The Impact of ESG On the Performance of European Banks During the Covid-19 Pandemic

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Abstract— **Purpose: This study investigates the impact of Environmental, Social, and Governance (ESG) performance and CSR strategy score on banks' performance across the European banking sector during the COVID-19 pandemic, using a mixed theoretical framework (i.e., agency theory and stakeholder theory).**

Methodology: We collected data for 155 banks from 24 European countries spanning six years (2016-2021), cumulating 930 observations. We use a panel data regression model (fixed effect) to test the study hypotheses.

Findings: The current study's findings revealed that the influence of the ESG pillar scores on banks' operational and financial performances varies in intensity. Our results revealed a positive and significant influence of the governance pillar score on the banks' performance, while the social pillar score was negatively and significantly associated with banks' performance. However, we found no significant influence of environmental pillar score, CSR strategy score, and human rights score on European banks' performance. This study demonstrated the link between the COVID-19 pandemic, ESG and bank performance. Our results also indicated that bank size was positively and significantly associated with financial performance (returns on assets and Equity). At the same time, Gross Domestic Product affected the bank's financial performance (return on Equity). Global Sustainable Competitive Index of the country wasn't significantly related to banks' performance in Europe.

Originality: Our study offers insights into the existing literature on the economic implications of ESG performance of banks in a developed country context, considering the COVID-19 crisis.

Keywords— **ESG, Banks, COVID-19.**

I. INTRODUCTION

An entity's Environmental, Social and Governance (ESG) performance has developed into an essential topic in academic research and practice. There has been a massive growth over the last decade in the number of sustainability reports published worldwide (Buallay, 2020). Following the United Nations Sustainable Stock Exchange, listed companies are required to disclose their sustainability practice by latest 2030 (Sustainable Stock Exchange, 2015).

With the growth of the global economy and the increasing interconnectedness through trade and investment (Li and Gaur, 2014), stakeholders expect more than just financial accounting from firms. As a result, various types of reports, such as value reporting, intellectual capital statements, sustainability reports and so on, have been established (Wulf et al., 2017). However, with a new type of reporting, new issues arise. The different kinds of sustainability reporting stem from the point of what to disclose, as ESG information is non-financial disclosures and, thus, does not have a standard format. Therefore, ESG disclosures vary significantly (Elzahar et al., 2015). The issue of what to disclose is also a vast topic of research. It is not only of crucial importance for national and international stakeholders but also for policymakers all over the world.

With increasingly more focus on sustainability, it has become a tool used to enhance the performance of firms. The resource-based perspective implies that entities can obtain superior performance when disclosing financial and non-financial resources. (Gaur et al., 2011). These disclosures will assist firms in developing new competencies, which is of utmost importance in achieving sustainable competitive advantage.

Consistent with the studies, a relationship can also be found between ESG disclosures and the country where the firm operates (Loannou and Serafeim, 2017; Reverte, 2009). Baldini et al. (2016) claim that country-specific aspects such as governance, labour and economy are important factors that affect a firm's ESG disclosure. In this regard, looking into the association between ESG and the performance of firms within country-specific factors is essential. European countries are at the forefront of advocating sustainable development (Taylor & Francis, 2022). An older study by Duuren et al. (2016) affirmed that European-level managers look at ESG differently.

This study contributes to the existing literature in a few ways. Firstly, it sheds light on the prior ESG works on operational and financial performance. Secondly, the study broadens the understanding of the impact of the COVID-19 pandemic on sustainability and performance of European banks. In the same vein, it also provides more information on the economic implications of the pandemic. Finally, it also offers empirical data on the level of ESG in banks in the European region.

The rest of this chapter is structured as follows. Section 2 provides the related literature review, theoretical framework and hypothesis development. Section 3 presents the research method. Section 4 shows the results of the data analysis. Section 5 discusses the results and the findings. Section 6 offers a conclusion and remarks.

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II. LITERATURE REVIEW, THEORETICAL FRAMEWORKS AND HYPOTHESIS DEVELOPMENT

2.1. Literature review

2.1.1. The Significance of Sustainability Reporting

With the integration of world economies and the growth of multinationals, sustainability disclosures, especially corporate governance, have become an essential concern for management and stakeholders worldwide (Gaur and Singh, 2013). Promoting ESG disclosures is beneficial for both the firm and its stakeholders. Sustainability reporting usually results in superior internal and external decision-making, a higher level of transparency and, at the same time, reinforcing financial stability and contributing towards better social sustainability (Krzus, 2011; Eccles and Saltzman, 2011; Eccles et al., 2015). Steyn (2014) argues that sustainability reporting improves financial performance in the long run. Adams (2017) shows that by showing the links between ESG and corporate financial performance, investors with sustainability concerns are more likely to invest in those firms rather than `irresponsible` firms.

Similarly, disclosure of ESG figures boosts the firm's corporate reputation and creates considerable competitive advantages (Gardberg and Fombrun, 2006; Lee Brown et al., 2009; Simnett et al., 2009). Jensen and Berg (2021) conclude that ESG disclosures reveal the complete picture of an organisation's future performance when it displays the current financial and non-financial performance. In addition to the existing literature, Popli, Ladkani and Gaur (2017) and Popli, Kumar and Gaur (2018) affirm that firms shaping their responses in sync with variations of the external environment are in the best position to ease the erosion of their levels of profitability

2.1.2. Sustainability in the banking and financial service sector

According to Buallay (2019) and Jeucken (2004), the banking and financial services industry responds less to long-term challenges than other sectors. Even older literature like Jeucken and Bouma (1999) assert that banks are behind in measuring the effect of sustainability reporting on their performance compared to other sectors. Empirical evidence by Tomorrow (1993) observed that bank disclosures do not emphasise the impact of the environment on their activities. A while later, Earhart et al. (2009) observed that the service sector was still lagging regarding their activities' environmental and social impact.

Following the financial crisis of 2008, Bually et al. (2020) and Earhart et al. (2009) noticed that many banks survived and grew. Those banks worked sustainably and were involved in environmental, social and governance practices. After a severe crisis, survival often compels banks to focus on values other than financial ones, like environmental and social values (Capella, 2012). In line with the banking industry, regulations also evolve after acute crises to mitigate the risk of another (Capella, 2012).

