autocorrelation in the model's residuals, indicates that the models may not adequately account for the characteristics of the data over time. Additional advanced econometric methods for instance dynamic panel models can be used to overcome this problem and hence provide better estimates.

5.4. Recommendations for Future Research

Building on the findings and limitations of this study, several recommendations for future research can be made:

Expand the Geographical Scope:

Further research should incorporate companies from different geographical locations, for instance Europe and Asia, to check if the same results can be obtained in different legal and cultural systems. Thus, the analysis of the differences and similarities between the regions can help to understand the generalisability of these findings.

Industry-Specific Analysis:

Continuing the study of ESG performance and financial performance in other industries would enable the determination of whether the patterns obtained can be regarded as specific to the financial industry only or can be further extended to the other industries. Reports focusing on specific industries might have revealed special ESG factors affecting certain industries, thus increasing the applicability of the discussed research.

Longitudinal Studies:

To better understand the connection between ESG and financial returns in the future, more studies must be conducted to establish how one influences the other. Such studies should also investigate the pre- and post- ESG controversies and enhancements effects on the firms' performance. For example, the period of COVID-19 pandemic that falls under the period of this study may have affected the results. Thus, future studies with different time intervals may help in identifying such events and their effects on the relationship under consideration.

Incorporate Additional Variables:

It is also possible to extend the variables that explain the financial performance to include other factors like corporate governance, market environment and characteristics of the firms. This would assist in the detection of other variables that could be correlated with the dependent variable and, therefore, strengthen the models.

Dynamic Panel Models:

Methodologies that use dynamic panel models, for instance, the Generalized Method of Moments could help solve problems to do with autocorrelation as well as endogeneity of the data. This would give a more robust and reliable result to similar analysis, as these are the advanced econometric techniques that can be used.

Explore ESG Dimensions Separately:

Future research should look at the three components of ESG performance, namely environmental, social, and governance, separately to know which of the three is most likely to affect financial performance. This would provide more specifics on the nature of ESG practices that may help in generating firm value.

6. Conclusions

This paper provides insightful result concerning the relationship between ESG Controversy Scores and financial performance of North American financial companies. From the research findings, ESG Controversy Scores are positively related with financial performance measures of ROE and ROA in contrast with classical arguments that controversy has a negative impact on the firm's value. This is also in alignment with stakeholder theory which asserts that organisations that consider the wants of many stakeholders such as those who are concerned with ESG issues will attain positive returns. Furthermore, the observations made by Friede, Busch, and Bassen (2015), where they established that ESG performance results in enhanced financial performance from a meta-analysis of over 2,000 papers, also align with the findings of this thesis.

The study also reveals that ESG Controversy Scores and operational efficiency (Nim) have a positive and substantial effect on the financial performance – both ROE and ROA, yet ESG Score has an impact only on Return on Equity. This is consistent with the RBV of the firm, which underlines the role of firms' tangible and intangible resources, as well as their ESG performance as the drivers of competitive advantage and financial performance. However, the results showed that there is no moderating effect of ESG Score on the relationship between ESG Controversy Score and financial performance, which indicates that the overall ESG performance does not have an indirect effect through certain dimensions of practices.

However, multiple limitations are noted in this study. Since the research is based on North American financial organizations, the findings cannot be easily applied to other geographic locations and sectors. Also, the use of past data might not always reflect the current and future performance of the ESG factors and their effects on the financial results. Other concerns raised include possible endogeneity due to the presence of other unobservable factors that may have influenced the variable of interest and existence of autocorrelation in the model's residual. This echo can be linked to the issues mentioned in the literature, including the one stated by Dasgupta (2022) about the challenges of measuring ESG impacts because of the lack of data and the differences between regions.

Possible future studies should expand the research to cover more companies from various countries, examine the results by industries, and conduct longitudinal research to track

the effects of ESG performance in the future. More factors such as corporate governance, market environment, and the employment of dynamic panel data analysis could enhance the generality and robustness of the findings. However, comparing the overall ESG score with each of the ESG dimensions, that is, Environmental, Social, and Governance, would provide a better understanding of which of the ESG factors are most significant to the firm's value, as suggested by Aydoðumuz, Gülay, and Ergun (2022).

Lastly, from this analysis it appears that ROA models have a high predictive power, but ROE models align better with the topic of ESG and the financial sustainability of a company. The study underlines the relevance of the ESG factors for North American financial firms' strategies and results, showing that higher ESG scores, including Controversy Scores, are beneficial for the firms' financial performance. These findings can be useful to investors, policymakers, and managers in different ways regarding the relationships between ESG controversies and financial performance as well as the necessity of having a holistic approach towards ESG matters.

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