Sustainability reporting practices and performance of commercial banks in Ghana: The moderating role of corporate stability

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Abstract

Purpose: Having regard for growing interest in the sustainability discourse, this study examined the moderating effect of corporate stability in the relationship between sustainability reporting practices and financial performance of commercial banks in Ghana.

Methodology: Using data sampled from the annual reports of twenty (20) commercial banks in Ghana from the period 2010 to 2022, we used system General Method of Moments (GMM) estimation technique for analysis.

Findings: The study found a significant negative effect of sustainability reporting practices on the financial performance of commercial banks in Ghana. However, the significant negative effect was found to be positive with the moderating role of corporate stability. The findings are robust against endogeneity and instruments proliferation through a *Hansen J*-test and *Arellano-Bond Serial* Correlation Test robustness check.

Implications: The findings of the study will contribute to policy and regulation formulation in the area of sustainability practices. It also provides empirical basis for banks to make sustainability commitments, having regard to their stability status.

Originality / Research value: The study is the first of its kind to examine the influence of corporate stability in the sustainability-performance relationship.

Keywords: Sustainability reporting practices; corporate stability; financial performance; commercial banks; general method of moments, stakeholder theory, institutional theory

Paper type: Empirical

1. Introduction

The most topical issue in human endeavour today is arguably sustainability due to the clarion call to save our planet for current and future generations. Perhaps, there has never been any period in human endeavour to operate within the classical definition of sustainability given by Brundtland (1987) as the kind of progress that addresses the desires of the current generation without sacrificing the capacity of future generation to meet their potential desires. The need to focus on sustainable practices even is pronounced, even in the midst of aiming for organisational objectives. In spite of the rapid growth and expansion of the socio-economic climate of developing countries, social and environmental challenges are usually most intensely felt (Mahmood, Kouser & Masud, 2019). This has led to firms increasingly engaging in sustainability practices and reporting their activities through conventional or non-conventional media as Bualley and Al-Ajmi (2020) notes that the number of sustainability reports churned out by firms has seen significant growth. Sustainability reporting is the practice of disclosing an organization's performance in terms of sustainability. Sustainability reporting aims to provide stakeholders with transparent, comparable, and accurate information about the entity's contributions to sustainable development, risks, and opportunities related to sustainability (Abideen, 2024). Sustainability reporting handles the measurement, disclosure, and accountability of organizational sustainability performance for the benefit of internal and external stakeholders (Alaraji & Aljuhishi, 2020).

The sustainability paradigm is now regarded and measured diversely on Environmental, Social and Governance (ESG), Corporate Social Responsibility (CSR), Triple-Bottomline Reporting, Economic, Environmental, Social reporting among other dimensions (Buallay, Fadel, Alajmi & Saudagaran, 2021). This phenomenon is now rife in diverse organisations whose activities have direct or indirect impacts on the dimensions of measurement. The financial sector, with the banking industry being its prominent segment, is thus not left out of the sustainability conversation. Although firms' activities in the financial sector may not have a direct effect on dimensions of sustainability, their clients may contribute to or be vulnerable to these impacts (Nwobu et al. 2017). Situating our conversation within the realms of Stakeholder and Institutional theories, the focus on sustainability issues in the decision-making processes of financial institutions has reached appreciable heights due to pressure from shareholders and different stakeholders (Houston & Shan 2022) and also a plethora of literature pointing to sustainability reporting being linked to improved business performance (Hawaj & Buallay, 2022). Buallay et. al (2021) note that banks are expected to play an internal and external role in corporate sustainability, where the internal role is practiced through their internal operations like any other organisation, whilst the external role is practiced through the inclusion of sustainability practices in their corporate decisions.

In recent decades, a number of sustainability reporting frameworks have been developed by organisations to help business entities report their sustainability activities to stakeholders. As Oorschot et al. (2024) notes, international sustainability initiatives, standards, regulations, and national legislations have increased since the turn of the millennium with the overarching aim to improve the overall quality of sustainability reports. Reporting frameworks includes, but not

limited to, Global Reporting Initiative (GRI) Standards, Sustainability Accounting Standards Board (SASB), Integrated Reporting Framework (IIRC), UN Global Compact – Communication on Progress (COP), ISO 26000: Guidance on Social Responsibility, European Sustainability Reporting Standards (ESRS) and World Economic Forum (WEF) Stakeholder Capitalism Metrics. The Global Reporting Initiative (GRI) framework for sustainability reporting is the most widely used framework globally (Abeysekera, 2022). It was developed by the Global Reporting Initiative (GRI) which is an independent, international organisation that helps organisations take responsibility for their impacts on the environment and social impacts by providing them with the global common language to communicate those impacts aforementioned. The first version of the GRI guidelines (G1) was produced at the turn of the current millennium. The guidelines are often reviewed to ensure that they reflect global best practices for sustainability reporting so that organizations respond to emerging information demands from stakeholders and regulators. The G4 was released in 2013, followed by sustainability reporting standards in 2016 and sector-specific standards in 2022 (GRI, 2022).

Globally, the banking sector is known to be susceptible to shocks and distress when the feathers of the economy are raffled. The ravaging effects of the global financial crises of 2008 and the most recent COVID-19 pandemic are depictions of the dire situation financial institutions may find themselves. Gutiérrez-Ponce and Wibowo (2023) highlighted that the 2008 global financial crisis raised concerns about the impact of sustainability activities on the financial performance of banks due to questions raised about their social responsibility policies. As a result, financial institutions have been urged to reinvent their business, realign capital flows toward sustainable investments and integrate sustainability in risk management to restore trust, transparency and longevity (Buallay et al., 2023). Due to the vital role of banks in economic development and financial stability worldwide, sustainability reporting practices is increasingly being requested from financial and banking entities (Scholtens & Van Klooster, 2019). The debate is thus settled that banking operations should include sustainability reporting practices for stakeholder benefits. A key argument for sustainable practices by banks is to ensure their stability and operations for the foreseeable future. Chiaramonte at al. (2022) thus found that prolonged sustainability practices contributed positively to stability of banks.

The banking sector in Ghana has seen major developments recently with a more complex regulatory environment. Legislations were passed in late 2016, followed by a number of other steps to further improve constructive monitoring and stabilize the sector (PWC Ghana Banking Survey Report, 2018). The banking sector was subjected to a "clean-up" by the regulator, Bank of Ghana, in 2018 which led to twenty-three (23) banks currently in operation. The (PWC Ghana Banking Survey Report, 2023) cited a mega-crisis of Ghana's economy through the third to the fourth quarter of 2022 due to the lingering effects of COVID-19, the Russia-Ukraine war which caused systemic shocks to the energy sector, inflation, aggressive depreciation of the cedi, emerging potential recession, rising public debt distress and sustained sovereign credit rating downgrades, which occasioned widespread mistrust in the financial sector and a threat to the stability of many banks.