2.1.3. ESG and Corporate Financial Performance (CFP)

In the last two decades, ESG and its capitalisation have been vital and debatable research topics. According to various research, the main question focuses on whether ESG influences the CFP of firms. Despite several studies, a consensus between ESG and CFP has not been accepted. Consequently, theories illustrating the relationship between ESG and CFP are of a wide variety. However, the search for a link between ESG and CFP dates to the early 70s (Fernandez-Izquierdo, Ferrero-Ferrero, and Muñoz-Torres, 2016). An increase in costs or any reduction in profits is not in line with the Friedman theory (1970). In this theory, Friedman claims that a firm has only one social responsibility: to maximise its shareholders' value.

Following the traditional neo-classical standpoint, investment done to be socially responsible alongside the value of ESG creates additional costs for an organisation (Palmer, Oates, and Portey, 1995). Similarly, Baumol (1991) said that additional costs incurred in a competitive market decrease the firm's profits. He adds that in the long term, the higher prices would affect the firm's competitiveness which will, in turn, impact its cash flows.

On the other side, numerous theories report a positive relationship between ESG and CFP. Godfrey, Merrill, and Hansen (2009) argue that investing in ESG can be considered a `protection` against reputation risks. Apart from being a guarantee against reputation risks, ESG investing can enhance an organisation's reputation. McWilliams and Siegel (2006) state that a positive reputation leads to good economic value. The authors claimed that consumers perceive products from firms with good reputations as higher quality. A good reputation also enhances stakeholders` commitment to a firm (Wang, Choi, and Li, 2008; Godfrey, 2005). Edams (2011) argue that employee satisfaction positively influences the CFP. He added on to say that investing in certain ESG aspects led to an increase in employee satisfaction.

Besides negative and positive theories, a few studies explain the more ambiguous findings in the correlation between CSR and CFP. Weber (2008) introduced a variation of the discounted cash flow methodology. She claims that doing good is beneficial if the financial rewards outweigh the costs, and ignoring the additional financial flows yields the overall value of doing good. Horváthová (2010) introduces a theory that shows an inverted 'U'-relationship between CSR and CFP. This relationship can be justified as CSR investment, which creates value if the company's value is not already maximised. A second hypothesis to deal with mixed outcomes is based on the learning hypothesis. The proposition says that opportunity to generate alpha with ESG factors changes and becomes more complex if the market pays closer attention. Consequently, the current price will be adjusted. In recent literature, the learning hypothesis, discounted cash flow theory and inverse "U" relationships are the outcomes of a lack of consensus on the impact of ESG on CFP.

2.1.4. Impact of COVID-19 on Banks

The COVID-19 epidemic is a disaster on the global economic and financial landscape, acting as the most severe challenge since the 2008-09 Global Financial Crisis (GFC) for financial institutions. According to Asian Development Bank (Park et al., 2020), the pandemic will likely have an international economic cost of between $5.8 and $8.8 trillion (or 6.4% to 9.7% of the world GDP). Moreover, the unprecedented macroeconomic and healthcare shocks are anticipated to have various spillover consequences on every country's financial systems in multiple ways (IMF, 2020).

The integrity of the banking system is threatened by disease pandemics like COVID-19, which have a variety of complex effects on banks (FSB 2020; Aldasoro et al. 2020). Banks have historically dealt with many types of risks. The pandemic has exacerbated banks in different ways, including a liquidity crisis, credit squeeze, rises in non-performing assets and defaults (Larbi-Odam et al., 2020; Cecchetti and Schoenholtz, 2020; Goodell, 2020). Moreover, banks face lower returns on loans and investments, lowering market interest rates and triggering infectious bank runs (World Bank 2020c, d; Stiller and Zink 2020). In times of the COVID-19 pandemic, the risk of default for bank borrowers, including people and businesses, is significant due to the wide range of macroeconomic shocks (Vidovic and Tamminaina, 2020). Moreover, because many depositors may decide to withdraw their savings to cover their expenses, banks may also experience liquidity difficulties (Baret et al., 2020).

2.2. Theoretical Framework

According to Rodríguez-Fernández (2020), the theories mainly used for the relationship between sustainability and firm performance are the stakeholder theory, followed by the agency theory and the institutional theory (ranked from most common to least common). These three theories are the most used among several CSR theories. For example, according to signalling theory, firms use CSR to provide non-financial information to stakeholders, reducing information asymmetry (Turzo et al., 2022). Firms disclose more CSR information to signal their actual CSR activities, which helps to distinguish themselves from other poorly performing firms (Mahoney et al., 2013). Greenwashing theory indicates that companies with "bad" social and environmental activities voluntarily release their social and environmental movements in a positive light (Clarkson et al., 2011). Thus, CSR reports may be used as impression management strategies to create a symbolic image of social responsibility without actual implementation in CSR practices (Michelon et al., 2015).

2.2.1 Stakeholder Theory

Stakeholder theory justifies the worldwide disclosure of sustainability activities for firms (Hörisch, Freeman, and Schaltegger, 2014). According to (Freeman, 2010), a stakeholder is 'any group or individual who can affect or is affected by the success of an organisation's objectives. In setting forth this definition, Freeman (2010) considers external and internal parties that impact and are impacted by the firm. The external parties frequently pressure institutions to lower

the incidence and extent of outcomes, negatively influencing them and causing a rise to the extent and incidence of consequences positively impacting the same (Sarkis, GonzalezTorre, and Adenso-Diaz, 2010). According to Keynes (1936), major groups of stakeholders exist, namely, external stakeholders (for example, governments, creditors, competitors, customers and so on), internal stakeholders (for example, managers, employees and so on) and shareholders (natural person or entity who owes ownership through shares and other types of securities from firms).

Stakeholder theory principally operates because entities must properly manage their affiliation with the different stakeholders to continue business (Brammer and Millington, 2008). Deegan and Blomquist (2006) discern that, following stakeholder theory, reporting on certain specific information can help attract or maintain specific types of stakeholders. An example is where the disclosure of social or environmental performance information is vital in attracting or retaining some powerful and potential individual or group that may invest in the firms` sustainability activities.

In practice, entities operating in all sectors of the economy face an array of challenges in dealing with the expectations of numerous stakeholders while reporting on sustainability. Investors usually consider the prime reason that they fulfil the function of capital contributors, without which the organisation's survival would be jeopardised (Verbeeten, Gamerschlag, and Möller, 2016). Nevertheless, stakeholder theory claims that while giving equal consideration to the needs of every stakeholder, it also provides an optimal `balance` of support between them and increases the shareholder's return by reducing both explicit and implicit costs of the company (Hasnas, 1998). Similarly, Tsoutsoura (2004) denoted that any entity that tries to lower its implicit costs by implementing socially irresponsible behaviour will undoubtedly incur further explicit charges in the future.

Melé (2008) thus concluded that managers should satisfy not only the needs of investors or shareholders but all stakeholders. Therefore, sustainability reporting will suit the need of stakeholders. For instance, satisfied employees tend to be more efficient; satisfied customers purchase in significant quantities, and happy suppliers offer discounts.

2.2.2 Agency Theory

Secondly, agency theory demonstrates the connection between shareholders (principal) and management (agent) (Holmstrom, 1979; Holmstrom and Milgrom, 1987; Jensen and Meckling, 1976). In short, the concept posits that managers are agents assigned to maximise shareholders' wealth (Quinn and Jones, 1995). Principal-agent problems can result from a non-alignment of interests between the two parties (Jensen and Meckling, 1976). Conflicts arise as shareholders want to maximise their return on investment while managers wish to prioritise their gains over the firms` return. Thus, agency theory suggests that shareholders must reward the board of managers when they maximise the firm's profitability (Harjoto, 2012).

Watts and Zimmerman (1990) infer the presence of agency costs that reflects information asymmetries innate in corporate transactions. (Rodríguez-Fernández, 2015; Mahoney &

Roberts, 2007; Waddock & Graves, 1997) suggests that sustainability disclosure is a method to convey to stakeholders. It lowers information asymmetries between the principal (shareholders) and agent (management). Consequently, the agency theory deems that sustainability reporting minimises agency costs. According to Al Kurdi (2021), no matter how many risks are mentioned in the sustainability reports of an entity, lowering agency costs should result in an increase in financial performance.

The two theories can be linked in absolute terms but leave a gap where the firm's behaviour does not match the country's expectations. Suchman (1995) elaborates that the values and standards of firms may not always match the cultural and environmental milieu of the country. Belal and Owen (2015) argue that the choice of the sustainability reporting model is affected by societal perceptions and stakeholder pressure that is itself affected by those milieus and changes over time.

To close this gap, firms tend to assess and, at the same time, align the social values of the country they do business and their values (O'Donovan, 2002). That is, firms require to legitimate their role in society. Wagner and Schaltegger (2004) assert that alignment is the crucial link when considering these two distinct theories. In compliance with the need to be legitimate, firms should also fulfil stakeholder needs. The following section includes two control variables for different institutional contexts within the European Region (in which the governance index represents the political context whilst GDP represents the economic context) (Mokadem and Muwafak, 2020).

2.3 Hypothesis Development

2.3.1. Effect of environmental pillar score (E) on corporate financial performance

The effect of environmental performance against CFP is a widely discussed topic in the literature that dates back to the 1980s. The most notable work in this field, on which many hypotheses are still based today, is the empirical work of McGuire, Sundgren and Schneeweis (1988). This study lays the groundwork for decades of arguments between environmental performance and corporate financial performance, and they distinguish three theoretical ideas, which all argue for a different relationship.

The first concept is that managers face economic and environmental performance trade-offs; firms that improve or focus on environmental performance are often at a financial disadvantage. This theoretical approach follows suit with the neoclassical theory explained above.

The second concept is the costs to improve CFP are not significant and generate other managerial benefits (for example, higher morale or a rise in productivity). This theory suits the study of Porter and Van Der Linde (1995), whose counterargument from the traditional view was that environmental regulation is not necessarily costly for a firm. In their opinion, innovation is a by-product of correctly managed environmental regulations and will offset the early cost of compliance with new regulations.

The third concept is that the cost of improving environmental performance is offset by either a future increase in revenue or a future decrease in other expenses. This theory is in line with the study of McGuire et al. (1988). These theoretical arguments became the basis of numerous hypotheses in recent empirical studies.

Bauer, Derwall, Guenster and Koedijk (2005) considered the concept of eco-efficiency in which there was empirical evidence for a positive non-linear relationship between CFP and corporate eco-efficiency. Kruger (2015) assessed the result of mandatory greenhouse gas emission disclosure on CFP. He concluded that the CFP of large firms increased considerably compared to smaller firms as the product of new environmental regulations. Apart from the size perspective, Semenova and Hassel (2008) and Derwall et al. (2005) found that the positive effects of environmental spending are more challenging to realise in environmentally sensitive sectors because of the higher cost of environmental performance.

In light of the above discussion, the results of the studies that investigate the relationship between environmental performance and a firm's performance are mixed. Thus, our first hypothesis is constructed as follows.

H1$_A$: A positive relationship exists between the environmental pillar score (E) and operational performance measured by return on assets (ROA).
H1$_B$: A positive relationship exists between the environmental pillar score (E) and financial performance measured by return on investments (ROE).

2.3.2. Effect of Social Pillar Score (S) on Corporate Financial Performance

The effect of social performance on CFP is directly related to how employees are needed to produce goods and services. Thus, we shall use human resource management to describe social performance. From a social standpoint, several works of literature ponder whether corporate financial performance is affected by human resource management. Among the myriad of studies, Huselid (1995) argue that organisational human resources policies have an economically significant contribution to CFP. According to a study by Jackson and Schuler (1995), empirical evidence supports the theory that competitive advantage is gained if human resource management is integrated into the firm's strategy.

The study of Molina and Ortega (2003) contradicts the neo-classical approach explained above. They directed a survey of four hundred firms quoted in the North American exchange and found that training expenses and development costs were positively linked with firm performance. However, their results follow the theory that firm performance can increase through employee satisfaction.

Other literature, such as Van Beurden (2008), showed empirical evidence of a positive relationship between social performance and CFP. Wagner and Schaltegger (2004) claim that the combined effect of social and governance disclosures in financial statements positively affects CFP for European listed banks.

Consistent with the previous literature involving social performance and firm performance, the second hypothesis is established as follows.

H2_A: A positive relationship exists between the social pillar score (S) and operational performance measured by return on assets (5ROA).

H2_B: A positive relationship exists between the social pillar score (S) and financial performance measured by return on investments (ROE).

2.3.3 Effect of governance pillar score (G) on corporate financial performance

Most literature studies focusing on the G of ESG elaborate on corporate governance. Empirical studies on governance are most likely to study the impact of independence across the board, the size of the board and the debt financing method, amongst others. A study by MacAvoy and Millstein (1999) studies the effects of board independence. They assert that an independent board is more likely to take action that obliges a company's management to operate in the best interests of shareholders. They discovered that these actions caused an increase in earnings per share.