Literature is rich with empirical studies pointing to positive effects of sustainability reporting practices on banks' financial performance (Platonova et al., 2018; Cornett, Erhemjamts & Tehranian, 2016; Nizam et al., 2019) and bank stability (Orazalin, Mahmood & Narbaev, 2019; Buallay et. al, 2021; Chiaramonte at al., 2022) but none identified has tested how corporate stability moderates the relationship between sustainability practices and financial performance. In the midst of prevailing circumstances in the Ghanaian banking sector and the calls for sustainability practices from diverse stakeholders, we explore in a novel way, how the stability status of commercial banks in Ghana serves as a moderating mechanism in ensuring desirable financial performance whilst maintaining sustainability practices.

First, the study contributes to the stakeholder and institutional theories. The findings of the study will lay credence to the underpinnings of the stakeholder and institutional theories, that highlights the importance of institutional forces in driving a firm's operational direction. The predominant urge from stakeholders and institutional forces alike, has caused banks to adopt sustainability practices for survival and the findings will contribute to this body of knowledge. Second, the study contributes in a novel way to the sustainability literature. The study is the first identified that examines how the stability of a bank serves as a mechanism to boost financial performance through sustainability reporting practices. Previous studies have looked at how these variables have a direct relationship with each other but have not attempted to look how corporate stability moderates the relationship between sustainability practices and financial performance. Thirdly, the findings of the study will be novel in empirically testing the relationship between sustainability reporting practices and financial performance of banks in Ghana in the near aftermath of the banking sector crises and the double-whammy COVID-19 and Russia-Ukraine war induced economic meltdown. Empirically testing the relationship between these variables will serve the sustainability literature a great deal of how firms react sustainably during periods of difficulty. Finally, the study contributes to policy dialogue and direction in the Ghanaian - and to a large extent the African - banking space. The economic climate, coupled with stakeholder and institutional demands, will require policies that shape the sustainability practices of banks to ensure organisational targets are met. The findings of the study will thus lay empirical basis policy discourse.

The remainder of the paper proceeds in subsequent chapters as follows. The second section will touch on corporate sustainability regulations and reporting reforms in Ghana, followed by a review of related literature that will be composed of a theoretical framework, and empirical literature review and hypotheses development. The research design will take the fifth section, whilst the empirical results and discussion, and summary and conclusion will respectively end the paper.

2. Corporate sustainability regulations and reporting reforms in Ghana

There has been a surge in sustainability reporting in developing countries from the turn of the millennium (Tilt et al., 2020) and may be attributed to the social and environmental challenges that are pronounced in these geographical and economic areas (Mahmood, Kouser & Masud,

2019). The emergence of the sustainability paradigm, with its attendant benefits to stakeholders, has led to the evolvement of a regulatory framework to guide the practice in Ghana. The framework includes constitutional provisions, environmental policies, varied legislations, conventions and best practices and international partnership agreements. This framework largely guides business entities, such as banks, in sustainability reporting and activities.

The 1992 Constitution of Ghana, which is the supreme law of the land, that ushered the current and most enduring civilian regime makes provisions that emphasise sustainability practices. Under the sixth chapter of the 1992 Constitution of Ghana, titled *"The Directive Principles of State Policy"*, Article 36(9) provides thus,

> *"The State shall take appropriate measures needed to protect and safeguard the national environment for posterity; and shall seek co-operation with other states and bodies for purposes of protecting the wider international environment for mankind."*

The above provision that guides state policy sits well with the classical definition of sustainability. This sets the tone for sustainability practices to be engrained in every regulation used to execute State policy. Subsequently, legislations and accepted practices have ensured that firms show care for the environment and society. Some of these legislations are Environmental Protection Agency Act, 1994 (Act 490), Environmental Assessment Regulations, 1999 (LI 1652), Minerals and Mining Act, 2006 (Act 703) among others. The loophole in these laws is that, it addresses sustainability issues of firms that have a direct impact on the dimensions of sustainability. Although Ghana does not have a comprehensive legal framework mandating sustainability practice, various sectors have developed guidelines to encourage these practices and reporting in the wake of pressure from stakeholders.

In recent years, some commercial banks have developed reporting frameworks based on globally accepted standards such as the GRI to communicate sustainability practices. These frameworks have specially designed sector specific guidelines for reporting. We can safely put however, that the most comprehensive and binding reporting framework for the banking sector in Ghana is the International Financial Reporting Standards (IFRS) Sustainability Disclosure Standards. The IFRS Sustainability Disclosure Standards are a set of global standards developed by the International Sustainability Standards Board (ISSB) under the oversight of the International Financial Reporting Standards (IFRS) Foundation. These standards aim to create a unified global framework for sustainability-related disclosures, helping companies report consistent, comparable, and decision-useful information to investors and other stakeholders. The ISSB was established in 2021 to address the growing demand for transparency in sustainability reporting. The goal of the board is to create a comprehensive set of standards that integrate with financial reporting, helping investors understand how sustainability issues impact a company's enterprise value. The IFRS Sustainability Standards complement traditional financial statements, focusing on how environmental, social, and governance (ESG) risks and opportunities affect the entity's ability to create value over time. The standards released for adoption, effective for annual reporting periods beginning on or after 1st January, 2024, are IFRS S1 – General Requirements for Sustainability-Related

Disclosures and IFRS S2 – Climate-Related Disclosures. The objective of IFRS S1 is to provides a framework for entities to disclose material sustainability-related information whilst the objective of IFRS S2 is to focus specifically on climate-related risks and opportunities.

Although the adoption of the IFRS Sustainability Standards is voluntary for most jurisdictions, we can safely put forth that legislation in Ghana requires all companies to adopt and report sustainability activities based on these standards. We are fortified by provisions in Ghana's Companies Act 922 of 2019. Section 7 of the Act point to the fact that all banks in Ghana are public companies and are required to operate in a transparent and accountable manner to the public. Further, Section 127(5b) provides that the financial statements of a company shall, *"be prepared in compliance with International Financial Reporting Standards adopted by the Institute of Chartered Accountants, Ghana or any other standards approved or adopted by the Institute."* The Institute of Chartered Accountants, Ghana (ICAG) has in fact inculcated sustainability reporting standards and guidelines into its curriculum and training for students and practitioners alike. This brings us to the safe conclusion that companies in Ghana are currently well guided by comprehensive legislations and guidelines for sustainability reporting to stakeholders. This study, however, relies on the GRI framework to assess the sustainability reporting practices of commercial banks in Ghana.

3. Theoretical framework

The study was underpinned by the Stakeholder and Institutional theories. These theoretical frameworks have been widely used, and rightly so, to guide sustainability studies. These theories underscore the importance of actors within a firm's environment of operation. The demands of these actors are the fiat to gain legitimacy for operation and survival by these firms. Banks operating in Ghana also largely succumb to these demands overtime hence our reason to build this study on the Stakeholder and Institutional theories.

The stakeholder theory is mostly referenced in relation to sustainability studies, as the crust of sustainability is safeguarding the interest of groups that have a stake in the activities of a corporate entity. Ansoff (1965) initially used the phrase "stakeholder theory" to describe the firm's goals. Modern stakeholder theory owes its empirical growth to Freeman's Strategic Management work: An Approach to Stakeholder in 1984. Until then, the Shareholder Theory (Friedman, 1970) prevailed in management research since the relationship of other interest groups was deemed non-economical. Freeman (1984) set the tone for attention on other interest groups by Freeman (1984) defined stakeholders as "any group or individual who can affect or is affected by the achievement of the organization's objectives." Donaldson & Preston (1995) subsequently categorized Stakeholder Theory into Descriptive Stakeholder Theory, Instrumental Stakeholder Theory and Normative Stakeholder Theory. This categorization explained how firms related to different stakeholder groups, how stakeholder management can improve corporate performance and highlighted the moral duty firms have to stakeholders' interests respectively.