Yermack (1995) conducts a study using 452 large US firms and realises that the board's size harmed CFP. He concludes that smaller panels are more efficient, resulting in higher market value. The same study is replicated on a larger scale by Guest (2009), who studied 2746 listed UK firms over 20 years (1981 - 2002). His conclusion is similar to Yermack (1995). He finds that by increasing the board size from 6 persons to seven, there was a reduction in TobinsQ by 1. The outcome provides evidence that a board with more members experience issues because of poor decision-making and communication.

Our third hypothesis will be tested to examine the relationship between corporate governance and corporate financial performance.

H3_A: A positive relationship exists between the governance pillar score (G) and operational performance measured by return on assets (ROA).

H3_B: A positive relationship exists between governance pillar score (G) and financial performance measured by return on investments (ROE).

2.3.4 Effect of human rights score (HR) on corporate financial performance

The human rights score is very literal. Under the Eikon Refinitiv database, the metric with the most weight in its calculation is the best-practice human rights policy integration. Past literature can be found linking both HR and CFP. Herring (2009) investigates the impact of diversity on CTP. She describes three theories to elaborate on previous empirical findings. The first theory is the 'value-in-diversity' theory which claims that a diverse workforce, compared to a homogenous one, results in better business performance. The second theory is the 'diversity as a process loss theory. This concept denotes that diversity in the workplace is somewhat counter-productive for the business. The third theory is the paradox theory which asserts that diversity inevitably leads to more conflicts in a firm. However, these conflicts will result in better business results as the firm will be more innovative and come up with better solutions than a homogenous group.

Herring (2009) concludes that racial and gender diversity positively impacts CFP. Her research also provides evidence against the theory of 'diversity as a process loss.

A study of 2 million companies from 34 European countries by the IMF (2013) finds a strong positive relationship between women in senior positions and ROA. According to IMF's study, by replacing only one male member with a female member in a senior position, a higher ROA could be recorded of 8 to 13 basis points.

Other literature looks at the impact of gender diversity across board members and its resultant effect on CFP. The outcomes of these studies are mixed in most cases, but Marinova, Moon and Van Dyne (2010) displayed neither a positive nor negative impact when taking only European firms into account.

In light of the above discussion, we set forward our fourth hypothesis.

H4_A: A positive relationship exists between human rights score (HR) and operational performance measured by return on investments (ROE).

H4_B: A positive relationship exists between human rights score (HR) and financial performance measured by return on investments (ROE).

2.3.5 Effect of CSR strategy on corporate financial performance

CSR practices have become a strategic tool for organisations in the past few decades. Many firms are playing on the image that society gives them to grow and have better performance. Authors who have emphasised reputational risks also link their studies to CSR as a countermeasure. Emezi, Charles and Nwaneri (2015) stated numerous benefits of investing in CSR activities, from an excellent corporate image to higher employee morale and better relations with the government, which will bring a better position for the firm and turn into profits in the long run.

Friedman (1970) claimed that managers who take the owners' or shareholders` capital to address the needs of society are stealing from the firm. Agulanna and Madu (2008) advocated that managers' funds spent on CSR activities are challenging to account for, which makes it very complex to audit CSR accounts. The significant challenges of CSR maintain that the business's primary and only goal is profit maximisation. They add that managers are trained to make a profit and ensure the entity's going concern or continued survival. Alongside this argument, the reality is that the actual business environment is very competitive with emerging competitors, especially those from Africa and Asia.

The fifth hypothesis aligns with the previous literature on CSR strategy and firm performance.

H5_A: A positive relationship exists between the CSR strategy score and operational performance measured by return on assets (ROA).

H5_B: A positive relationship exists between the CSR strategy score and financial performance measured by return on investments (ROE).

2.3.6 Impact of COVID-19 on corporate financial performance

Much ongoing literature around COVID-19 explains its effects, but a complete picture will emerge only when the impact entirely unfolds. Shen et al. (2020) concluded that firm performance had deteriorated due to the COVID-19 pandemic. Aifuwa et al. (2020) investigated the impact of the COVID-19 pandemic on the profitability and performance of private-sector firms in Nigeria, and they found similar results.

Using the event study method, Liu et al. (2020) explore how COVID-19 has influenced stock market returns, whereas Ali et al. (2020) explore the consequence of the global financial markets in terms of volatility. All the authors report an adverse effect on 21 leading stock markets worldwide from the impact of the COVID- 19 pandemic.

Nevertheless, it is thought that businesses with high sustainability investment levels can support their stakeholders better. It is also believed that these businesses are more likely to honour their implicit agreements with their stakeholders (Cheng et al., 2013; Gao et al., 2016). One may argue that businesses that perform better in sustainability will likely be abler to withstand the COVID-19 pandemic (BlackRock, 2020; Gilchrist, 2020; Schroders, 2020).

Thus, we can structure our sixth hypothesis as follows.

H6$_A$: A negative relationship exists between the COVID-19 pandemic and operational performance measured by return on assets (ROA).

H6$_B$: A negative relationship exists between the COVID-19 pandemic and financial performance measured by return on investments (ROE).

III. RESEARCH METHOD

3.1 Data And Sample

The sample comprises 930 observations from 155 banks from 24 countries for the past six years, from 2016 to 2021. We obtained the required data from Refinitiv (previously, Thomson Reuters) database. Sustainability performance data was obtained from the Refinitiv ESG database, whereas the financial accounting data was obtained from the Refinitiv DataStream database. The firm-year observations were merged into the two databases for 2016-2021. We started our sample with 206 firms giving 1236 observations from the Refinitiv database. Data were obtained on GDP from the World Bank database and the country-level Governance Index from Solability database, a subset of the Global Sustainable Competitiveness Index. Due to the size of the database and the inherent number of incomplete observations, the study only included firms that had the following conditions:

1. Availability of data for the period 2016-2021
2. Disclosure of ESG information for a minimum of 4 years

After combining those databases and dropping all the incomplete observations, a final sample of 930 observations from 155 firms in the banking sector over 24 European countries was reached. Table 1 shows the sample profiles. As illustrated in Table 1, the most significant element comes from the United Kingdom (162 observations or 17.4% of the

sample). Past studies have demonstrated that the UK banking sector has strong disclosure rates, is transparent compared to other European counterparts, and is constantly working towards sustainable goals (Sarah Graham, EY Press Release 2020). The second largest component comes from Italy (102 observations or 11% of the sample). The remaining 666 observations, representing 71.6% of the sample, come from 24 countries.

TABLE I. Sample profile

Country	Listed Banks	%	Total Observations	%
1. Austria	2	1.3%	12	1.3%
2. Belgium	1	0.6%	6	0.6%
3. Cyprus	2	1.3%	12	1.3%
4. Czech Republic	2	1.3%	12	1.3%
5. Denmark	6	3.9%	36	3.9%
6. Finland	3	1.9%	18	1.9%
7. France	8	5.2%	48	5.2%
8. Germany	9	5.8%	54	5.8%
9. Greece	6	3.9%	36	3.9%
10. Hungary	1	0.6%	6	0.6%
11. Iceland	1	0.6%	6	0.6%
12. Ireland	2	1.3%	12	1.3%
13. Italy	18	11.6%	108	11.6%
14. Liechtenstein	2	1.3%	12	1.3%
15. Netherland	5	3.2%	30	3.2%
16. Norway	9	5.8%	54	5.8%
17. Poland	11	7.1%	66	7.1%
18. Portugal	2	1.3%	12	1.3%
19. Romania	2	1.3%	12	1.3%
20. Russia	3	1.9%	18	1.9%
21. Spain	7	4.5%	42	4.5%
22. Sweden	10	6.5%	60	6.5%
23. Switzerland	16	10.3%	96	10.3%
24. United Kingdom	27	17.4%	162	17.4%
Total Firm	**155**	**100.0%**		
Total Observations			**930**	**100.0%**

A. The study variables

We measure the independent variable (ESG) using five disclosure indicators, including (E) Environment pillar score, (S) Social pillar score, (G) Governance pillar score, (HR) Human Rights score, and CSR strategy score (SCRST). The dependent variable (bank performance) has been measured using operational (ROA) and financial (ROE) performance (Buallay, 2017; Hamdan et al., 2017; Buallay et al., 2017).

Two types of control variables were utilised in this study: macroeconomic control variables, the Gross Domestic Product (GDP), and the Global Sustainable Competitive Index (GSCI) of the country (Nikolaev and van Lent, 2005; Larcker and Rusticus, 2010) and total assets (TA) as a bank-specific control variable (Gaur et al., 2014; Singh et al., 2018). Using macroeconomic specifications as a control variable is reasonably fair to deal with issues where the countries differ regarding technological capacity, intellectual property regimes, economic development and geography (Contractor et al., 2016). As the COVID-19 pandemic is expected to affect the

performance of banks we denote it using a dummy variable which takes value 0 for the years before COVID-19 (2016-2019) and 1 for the years in which COVID-19 still prevails (2020 and 2021). Table 2 provides the description and measurements of the study variables.

TABLE II. Variable description and measurements

Variable Type		Variables	Acronyms	Exp. Sign	Descriptions
Dependent		Return on Assets	ROA	DV	% of Earnings before Interest and Tax to Total Assets.
		Return on Equity	ROE	DV	% of Profit after Tax to Equity.
Independent		COVID-19	COVID	(-)	1 for a period where COVID prevails (2020 and 2021). Otherwise,0.
	Explanatory	Environmental Pillar Score	E	(+)	ESG index measures the disclosure of the firm's energy use, waste, pollution, natural resource conservation and animal treatment.
		Social Pillar Score	S	(+)	ESG index measures the disclosure of the firm's business relationships, firm donations, volunteer work, and employees' health and safety.
		Governance Pillar Score	G	(+)	ESG index, which measures the disclosure of corporate governance code.
		Human Rights Score	HR	(+)	ESG index, which measures a company's effectiveness in terms of respecting fundamental human rights conventions.
		CSR Strategy Score	CSRST	(+)	ESG index reflects a company's practices to communicate that it integrates economic (financial), social and environmental dimensions into its day-to-day decision-making processes.
	Control	Governance Index	GSCI	CV	The country's global Sustainable Competitive Index (GSCI) is measured by five indicators (Government cohesion, Infrastructure, Business Environment, Corruption, and Financial Stability).
		Total Assets	LogTA	CV	The logarithm of the total annual assets of the bank.
		Gross Domestic Product	LogGDP	CV	The logarithm of the annual GDP of the country.

3.3 The Study Model

Firm performance is the dependent variable in the current study model, comprising two dimensions: operational and financial performance (ROA and ROE). Additionally, some elements were taken as control variables (GSCI, LogGDP and LogTA). In determining the association between firm performance and ESG against the impact of COVID-19 (COVID), a panel regression analysis is used to assess the effect of sustainability disclosure on firm performance in years, whether the pandemic was present.

$$Perf_{itg} = \beta_0 + \beta_1 E_{it} + \beta_2 S_{it} + \beta_3 G_{it} + \beta_4 HR_{it} + \beta_5 CSRST_{it} + \beta_6 GSCI_{it} + \beta_7 LogGDP_{it} + \beta_8 LogTA_{it} + \beta_9 COVID + \varepsilon \quad \text{............(1)}$$

This equation can be further divided into two models based on performance:

$$ROA_{itg} = \beta_0 + \beta1E_{it} + \beta2S_{it} + \beta3G_{it} + \beta4HR_{it} + \beta5CSRST_{it} + \beta6GSCI_{it} + \beta7LogGDP_{it} + \beta8LogTA_{it} +$$
$$\beta9COVID +$$
$$\varepsilon\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1A)$$

$$ROE_{itg} = \beta_0 + \beta1E_{it} + \beta2S_{it} + \beta3G_{it} + \beta4HR_{it} + \beta5CSRST_{it} + \beta6GSCI_{it} + \beta7LogGDP_{it} + \beta8LogTA_{it} +$$

$$\beta9COV + \varepsilon\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1B)$$

Where Perf is a continuous variable, β_0 is the constant, and $\beta1$-8 is the slope of the independent and control variables; ROA and ROE are the dependent variables that will be tested. The independent variable is measured by five indicators E, S, G, HR, and CSRST. The firms` control variable is LogTA, and the countries` control variables are GSCI and LogGDP. "i" represents the firm, "t" stands for the period, "g" represents the country and "ε" is the random error.

IV. RESULTS

4.1 Descriptive Statistics

The descriptive statistics for dependent, independent, and control variables are set out in Table 3. It provides an overview of the central tendency measures and dispersion measures. The dependent variables (ROA and ROE) have an average score of 1.47% and 9.69%, respectively. The results show that, on average, the banks have a ROA of 1.47% with a minimum of -11.5% and a maximum of 35.9%, indicating that most European banks have a decent ROA. While few banks have a higher ROA, others have a profitability issue. On the other hand, the mean ROE is 9.59%, with a maximum score of

98.5% and a minimum of -42.6%, indicating that most banks have a relatively good profitability level.