Following the grounding of the theory, a number of studies have highlighted the relationship stakeholder induced governance and the financial performance of business entities (Hill & Jones, 1992; Freeman et al., 2004; Harrison & Bosse, 2013) whilst others have narrowed down on the positive relationship between sustainability practices and firm performance (Eccles et al., 2014). The instrumentality of the theory in testing the stability of firms through proper risk management has also been highlighted in literature (Mitchell, Agle, & Wood, 1997; Mellahi et al., 2016; Chiaramonte et al. 2021), The current study is thus situated within the precincts of the stakeholder theory to test the potency of stakeholder demands on corporate stability and financial performance.

The Institutional theory although having its roots in socio-political science has gained prominence in strategy and organisational science research. Meyer and Rowan (1977) in their ground-breaking work "Institutionalized Organizations: Formal Structure as Myth and Ceremony" introduced an alternative theory to the prevailing Weberian theories that "assumed the coordination and control of activity are the critical dimensions on which formal organizations have succeeded in the modern world" (Meyer & Rowan, 1977, pp. 342). The institutional theory contended that institutional forces (or myths) are the sources of the formal structure of the firm in order to gain legitimacy for survival. The theory was further developed by DiMaggio and Powell (1983) which argued that highly structured fields or industries generate isomorphic pressures that lead to organisational homogeneity via coercive, mimetic, and normative forces. The theory thus describes why organisations adopt parallel practices over time and how external institutional pressures influence organisational legitimacy to operate and survival.

DiMaggio & Powell (1983) made a remarkable contribution to the theory by introducing the concept of institutional isomorphism. They argued that there are three drivers of institutional isomorphism: Coercive Isomorphism – Pressures from state regulations government and external stakeholders; Normative Isomorphism – Influence of professional and industry standards and education; and Mimetic Isomorphism – adopting practices of successful firms. Subsequent studies found institutional isomorphism forces to be key drivers of sustainability practices adoption (Bansal & Roth, 2000; Delmas & Toffel, 2008; Kolk & van Tulder, 2010; Ioannou & Serafeim, 2012; Eccles, Ioannou & Serafeim, 2014). This study is situated in this theory to test and contribute to the central idea that institutional demands drive firms in the Ghanaian banking sector to adopt sustainability practices in order to fit in and survive. Normative and mimetic isomorphism were the main drivers in the context of this study due to the absence of a direct coercive isomorphic force.

4. Empirical review and hypotheses development
4.1.Sustainability reporting practices and financial performance

Empirical literature on the relationship between sustainability reporting practices and financial performance of business organisations has seen a significant increase over the past decade. However, these studies have produced mixed results which may be attributed to differences in jurisdiction where the study was undertaken, the industry studied, the methods used, the

specific sustainability practices adopted, and the overall commitment of the institution to genuine sustainable development amongst other factors. Studies on sustainability have largely measured sustainability reporting practices on the various individual dimensions – economic, social, environmental and governance – and in some instances also aggregated the individual dimension scores. The varied findings of these empirical studies provide tremendous support to the Stakeholder and Institutional theories. Irrespective of the positive, neutral or negative effects, it lays credence to the position that the potency of stakeholder and institutional forces determine firm sustainability practices and performance.

Some few studies have found no significant relationship between dimensions of sustainability and financial performance (Nyirenda, Ngwakwe & Ambe, 2013; Moufty, 2014; Buallay et.al., (2022), which can be attributed to jurisdictional and industry differences that create weaker stakeholder power and institutional demands. Further, the interaction of some institutional factors weakened the relationship between sustainability practices and financial performance Jan et. al. (2019); Kaya & Akbulut (2019) whilst others specifically found that firms in developed economies Laskar & Maji (2018). Narrowing down to sector specific studies, De Silva (2019) found, in a study of the Sri Lankan financial sector, no significant impact of sustainability disclosures measured on economic, environmental and social disclosures and financial performance. Mesut and Mustafa (2021) in a study of the Turkish banking sector showed that sustainability practices had no effect on financial performance, suggesting that the impact of on regional and institutional contexts. Similarly, Nampoothiri, Entrop and Annamalai (2023) found within the context European listed banks that mandatory disclosure of corporate sustainability practices holds no significant influence on firm value at an aggregate level.

Other studies have produced results that point to a positive relationship between sustainability practices and firm performance. Nwobu (2015) and Laskar and Maji (2018) found positive correlations between the quality of sustainability disclosures and firm value among both developed and developing countries in Africa and Asia. Cornett, Erhemjamts and Tehranian (2016) found a positive association between social sustainability practices and bank performance whilst Wang, Dou and Jia (2016) using a meta-analysis of over 40 publications in top-tier journals concluded that social performance improves firm performance. Studies situated within the context of developing economies have also produced some positive results (Shakil et al., 2019; Buallay, 2019; Ibrahim and Hamid, 2019) and similarly, within the precincts of developed countries effective sustainability practices was found to positively influence bank performance, suggesting that comprehensive sustainability initiatives can lead to financial benefits (Menicucci & Paolucci, 2023). Narrowing down to the Ghanaian banking context, Maama (2021) found, in part, that the governance reporting dimension produced positive but insignificant relationship with bank performance.

Literature also shows that higher sustainability practices of banks in particular have an inverse effect on financial performance; in effect, the more a firm spends on sustainability reporting practices the lesser it inures to better financial performance. Buallay et. al., (2021) found that sustainability performance (ESG) improved banks' performance in developed countries and while using pooling regression and instrumental variable – generalised method of moments,

found that ESG weakens banks' performance in developed and developing countries. Hawaj and Buallay (2022) again found that there were differences in the impact of SRP on firm's operational performance (ROA), financial performance (ROE) and market performance (TQ). Buallay, et.al., (2023) further investigated the effect of the ESG and the three measures of banks' performance [(ROA), (ROE) and (TQ)], whilst controlling for bank-specific, macroeconomic and governance effects and found a negative relationship between ESG on one hand and operational performance (ROA), financial performance (ROE) and market performance (TQ) on the other hand. Gutiérrez-Ponce and Wibowo (2023) studying banks from five countries in emerging economies found that sustainability practices have a significant negative effect on all measures of bank performance employed but analysis of the relationship of each individual measure of sustainability practices to bank performance obtains mixed results for each. Maama (2021), while studying the banking sector of Ghana, found that the environmental measure of sustainability had an inverse effect on bank performance.