When it comes to the various components of ESG, the results demonstrate that the average governance disclosure had the maximum value (57.83), followed by the social disclosure (49.796), human rights disclosure (45.598), CSR strategy disclosure (45.095) and lastly environmental disclosure (42.77).

The mean of environment disclosure is 42.77, with a maximum of 99.13 and a minimum of 0.14, explaining the directly proportional relationship between the disclosure of corporate governance practices and performance. The low environmental disclosure score may imply that banks have less environmental impact as they operate in the tertiary sector (heavily service-based) compared to firms which operate in other sectors.

The mean, maximum, and minimum values of CSR strategy (SCRST) disclosure and human rights disclosure are nearly identical. The governance index (GSCI) mean is 51.39, with a maximum weight of 71.69. The variable is evenly distributed concerning its central tendency measures because European countries generally tend to have good financial stability alongside good infrastructure, business environment, low rate of corruption and good government cohesion.

All the dependent, independent and control variables are almost symmetrical such as the fact that the results between the mean and the median have only slight differences except for the governance pillar score and return on asset. Moreover, high volatility was found for almost all variables analysed.

In addition, the Jacque-Bera test shows that all variables are normally distributed as their p-value is less than the 10% significance level.

TABLE III: Descriptive statistics

Variables	ROA	ROE	E	S	G	HR	CSRST	COVID	LogGDP	GSCI	LogTA
Mean	0.015	0.096	42.772	49.796	57.826	45.598	45.095	0.333	27.516	51.391	23.612
Median	0.004	0.079	43.115	55.315	29.93	49.41	44.85	0	27.421	53.4	23.71
Maximum	0.359	0.985	99.13	97.62	99.52	95.66	99.92	1.000	29.073	71.694	28.600
Minimum	-0.115	-0.426	0.14	0.63	1.000	1.000	0.34	0	22.532	28.295	28.515
Std Dev	0.040	0.120	33.640	29.238	36.077	29.262	33.984	0.472	1.184	9.172	2.649
Skewness	4.347	1.579	0.115	-0.442	0.280	-0.175	-0.019	0.707	-1.361	-0.551	-0.189
Kurtosis	27.031	11.272	1.491	2.007	1.428	1.776	1.520	1.50	6.194	2.575	2.264
Jarque-Be	25306.31	3037.96	90.33	68.43	107.92	68.78	84.96	164.69	282.26	54.03	26.50
Prob	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Legend: See Table 2 for variable description and measurements

4.2 Correlation

The Pearson correlation matrix (see Table 4) shows the direction of relationships across all the variables under observation to get a clearer picture before testing the hypothesis. As a rule of thumb (Hinkle et al. 2003), the correlation coefficient results are categorised as negligible (0.00-0.30), low (0.30-0.50), moderate (0.50-0.70), high (0.70-0.90) and very high (0.90-1.00).

Table 4 indicates no high collinearity between any two independent variables as the correlation coefficient does not exceed 0.7, except for S and G (0.752) and HR (0.732). Therefore, a VIF test is done to check the multicollinearity between these variables.

TABLE IV. Correlation matrix

Variables	E	S	G	HR	CSRST	COVID	LogGDP	GSCI	LogTA
E	1.000								
S	0.608	1.000							
G	0.626	0.752	1.000						
HR	0.600	0.732	0.580	1.000					
CSRST	0.685	0.678	0.642	0.675	1.000				
COVID	0.152	0.285	0.285	0.315	0.284	1.000			
LogGDP	0.053	0.119	0.148	0.084	0.090	0.025	1.000		
GSCI	0.036	0.059	0.080	0.038	0.100	0.514	0.001	1.000	
LogTA	0.089	0.191	0.223	0.112	0.115	0.037	0.052	0.028	1.000

Legend: See Table 2 for variable description and measurements.

A VIF test is performed on the independent variable of a model to confirm the assumption that there is no multicollinearity, as shown in Tables 4 and 5. VIF is the reciprocal of tolerance; therefore, VIF is advantageous for small values. A commonly used rule is that a VIF>10 indicates high multicollinearity (Heckman, 2015; Hair et al., 1995). However, as shown by Table 5 for the ROA model and Table 6 for the ROE model, the results show no sign of multicollinearity as VIF < 10 for all independent variables.

TABLE V: Variance Inflation Factor (VIF)

Variables	ROA (VIF)	ROE (VIF)
E	1.845	1.842
S	4.630	4.628
G	2.133	2.132
HR	2.598	2.599
CSRST	2.269	2.268
COVID	2.057	2.059
LogGDP	1.025	1.025
GSCI	1.507	1.507
LogTA	1.058	1.058

Legend: See Table 2 for variable description and measurements.

4.3 Regression results

According to Ramnoher and Seetah (2020), the core issue with pooled cross-sectional OLS is that the heterogeneity and uniqueness of data sets are entirely disregarded. Thus, we performed the Hausman test to determine whether to use the fixed or random effect. The Hausman test has the prime aim of choosing between two regression models: the Fixed Effect (FE) and Random Effect (RE). The FE model is more suitable for panel data since it provides reliable results. However, the RE model is considered a more effective estimator as better p-values are proposed.

Under the FE model, the link between the predictor and outcome variable within a specific entity is explored. Every entity has attributes that can or cannot impact the independent variable, and this model assumes that specific individual effects may affect or cause bias to the predictor variables. Another assumption of FE is that those personal characteristics are unique to the individual, and no correlation must exist with other individual features. The FE model eliminates the effects of those particular characteristics to assess the overall impact of the independent variables on the dependent variable.

Also known as the variance components model, the RE model assumes variations across entities to be random and uncorrelated with the independent variables. The model also believes that the panel data analysis contains no fixed effects, allowing for individual-specific effects. Furthermore, unobserved heterogeneity can be controlled using the RE model.

According to the Hausman test results (not reported here), the null hypothesis (H0) is rejected in both models since the p-value of the Hausman test is below the 10% significance level. Therefore, the fixed effect is identified as the appropriate model.

Table 6 (Panels A) shows a significant relationship between ROA and S, G, COVID and LogTA. It can also be seen that the Durbin-Watson is very close to 1.5, which is the acceptable range. While Panel B in Table 6 indicates a significant relationship between ROE and S, G, COVID, logGDP and logTA. It can also be seen that the Durbin-Watson is within the range of 1.5 to 2.0, which is the acceptable range. The association of the significant independent variables is explained in the next section.

TABLE VI. Regression Results

Variable	Coefficient	Std. Error	t-Statistic	P-value
Panel A: ROA Fixed Effect Model				
C	-0.424	0.357	-1.189	0.235
E	-0.004	0.007	-0.566	0.572
S	-0.006	0.000	-2.568	0.057
G	0.010	0.006	2.629	0.010
HR	-0.009	0.007	-1.188	0.235
CSRST	0.008	0.005	0.547	0.122
COVID	-0.005	0.002	-2.177	0.030
LogGDP	0.008	0.013	0.607	0.544
GSCI	0.000	0.000	0.992	0.322
LogTA	0.009	0.003	3.584	0.000
R^2	0.728			
Adjusted R^2	0.670			
F-statistic	12.590			
Prob(F-statistic)	0.000			
Durbin-Watson statistic	1.485			
Panel B: ROE Fixed Effect Model				
C	-4.503	1.095	-4.112	0.000
E	0.001	0.000	0.054	0.957
S	-0.001	0.000	-2.670	0.008
G	0.000	0.004	2.019	0.044
HR	0.002	0.000	0.111	0.912
CSRST	0.010	0.000	0.595	0.552
COVID	-0.017	0.008	-2.029	0.022
LogGDP	0.151	0.040	3.774	0.000
GSCI	0.000	345.000	1.033	0.302
LogTA	0.019	0.008	2.415	0.016
R^2	0.715			
Adjusted R^2	0.654			
F-statistic	11.787			
Prob(F-statistic)	0.000			
Durbin-Watson statistic	1.610			

Legend: See Table 2 for variable description and measurements.

V. DISCUSSION

A. Environmental Pillar Score (E)

Panel A in Table 6 indicates a negative (-0.004) but insignificant association (p=0.572; p>0.1) between the environmental pillar score (E) and return on assets (ROA), implying that the environmental performance does not affect the bank's operational performance. Hence, we reject the first part of Hypothesis One (H1$_A$), which suggests a positive and significant association between the E and ROA. Panel B in Table 6 (ROE model) also shows a positive (0.001) but insignificant association (p=0.957; p>0.1) between E and ROE, indicating that environmental performance does not affect the bank's financial performance (ROE). Thus, we reject the second part of Hypothesis One (H1$_B$), which proposes a positive and significant association between E and ROE.

Our results are consistent with Wagner and Schaltegger (2004) on EU members that portray an insignificant effect of environmental performance compared to the other aspects of ESG. The nature of the firms' industry could be a possible explanation for these results. Our sample contains only banks, and as a service-based industry, banks do not have much to do with the environment. There is undoubtedly a term coined as E-waste, and firms are working on reducing it. However, the impact is not that strong to be significant in terms of profitability and performance.

B. Social pillar score (S)

Surprisingly, Table 6 (Panel A) demonstrates a negative (-0.006) and significant effect (p=0.057; p<0.1) of the social pillar score (S) on ROA. The ROE model (Panel B) also demonstrates a negative (-0.001) and significant association (p=0.008; p<0.1). These results suggest that the social performance of European banks affects their operational

(ROA) and financial (ROE) performances. Therefore, our second hypothesis is partly supported (H2$_A$ and H2$_B$).

Our findings are congruent with the neo-classical approach and precisely that of Palmer, Oates & Portey (1995). However, they do not uphold those of Molina and Ortega (2003), Wagner and Schaltegger (2004) and of Van Beurden (2008), who confirm a non-negative relationship between the two variables.

One factor contributing to the negative relationship between S and bank performance (ROA & ROE) is the change of strategy from spending on retraining employees to increasing the average salary to retain the employee. Banks encourage employees to stay in their firm instead of joining another in the financial sector. A few years ago, it was common practice for financial employees to move out and join other firms every 4 to 5 years for better salaries, working conditions or other benefits. However, from the data collected in recent years, banks in the EU have changed their strategy to retain their staff.

According to Crowe (2021)[1], the median turnover rate of bank non-officer dropped from 23.6% in 2019 to 16.2% in 2021. At the same time, the bank's officer roles experienced a turnover drop from 7.3% in 2017 to 3.3% in 2021. One factor for this decrease in turnover rate is performance-based pay increases, one of the best strategies for boosting employee morale. About 65% of banks claim to use this strategy.

Apart from performance-related pay, there is also a general increase in salary in the banking industry. The median wage for 19 jobs observed from the lowest to the highest experienced a pay increase. For example, a data entry clerk's salary increased by 16.4% from 2019 to 2021 only (one of the highest rates of growth), a credit analyst's salary increased by 5.2% on average from 2019 to 2021 while a loan operations supervisor's salary saw a rise of 6.8% for the same period (Crowe, 2021).

C. Governance pillar score (G)

With regards to the governance pillar score (G), Table 6 (Panel A) reveals a positive (0.010) and significant (p=0.010; p<0.01) relationship between G and the ROA model. Panel B also shows that G is positively and significantly correlated with the ROE model (0.004; p=0.044; p<0.1). These results suggest that European banks' corporate governance performance impacts their operational and financial performances. Thus, we accept our third hypothesis (H3$_A$ and H3$_B$).

These results are the outcome of many years of constant improvement of the regulation regarding corporate governance. Ever since the financial crisis of 2008, the impact on the banking sector was so severe that new regulatory actions were developed and implemented internationally through Basel III, and country-specific regulations were amended. To avoid another crisis, new capital and liquidity reforms, also known as Basel III, were passed by G-20 members.

Following the numerous changes in regulatory standards and countrywide governance amendments, the public slowly regained confidence in the banking sector. The European Central Bank has updated specific regulatory board sizes, compositions, etc. These changes in corporate governance may

factor in the increase in banks` operational and financial performance.

D. Human Rights pillar score (HR)

Table 6 (Panel A) shows a negative (-0.009) and insignificant (p=0.235; p>0.1) association between ROA and HR, indicating that HR policies have no significant impact on ROA. Hence, we reject the first part of the fourth Hypothesis (H4$_A$), which assumes a positive and meaningful relationship between HR and ROA. Moreover, Panel B in Table 6 indicates a positive (0.002) but insignificant association (p=0.912; p>0.1) between HR and ROE, revealing that HR policies do not affect bank financial performance. Thus, we also reject the second part of the fourth hypothesis (H4$_B$).