The mixed results of empirical literature stemming from contextual, geographical, methodological and variable measurement differences gave us cause for the following hypotheses to be tested in pursuance of the study's objectives:

$H1_a$: *There is no statistically significant effect of economic sustainability reporting practices on the financial performance of commercial banks in Ghana.*

$H1_b$: *There is no statistically significant effect of environmental sustainability reporting practices on the financial performance of commercial banks in Ghana.*

$H1_c$: *There is no statistically significant effect of social sustainability reporting practices on the financial performance of commercial banks in Ghana.*

4.2. Sustainability reporting practices and corporate stability

Models on Corporate Stability (Altman's z-score discriminant analysis, neural-fuzzy model, factor analysis, logistic regression analysis, multivariate regression analysis and the artificial neural network) are rife in literature relating to corporate risk. Nwadobie (2015) argued that financial variables (measured by financial ratios) obtained from financial statements are best used for the prediction of corporate stability. These models have successfully withstood empirical tests in varied sectors across the globe with the Altman (1968) Z-score model being the most successful, particularly in accounting research (Arora & Saini, 2013). Altman (2000) modified the Z-score model from the original version to present a new model that sits with non-manufacturing entities (including banks) and emerging markets. This modified Z-score model has been variedly applied in accounting research (Agyemang & Agalega 2014; Khaddaf et. al. 2017; Permata & Purwanto 2018). The performance of banks in susceptible economies like Ghana, whilst being urged engage in sustainability practices have been a concern for both industry players and researchers, and thus produced an almost unanimous empirical result.

A number of studies have focused on the study of sustainability practices and stability since firms committed to sustainable ventures strive to reach a set of goals which includes risk

reduction (Salama, Anderson & Toms, 2011; Gramlich & Finster, 2013; Bouslah, Kryzanowski, & M'Zali, 2018; Monti et al., 2019). Some studies have also shown that enhanced sustainability practices lead to improved financial (Jahmane & Gaies, 2020) and reputation (Jeffrey, Rosenberg, & McCabe, 2020), which helps to attract more credible creditors thus, contributing to bank stability. In the same vein, several studies have also pointed to a positive influence of sustainability practices on asset quality, financial earnings (Wu & Shen, 2013) and capital adequacy (Keffas & Olulu-Briggs, 2011), which emphasise corporate stability. A bidirectional causality between sustainability and bank stability was subsequently found in Abdallah, Saïdane and Slama (2020). Chiaramonte et al., (2022) also revealed that, in times of financial turmoil, the longer the duration of sustainability disclosures, the greater the benefits on stability; further they found that the relationship between sustainability reporting and bank stability varied significantly across banks' characteristics and working environments. García, Herroro and Morillas-Jurado (2024), also measuring stability on stock return volatility and probability of default, in the hospitality industry found that environmental sustainability significantly affected stability. The stability of banks cannot thus be underscored in the sustainability and firm performance conversation. We thus put forth the following hypotheses to achieve the purpose of the study:

$H2_b$: There is no statistically significant moderating effect of corporate stability in the relationship between economic sustainability reporting practices and financial performance of commercial banks in Ghana

$H2_b$: There is no statistically significant moderating effect of corporate stability in the relationship between environmental sustainability reporting practices and financial performance of commercial banks in Ghana

$H2_c$: There is no statistically significant moderating effect of corporate stability in the relationship between social sustainability reporting practices and financial performance of commercial banks in Ghana

5. Research design

This section elucidates the research methods employed to obtain and analyse data for the purpose of answering the hypotheses put forth. The study used an explanatory research design to establish the relationship between sustainability reporting practices of Ghanaian banks and their financial performance, with the moderating effect of corporate stability. The data, secondary in nature, was culled from the 13-year period of 2010 to 2022 giving a 260 firm-year observation. The data on sustainability reporting practices were manually sourced from the annual reports of the banks using the GRI framework checklist (See in Appendix 2) whilst data on financial performance were from the PricewaterhouseCoopers (PwC) Ghana Banking Survey reports from 2010 to 2023. Data for the corporate stability variable were culled from the financial statement metrics in the annual reports of the banks. The data was analysed using Stata version 18.0 software. The population, sampling techniques and size, variable

measurement, model specifications, the data, and the estimation procedures are explained in the following sub-section.

5.1. Population

The population for the study were the twenty-three (23) commercial banks licenced to operate in Ghana by the central bank as of the end of 2024. The full list of these banks is shown in Appendix 1 of this paper. The current number of commercial banks was as a result of the "banking sector clean-up" undertaken by the Bank of Ghana from 2018 to 2022.

5.2.Sampling techniques and sample size

The study utilized a purposive sampling technique. Purposive sampling (judgmental sampling) is a non-probability sampling technique where participants are selected based on some definite characteristics or expertise applicable to the research objectives (Creswell & Poth, 2018). We employed this technique because the entire population was impossible to reach (Robinson, 2014) as some of the banks had changed their legal structure as a result of the banking sector clean-up by the regulator. The sample size for the study was twenty (20) banks. The excluded banks were due to change in their structure as a result of mergers and amalgamations (Consolidated Bank Ghana PLC and OmniBSIC Bank Ghana PLC) and establishment date beyond the study period (First National Bank Ghana).

5.3.Definition and measurement of variables

Financial performance, which was the dependent variable in this study, was measured on Return on Assets (ROA) and Return on Equity (ROE). The independent variable, sustainability disclosures using the GRI framework, was measured on each of the three dimensions of: Economic, Environmental and Social dimensions.

The moderating variable in the study was CS and was measured by computing the modified Z-score for non-manufacturing firms. The variables that were controlled in the study were Firm Age, Firm Size and Listing on the Ghana Stock Exchange.

Table 1 demonstrates a summary of the variables, how they were measured, the data sources and empirical justifications for them.

Table 1 – *Description of variables, operational definition, measurement and source of data*

Variable	Definition of Operational Terms	Variable Type	Measurement	Data Source
Sustainability Reporting Practices	This refers to the disclosure by firms about their economic, environmental and social activities and its impact on their area of operations.	Independent Variable	Ratio of the number of disclosures by the bank to the total number of disclosures in the framework	GRI-G4 Framework, 2010 -2022

Variable	Definition of Operational Terms	Variable Type	Measurement	Data Source
Return on Assets	The extent to which the financial objectives of the banks, from the perspective of management, have been attained.	Dependent Variable	Net Income divided by total assets.	PwC Ghana Banking Survey Reports from 2010 to 2023
Return on Equity	The extent to which the financial objectives of the banks, from the perspective of shareholders, have been attained.	Dependent Variable	Net Income divided by shareholders equity	PwC Ghana Banking Survey Reports from 2010 to 2023
Firm Age	The period the firm has been in existence from its date of establishment.	Control Variable	Natural Log of number of years the firm had been in existence.	Websites of Banks
Firm Size	The total assets of the firm as a natural log.	Control Variable	Natural Log of Total Assets	Annual Reports of Banks, 2010 - 2022
Listing on Stock Market	The listing of the bank on the Ghana Stock Exchange (GSE).	Control Variable	0 for absence on stock market and 1 for presence on stock market	Ghana Stock Exchange, 2010 – 2022
Corporate Stability	The propensity of the firm discontinuing its operations due to the inability to raise revenue and meet operational expenses.	Moderating Variable	Altman Z-score where $Z > 2.99$ is safe zone, $1.81 < Z < 2.99$ is grey zone and $Z < 1.81$	Annual Reports of Banks, 2010 - 2022

5.4 Model specification

The models used for the study were formulated based on System General Method of Moments (GMM) panel estimator employed for estimation. There are two types of the system GMM which are the one step-estimator and the two step-estimator. The study employed the 2-step system GMM estimator due to its efficiency (Roodman, 2009) and robustness to heteroskedasticity (Windmeijer, 2005). There were six (6) models, testing each hypothesis, for the study which are specified as follows:

$ROA_{it} = \beta 1 ROA_{it-1} + \beta 2 ECO_{it} + \beta 2 SOC_{it} + \beta 2 ENV_{it} + \beta 3 CS_{it} + \beta 5 InFMAG_{it} + \beta 6 FMSZit + \beta 7 LIST_{it} + \acute{\eta}i + \varepsilon_{it} \dots\dots (1a)$

$ROE_{it} = \beta 1 ROE_{it-1} + \beta 2 ECO_{it} + \beta 2 SOC_{it} + \beta 2 ENV_{it} + \beta 3 CS_{it} + \beta 5 InFMAG_{it} + \beta 6 FMSZit + \beta 7 LIST_{it} + \acute{\eta}i + \varepsilon_{it} \dots\dots (1b)$

$ROA_{it} = \beta 1 ROA_{it-1} + \beta 2 ECO_{it} + + \beta 2 SOC_{it} + \beta 2 ENV_{it} + \beta 3 CS_{it} + \beta 4 ECO_{it} * CS_{it} + \beta 4 SOC_{it} * CS_{it} + \beta 4 ENV_{it} * CS_{it} + \beta 5 InFMAG_{it} + \beta 6 FMSZ_{it} + \beta 7 LIST_{it} + \acute{\eta}i + \varepsilon_{it} \dots\dots (2a)$

$ROE_{it} = \beta 1 ROE_{it-1} + \beta 2 ECO_{it} + + \beta 2 SOC_{it} + \beta 2 ENV_{it} + \beta 3 CS_{it} + \beta 4 ECO_{it} * CS_{it} + \beta 4 SOC_{it} * CS_{it} + \beta 4 ENV_{it} * CS_{it} + \beta 5 InFMAG_{it} + \beta 6 FMSZ_{it} + \beta 7 LIST_{it} + \acute{\eta}i + \varepsilon_{it} \dots\dots (2b)$

Where;

ROA_{it} = Return on Assets of the firm i at time t;

ROA_{it-1} = Lag of Return on Assets;

ROE_{it} = Return on Equity of the firm i at time t;

ROE_{it-1} = Lag of Return on Equity;

ECO_{it} = Economic sustainability disclosures of the firm i at time t;

ENV_{it} = Environmental sustainability disclosures of the firm i at time t;

SOC_{it} = Social sustainability disclosures of the firm i at time t;

CS_{it} = Corporate stability prediction of the firm i at time t;

$FMAG_{it}$ = Natural log of Firm Age;

$FMSZ_{it}$ = Firm Size;

$LIST_{it}$ = Listing on the Stock Market;

β = Coefficients;

η_i = Unobservable individual firm effects; and

ε = error term

The model for computing the moderating variable was the modified Altman Z-score model for non-manufacturing firms. The model used here was from Altman (2000) and it is:

$Z = 6.56 (X1) + 3.26 (X2) + 6.72 (X3) + 1.05 (X4).$

Where;

X1 = working capital/total assets;

X2 = retained earnings/total assets;

X3 = earnings before interest and taxes/total assets;

X4 = market value equity/book value of total liabilities; and

Z = overall index

6. Empirical results and discussion

The results derived from the analysis of data and discussion of same in line with literature reviewed, are presented in this section. The section first presents descriptive statistics on all the variables to give an exposition on the Sustainability Reporting Practices, Corporate Stability and Financial Performance of Ghanaian commercial banks under the period of study. Thereafter, to ensure issues of multicollinearity are addressed, a correlation matrix is presented. Regression results and robustness checks explain the findings and discussion of findings in relation to theory and past studies end the section.

6.1. Descriptive statistics

The descriptive statistics of the variables adopted for analysis in study are presented in Table 2 that follows. The descriptive statistics are presented by way of the mean, standard deviation, minimum and maximum values and the number of observations for each variable.

Table 1: Descriptive statistics of the dependent, control, moderating and independent variables

Variable	Mean	Standard Deviation	Minimum	Maximum	Observation
FMAG	36.1423	30.4863	2	126	260
FMSZ	21.58125	1.05283	18.80424	23.9726	260
LIST	0.3538	0.4791	0	1	260
CST	1.949741	1.7062	-1.1917	9.5961	260
ECON	48.1154	11.8411	33	79	260
ENVN	25.34615	9.7043	9	55	260
SOCL	37.1	8.9390	21	61	260
ROA	2.3394	2.6344	-11.1	9.6	260
ROE	12.15288	37.3284	-452.5	51.1	260

FMAG represents Firm Age which is measured by the number of years the firm has been in existence. FMSZ represents Firm Size which is measured by the log of total assets of the firms. LIST represents Listing of the firm and it is a dummy variable where listing on the Ghana Stock Exchange is 1 whilst no listing represents 0. CST represents Corporate Stability and is measured by the Altman Z-score. ECON represents Economic Disclosures of the GRI framework and is measured by a ratio of the number of disclosures by the firm to the total number of disclosures in the framework as a percentage. ENVN represents Environmental Disclosures of the GRI framework and is measured by a ratio of the number of disclosures by the firm to the total number of disclosures in the framework as a percentage. SOCL represents Social Disclosures of the GRI Framework and is measured by a ratio of the number of disclosures by the firm to the total number of disclosures in the framework as a percentage. ROA represents Return on Assets and is measured by profit before tax divided by average total assets. ROE represents Return on Equity and is measured by profit after tax divided by shareholders' equity.

From Table 2, the descriptive statistics show the Firm age of the banks averaging 36.1423 within a range of a minimum of 2 years and a maximum firm age of 126 with a 30.4863 degree of variance from mean. Firm size also has a minimum 18.8042 and maximum of 23.9726 with an average of 21.58125. On the dummy variable of listing on the Ghana Stock Exchange (GSE), there was a mean score of 0.3538 and 0.4791 varying from the average score meaning on the average 35% of the banks adopted the study are listed on the GSE. ROA averaged 2.3394 with a minimum of -11.1 and a maximum of 9.6 whilst ROE had an average score of 12.1529, higher than the average on ROA, and standard deviation of 37.3284 from a minimum of -452.5 and a maximum of 51.1. The ROA and ROE values indicate that, on the average, Ghanaian banks make an additionally 2.3394 for every cedi of assets invested by management of the banks whilst they make an additional 12.1529 for every cedi invested by shareholders of the banks

The descriptive statistics on the SRP of the banks were depicted by the scores from the results of the economic, environmental and social disclosure indices. Economic disclosures had an average of 48.1154 from a maximum of 79 and minimum of 33 with a variation from the mean of 11.8411, indicating that Ghanaian commercial banks make below average (50%) of economic sustainability disclosures based on the GRI-G4 framework. Environmental disclosures had the lowest mean score of 25.3462 with 9 as minimum and 55 as maximum and 9.7043 variation from the measure of central tendency. This means that Ghanaian commercial banks pay the least attention to environmental sustainability disclosures based on the GRI-G4 framework. Finally, social disclosures had an average of 37.1 and a standard deviation of 8.9390 from a minimum of 21 and a maximum of 61, indicating below average (50%) of economic sustainability disclosures based on the GRI-G4 framework by Ghanaian commercial banks. The mean score for CS is 1.949741 and a variation from average score of 1.7062 with a minimum Z-score of -1.1917 and a maximum of 9.5961. This means that on the average, Ghanaian commercial banks are in a grey zone, which is a Moderate Risk of Bankruptcy of bankruptcy zone based on interpretation of the Altman Z-Score scale. This picture is reminiscent of the tumultuous events that have bedevilled the sector in the past decade.