These results are consistent with Marinova et al. (2010), who displayed neither a positive nor negative impact when taking only European banks into account. However, our results are inconsistent with Herring (2009). The current study also does not confirm the positive impact of gender and racial diversity on bank performance (IMF, 2013). Banks, especially in the European region, comply with the law. Numerous laws in different European countries promote gender equality in the bank, racial diversity and even minimum employment of people with disability.

E. CSR strategy score

The results shown in Table 6 (Panel A) reveal a positive (0.008) but insignificant association (p=0.122; p>0.1) between the CSR Strategy score and ROA. In other words, the CSR strategies used by the banks are not a defining factor and have no significant influence on their operational performance. Therefore, we reject the first part of our fifth hypothesis (H5$_A$), which supposes a positive and significant relationship between the CSR strategy score and ROA.

Similarly, Table 6 (Panel B) indicates a positive (0.010) but insignificant relationship (p=0.552; p>0.1) between CSRST and ROE. Thus, the second part of the fifth hypothesis (H5$_B$) that suggests a significant and positive relationship between the CSR strategy score and ROE is rejected.

This positive relationship may result from doing what is socially expected from big corporations. The CSR strategy score shows an organisation's practices to communicate its integration of environmental, social and economic dimensions of society into its daily decision-making processes. For example, a clean-up campaign organised or sponsored by a bank will be perceived as a reasonable and socially responsible action in the eyes of the consumer, indirectly influencing its decision in choosing where to go for a credit card if, hypothetically, the banks are offering the same rate. These practices, however, do not have a significant impact on bank performance.

F. COVID-19 Impact

Concerning the impact of the COVID-19 pandemic on operational performance, Table 6 (Panel A) shows a negative (-0.005) and significant (p=0.030; p<0.1) association between COVID and ROA. Similar results are presented in Table 6 (Panel B), indicating a negative (-0.017) and significant

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[1] For more information on the survey findings, please see the 2022 "Crowe Bank Compensation and Benefits Survey."

(p=0.022; p<0.1) relationship between COVID and ROE. These results denote that the European banks have felt the impact of the COVID-19 pandemic on both operational and financial performances. Hence, we accept our final hypothesis (H6$_A$ and H6$_B$).

Our results are consistent with recent literature dealing with the economic shock of the COVID-19 pandemic. Our study confirms the results of Liu et al. (2020) and Ali et al. (2020), who explore how COVID-19 have impacted the global and worldwide stock market returns.

Most economies of the world have received the initial blow of COVID-19. The pandemic is still "active" (at the time of writing), but all sectors have adapted quite well till now. Many studies demonstrate a negatively abnormal return in the first few months of the pandemic. As Sandang (2020) points out, this COVID-19 pandemic is unlike the other pandemic we experienced. Regarding European banks, Vidovic and Tammina (2020) observe that the macroeconomic shocks created a high risk of default for borrowers. Baret et al. (2020) added that the costs of the disease had made depositors more prone to withdraw to cover their health expenses. All these factors negatively affect the performance of banks both in the short run and the long run.

In times of the COVID-19 pandemic, the risk of default for bank borrowers, including people and businesses, is significant due to the wide range of macroeconomic shocks (Vidovic and Tamminaina 2020). Moreover, because many depositors may decide to withdraw their savings to cover their expenses, banks may also experience liquidity difficulties. (Baret et al., 2020).

5.7 Control Variables

Table 6 indicates that bank size positively and significantly impacts its operational (0.009; p = 0.000) and financial (0.019; p = 0.016) performances. This result suggests that big European banks are performing better than small ones. Gross Domestic Product measured by LogGDP is found to have a significant and positive (0.151; p = 0.000) impact on the financial performance of European banks, whereas it does not affect (0.008; p = 0.544) the operational performance of these banks. Table 6 shows no impact of GSCI on the bank's operating and financial performance.

As shown in Table 6 (Panel A), the adjusted R^2 of 0.670 (F-statistics = 12.500; p = 0.000) indicates that the independent, explanatory and control variables in the ROA model explained 67% of the total variation in the bank operational performance. Panel B shows that the adjusted R^2 of 0.654 (F-statistics = 11.787; p = 0.000) indicates that these variables in the ROE model explained 65.4% of the total variation in the bank financial performance.

VI. CONCLUSION AND REMARKS

We investigate the impact of Environmental, Social and Governance (ESG) performance and sustainability reporting on banks' performance across the European banking sector during the COVID-19 pandemic. We collected data from 155 banks in 24 European countries for six years (2015-2020), totalling 930 observations. Our results showed that the governance pillar score positively and significantly affects the banks'

performance. In contrast, the social pillar score was negatively and significantly associated with the banks' performance. However, we found no significant influence of other pillars of ESG and sustainability reporting, including environmental pillar score, CSR strategy score, and human rights score, on European banks' performance.

This study demonstrated the link between the COVID-19 pandemic, ESG and bank performance. Our results also indicated that bank size was positively and significantly associated with its performance (returns on assets and Equity). At the same time, Gross Domestic Product affected the bank's financial performance (return on Equity). The global Sustainable Competitive Index of the country wasn't significantly related to the banks' performance. Our study offers insights into the existing literature on the economic implications of sustainability disclosures in a developed country context considering the COVID-19 crisis.

Consistent with agency and stakeholder theories and previous ESG literature, our findings show that social disclosure and governance disclosures significantly impacted the firm's performance. However, the impact of social disclosures was negative compared to the positive effect of governance disclosures. Another interesting finding that supports existing literature is the negatively significant relationship between the COVID-19 pandemic and the bank's performance.

Our evaluation of the effect of ESG on the bank's performance is based solely on the disclosure of ESG pillars; admittedly, other ESG measures, including the actual ESG performance and spending, are becoming popular. We further acknowledge that the impact of Covid-19 varies among countries due to the pandemic itself and on account of measures taken by governments to mitigate the impact of the pandemic on their people and businesses. Our research failed to capture this element due to limited information available. Future research can include this element to better assess the impact of COVID-19 on financial performance.

The proposed model may be applied to corporate disclosure forms such as sustainability, intellectual capital, and risk. Future research also can extend the comparison with other methods of measuring the quality of ESG disclosures and examine the influence of additional corporate governance mechanisms (e.g., sustainability board committees and sustainability officers) and firm features on the quality of ESG disclosures...

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