6.2. Multicollinearity Test

A Pearson correlation coefficient analysis was conducted to determine whether multicollinearity exists among independent variables in the model estimated for the study. The results are presented in Table 3 labelled correlation matrix.

Table 2: Correlation matrix

	ROA	ROE	InECON	InENVN	InSOCL	InFMAG	FMSZ	LIST	CST
ROA	1								
ROE	0.6424	1							
InECON	0.0741	0.0804	1						
InENVN	-0.0024	0.0586	0.6217	1					
InSOCL	0.0226	0.0990	0.7497	0.7630	1				
InFMAG	-0.0611	0.0144	0.1590	0.1820	0.1868	1			
FMSZ	-0.0198	0.0638	0.6356	0.7795	0.6795	0.3716	1		
LIST	-0.0248	0.0600	0.5302	0.3303	0.5839	0.5208	0.3684	1	
CST	0.1615	0.1239	-0.2662	-0.2249	-0.3521	-0.1750	-0.3441	-0.1787	1

ROA is Return on Assets and ROE is Return on Equity. InECON is log of Economic Disclosures, InENVN is log of Environmental Disclosures and SOCL is log of Social Disclosures. InFMAG representing lag of Firm Age, InFMSZ represents Firm Size which is the natural log of Total Assets and LIST is for listing on the stock market. CST is the Corporate Stability measured by the Altman Z-score.

Multicollinearity is the undesirable situation whereby the independent variables are highly correlated and impacts the statistical significance of the independent variables (Nguyen, Adams & Miller, 2023). As a rule of thumb, a correlation coefficient below 0.8 is shows there is no multicollinearity among the independent variables (Shrestha, 2020). A close look at the correlation matrix in Table 3 shows that there is no issue of multicollinearity in the models specified.

6.3. Regression Analysis Results

The results from regression analysis of the data based on the models specified in the fifth section are presented and interpreted in this sub-section. The results are presented in the Tables that follow:

Table 4: Regression results for models 1a

	InECON	InENVN	InSOCL
ROA$_{-1}$	.2020184***	.335684***	.4663723***
	(.052985)	(.0295873)	(.0578382)
ROA	-17.15967***	-5.6269**	-8.409747*
	(2.00982)	(1.79674)	(3.676896)
CST	-.1316616	.0112992	-.0576304
	(.1009657)	(.0755372)	(.1368566)
Control			
InFMAG	-2.285243**	-.7010909*	-1.742854*
	(.7897415)	(.319407)	(.7054117)
InFMSZ	2.505734***	1.651434*	1.164862
	(.3689525)	(.7294395)	(.6685285)
LIST	.0657301	.179027	4.490856*
	(2.188288)	(1.909417)	(2.118754)
_cons	25.06836***	-13.96189	10.18852***
	(3.214576)	(8.90695)	(2.806536)
Diagnostics			
F (7, 19)	86.81	233.66	2382.28
Prob > F	0.000	0.000	0.000
No. of Obs	240	240	240
No. of Grps	20	20	20
No. of Inst	23	23	23

InROA-1 is the lag of the dependent variable Return on Assets (ROA). InECON is for log of Economic Disclosures, InENVN is for log Environmental Disclosures, InSOCL is for log of Social Disclosures and CST is the Corporate Stability measured by the Altman Z-score. The control variables section has InFMAG representing Firm Age, InFMSZ representing Firm Size which is the natural log of Total Assets and LIST is for listing on the stock market. Aside the diagnostics section, the values in the bracket are the standard errors whilst those not in bracket are the coefficient values. The diagnostics section shows the values of the F-stats and prob, number of observations, number of groups and number of instruments respectively. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The results in Table 4 show that sustainability reporting practices, measured on the economic, environmental and social dimensions, have a significant negative effect on financial performance measured by ROA. This means that the sustainability reporting performance of commercial banks in Ghana have an inverse effect on performance. The more investment in sustainability practices, the less it inures to better financial performance measured from the view point of management. The results also show that corporate stability has no significant effect on ROA; the effect being that stability status of a bank at any point in time has on financial performance. The age of the banks, size and whether listed or not showed mixed controlling effects on the relationship. The diagnostics results show the strength of the instruments deployed in measuring the variables.

Table 5: Regression results for models 1b

	InECON	InENVN	InSOCL
ROE_{-1}	.0900858***	.0997488***	.1397854***
	(.0066813)	(.0078821)	(.0181213)
ROE	-81.42873***	-81.31485***	-105.6919***
	(15.48943)	(19.06372)	(34.23328)
CST	15.24212***	13.798***	12.04611***
	(2.496785)	(3.188236)	(2.537723)
Control			
InFMAG	-23.0332**	-20.5651***	-22.92392**
	(6.669208)	(4.524625)	(7.327124)
InFMSZ	9.443064**	28.98953***	16.93373*
	(3.079684)	(6.363186)	(7.606113)
LIST	63.84145***	58.08916***	84.5764**
	(15.08232)	(18.0199)	(22.62239)
_cons	166.6933**	-335.4817***	46.26104
	(58.30566)	(78.2774)	(64.10592)
Diagnostics			
$F_{(6, 19)}$	241.37	990.33	702.42
Prob > F	0.000	0.000	0.000
No. of Obs	240	240	240
No. of Grps	20	20	20
No. of Inst	20	20	20

InROE-1 is the lag of the dependent variable Return on Equity (ROE). InECON is for log of Economic Disclosures, InENVN is for log Environmental Disclosures, InSOCL is for log of Social Disclosures and CST is the Corporate Stability measured by the Altman Z-score. The control variables section has InFMAG representing Firm Age, InFMSZ representing Firm Size which is the natural log of Total Assets and LIST is for listing on the stock market. Aside the diagnostics section, the values in the bracket are the standard errors whilst those not in bracket are the coefficient values. The diagnostics section shows the values of the F-stats and prob, number of observations, number of groups and number of instruments respectively. $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$.

Similar to the findings on ROA as a measure of financial performance, the results in Table 5 show that sustainability reporting practices, measured on all the three dimensions, have a significant negative effect on financial performance measured by ROE. This means that the

more investment in sustainability practices, the less it inures to better financial performance measured from the view point of shareholders. Contrary to findings relating to ROE as a measure of financial performance, the results also show that corporate stability has a significant positive effect on ROE. This means that the stability status of a bank at any point in time has a bearing on their financial performance. The age of the banks, size and whether listed or not showed mixed controlling significant effects on the relationship. The diagnostics results show the strength of the instruments deployed in measuring the variables.

Table 6: Regression results for models 2a

	lnECONCST	**lnENVNCST**	**lnSOCCST**
ROA$_{-1}$	.0192173***	.288005***	.3745702***
	(.0779275)	(.0369883)	(.0402196)
ROA	3.670633**	1.65491***	4.037167***
	(1.056395)	(.2393235)	(.7372408)
CST	-14.13903**	-4.593839***	-13.593***
	(4.070845)	(.6415988)	(2.424917)
Control			
lnFMAG	.0680262	-1.666065**	-3.055752***
	(1.783834)	(.6559827)	(.6069137)
lnFMSZ	3.435542**	3.812865***	1.503693*
	(.9784453)	(.8784084)	(.6079454)
LIST	-5.027515	1.321691	9.744804***
	(2.798699)	(1.919431)	(2.096738)
_cons	53.96404	-32.07179***	36.61248***
	(11.41962)	(10.21084)	(8.429176)
Diagnostics			
$F_{(7, 19)}$	282.17	465.16	601.50
Prob > F	0.000	0.000	0.000
No. of Obs	240	240	240
No. of Grps	20	20	20
No. of Inst	24	24	24

lnROA-1 is the lag of the dependent variable Return on Assets (ROA). The interaction variables section has lnECONCST representing the interaction of Corporate Stability and log of Economic Disclosures, lnSOCCST represents the interaction of Corporate Stability and log of Social Disclosures and lnENVNCST stands for the interaction of Corporate Stability and log of Environmental Disclosures. The control variables section has lnFMAG representing Firm Age, lnFMSZ representing Firm Size which is the natural log of Total Assets and LIST is for listing on the stock market. Aside the diagnostics section, the values in the bracket are the standard errors whilst those not in bracket are the coefficient values. The diagnostics section shows the values of the F-stats and prob, number of observations, number of groups and number of instruments respectively. $^{*} p < 0.05$, $^{**} p < 0.01$, $^{***} p < 0.001$.

The results presented in Table 6 above shows that with the moderating role of corporate stability, economic, environmental and social dimensions of sustainability have a significant positive effect on financial performance measured by ROA. This points to the empirical evidence that the stability of commercial banks in Ghana positively amplifies the sustainability reporting practices to produce better financial performance. The age of the banks, size and

whether listed or not showed mixed controlling significant effects on the relationship. The diagnostics results show the strength of the instruments deployed in measuring the variables.

Table 7: Regression results for models 2b

	InECONCST	InENVNCST	InSOCLCST
ROE$_{-1}$	.1495312***	.1514972***	.1752255***
	(.0157484)	(.0256035)	(.0159752)
ROE	36.07763***	21.64355***	48.52095***
	5.917907	(4.532421)	(6.906024)
CST	-141.5297***	-60.37354***	-31.70203***
	(22.86144)	(13.29588)	(10.01355)
Control			
InFMAG	-21.37933*	-28.07532*	-3.055752***
	(8.959166)	(10.65847)	(.6069137)
InFMSZ	22.56349**	40.55747**	4.96124
	(5.729681)	(14.19247)	(7.074476)
LIST	52.95974**	93.54439***	137.1252***
	(13.77696)	(24.05553)	(17.48773)
_cons	556.452***	-290.3092	541.0865***
	(89.16222)	(200.0324)	(119.8883)
Diagnostics			
F (7, 19)	148.17	1040.13	864.39
Prob > F	0.000	0.000	0.000
No. of Obs	240	240	240
No. of Grps	20	20	20
No. of Inst	24	24	24

InROE-1 is the lag of the dependent variable Return on Equity (ROE). The interaction variables section has InECONCST representing the interaction of Corporate Stability and log of Economic Disclosures, InSOCLCST represents the interaction of Corporate Stability and log of Social Disclosures and InENVNCST stands for the interaction of Corporate Stability and log of Environmental Disclosures. The control variables section has InFMAG representing Firm Age, InFMSZ representing Firm Size which is the natural log of Total Assets and LIST is for listing on the stock market. Aside the diagnostics section, the values in the bracket are the standard errors whilst those not in bracket are the coefficient values. The diagnostics section shows the values of the F-stats and prob, number of observations, number of groups and number of instruments respectively. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Similar to the results from Model 2a, Table 7 above shows that with the moderating role of corporate stability, economic, environmental and social dimensions of sustainability have a significant positive effect on financial performance measured by ROE. This points to the empirical evidence that the stability of commercial banks in Ghana positively amplifies the sustainability reporting practices to produce better financial performance measured from the shareholder's point of view. The age of the banks, size and whether listed or not showed mixed controlling significant effects on the relationship. The diagnostics results also show the strength of the instruments deployed in measuring the variables.

6.4.Robustness check

The test of robustness and validity of the GMM model estimation employed for the study was conducted using Hansen's J-Test (Over-Identification Test) and Arellano-Bond Serial

Correlation Test. These tests ensured that the model estimated was robust against endogeneity and not weakened by instruments proliferation. The Hansen's J-Test accounts for heteroskedasticity in the data and tests whether instruments as a group are exogenous, making it preferable in two-step GMM estimation. The null hypothesis for the test is that the instruments are valid. The Arellano-Bond tests for autocorrelation in the first-differenced residuals. Where the GMM model is well specified, AR (1) should be significant ($p < 0.05$) and AR (2) should be insignificant ($p > 0.05$).

The results of the tests are presented in the following tables:

Table 8: Robustness check statistics for models 1a and 1b

Statistics	Model 1a			Model 1b		
AR (1): z	-2.52	-2.72	-2.82	-1.93	-2.49	-2.17
P-value	0.012	0.007	0.005	0.043	0.013	0.030
AR (2): z	-0.02	-0.43	0.28	0.02	-0.06	0.16
P-value	0.984	0.671	0.779	0.984	0.955	0.870
Hansen Chi2	16.02	16.30	19.12	17.92	18.69	17.55
Prob (Hansen)	0.451	0.432	0.263	0.161	0.133	0.176

Table 9: Robustness check statistics for models 2a and 2b

Statistics	Model 2a			Model 2b		
AR (1): z	-1.93	-2.67	-2.79	-1.70	-2.08	-2.40
P-value	0.044	0.008	0.005	0.048	0.038	0.017
AR (2): z	-0.24	-0.05	0.95	-1.15	-1.14	-0.82
P-value	0.809	0.958	0.341	0.250	0.255	0.411
Hansen Chi2	16.07	16.28	15.80	16.18	17.63	16.47
Prob (Hansen)	0.448	0.433	0.467	0.441	0.346	0.421

The Hansen's J-Test statistics shown in Table 8 and 9 indicates that the instruments to Models 1a, 1b, 2a and 2b as a group are valid (robust to heteroskedasticity) and exogenous. This validity of instruments means that they are strongly correlated with the endogenous predictor variables and has no relationship with the error term in the models. The exogeneity of the instruments means that they do not have a direct relationship with the error term in the model, which ensures that the instruments do not introduce bias in the coefficients estimated. The AR(1) and AR(2) p-values show that there are no first-order and second-order autocorrelation in the models hence proper specification of same.

6.5. Discussion

The findings of the study lead to a rejection of the null hypotheses put forth in the fourth section of this paper. The study found a significant negative effect of sustainability reporting practices of commercial banks in Ghana on financial performance but with the moderating interaction of corporate stability, the effect becomes positively significant. The findings support the stakeholder and institutional theories. The role of stakeholder and institutional demands for firms, including banks, to operate in a sustainable way plays a role in ensuring stability and better financial performance for survival. Although current bank sustainability practices

legislations of banks are not well grounded in Ghana, commercial banks should endeavour to pay heed to sustainable activities as it responds to growing stakeholder and institutional demands.

The findings of the study agree with previous studies that found a negative significant relationship between sustainability performance and financial performance. The study agrees with Buallay et. al., (2021) and Buallay et al., (2023) that found that ESG weakens banks' performance in developed and developing countries. The agreement can be attributed to the similarity in study areas and methodology. Ponce and Wibowo (2023) also found similar results with our study whilst studying banks from five countries in emerging economies. Within a more specific Ghanaian context, our findings agree with Maama (2021) that found a negative relationship between environmental sustainability and bank performance. These findings point to the budding prevalence of sustainability reporting practices in developing economies, hence less benefits on tangible financial outcomes. The implication on policy and operations of banks in the context of emerging and developing is a decoupling from sustainability commitments to meet financial goals.

The findings from the moderating role of corporate stability also agree with previous studies undertaken in different contexts. The findings of a bidirectional causality between sustainability performance and bank stability by Abdallah, Saïdane and Slama (2020) lays credence to the positive significant influence of stability in the sustainability and bank performance conversation. Chiaramonte et al., (2022)'s revelation that, in times of financial turmoil, prolonged sustainability practices impact stability positively agrees with our findings. The findings of García, Herroro and Morillas-Jurado (2024), though in the hospitality industry, also support our empirical discovery. Commercial banks in Ghana and the sub-region should thus endeavour to pay key attention to sustainability practices in the midst of survival uncertainty to boost financial performance.

7. Summary and conclusion

This study established that the significant negative effect of sustainability practices of commercial banks in Ghana on their financial performance is positively influenced by the moderating role of corporate stability. In effect, the study found that the stability status of banks in Ghana amplifies the need to engage in sustainability activities in order to achieve higher financial performance. These findings contribute, in a novel way, to the sustainability literature of assessing its relationship with risk and performance. It also lays credence to theoretical propositions on the need to pay heed to stakeholder and institutional demands for firm survival. The findings provide insights to enrich the sustainability dialogue, which is gaining roots in developing economies, particularly Africa. We hope to shape policy and regulations with the findings of the study.

The implications of the findings for banks operating in Ghana are wide-ranging. The findings from the direct effect of sustainability practices on bank performance show weaker stakeholder and institutional forces in the industry. In effect, it costs to be sustainable hence a disincentive for sustainability commitments. This opens the door for less sustainability efforts, shrouded

symbolic reporting and decoupling. Banks that are wary of their stability status will also commit to sustainability efforts for better performance in the long run. Finally, the implication for policy and regulatory formulation is to ensure stakeholder awareness and supervision of banking operation. This will make sustainability reporting commitments valuable for adoption by banks and in extension, firms in the financial services sector.

The study is limited by way of context and generalisability because it is undertaken among commercial banks, which form a part of the entire banking industry in Ghana and has its peculiar features compared to other types of firms in the industry. Other measures of financial performance were not looked at although results from other previous indicate it could influence the results. The use of the GRI framework serves as a limitation to the study because though generally accepted as a measure of sustainability reporting, banks in Ghana do no report senso stricto in line with the framework. Sustainability was also measured on economic, environmental and social dimensions in the study although there are other dimensions in the sustainability conversation. Other proven econometric models could also have been used in the alternative and may have pointed to other findings also the use of the system GMM in this study addresses model pitfalls.

Future studies should endeavour to examine other industries or inter-industry to assess the effect of sustainability practices on financial performance. With the release of the IFRS sustainability standards, future studies should consider measuring sustainability performance based on these standards that have the propensity of being adopted by companies operating in Ghana and the sub-region. Other econometric models such as the panel vector autoregression model, difference-in-difference model can be used to measure the relationship between the variables tested in this study. Finally, other theoretical mechanisms and boundary conditions can play moderating and mediating roles in future studies for glowing contributions to theory.

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Appendix 1 – List of Commercial Banks in Ghana

No.	Name of Bank
1	Absa Bank Ghana Limited, part of Absa Group
2	Access Bank (Ghana) PLC, part of Access Bank Group
3	Agricultural Development Bank PLC, state-owned
4	Bank of Africa Ghana Limited, part of Bank of Africa Group
5	CalBank PLC
6	Consolidated Bank Ghana Limited, state-owned
7	Ecobank Ghana PLC, part of Ecobank Group
8	FBNBank (Ghana) Limited, part of First Bank of Nigeria Group
9	Fidelity Bank Ghana Limited
10	First Atlantic Bank Limited
11	First National Bank (Ghana) Limited, part of FirstRand Group
12	GCB Bank PLC, majority state-owned
13	Guaranty Trust Bank (Ghana) Limited, part of GTCO Group
14	National Investment Bank Limited, state-owned
15	OmniBSIC Bank Ghana Limited
16	Prudential Bank Limited
17	Republic Bank (Ghana) PLC, part of Republic Bank Group
18	Societe Generale Ghana PLC, part of Société Générale
19	Stanbic Bank Ghana Limited, part of Standard Bank Group
20	Standard Chartered Bank Ghana PLC, part of Standard Chartered Group
21	United Bank for Africa (Ghana) Limited, part of UBA Group
22	Universal Merchant Bank Limited
23	Zenith Bank (Ghana) Limited, part of Zenith Bank Group

Appendix 2 – Sustainability Reporting Checklist

Economic Disclosures

EC 1	201-1	**Direct economic value generated and distributed**
EC 2	201-2	Financial implications and other risks and opportunities due to climate change
EC 3	201-3	Defined benefit plan obligations and other retirement plans
EC 4	201-4	Financial assistance received from government
EC 5	202-1	EC 5 202-1 Ratios of standard entry level wage by gender compared to local minimum wage
EC 6	202-2	EC 6 202-2 Proportion of senior management hired from the local community
EC7	203-1	Development of infrastructure and service supported
EC8	203-2	Significant indirect economic impacts
EC 9	204-1	Proportion of spending on local suppliers
SO 3	205-1	Operations assessed for risks related to corruption
	205-2	Communication and training on anti-corruption policies and procedures
SO 5	205-3	Confirmed incidents of corruption and actions taken
	206-1	Legal action for anti-competitive behaviour , anti-trust and monopoly practices

Environmental Disclosure

EN 1 301-1 Materials used by weight or volume
EN 2 Percentage of materials used that are recycled input materials
EN 3 302-1 Energy consumption within the organization
EN 4 302-2 Energy consumption outside the organization
EN 5 302-3 Energy intensity
EN 6 302-4 Reduction of energy consumption
EN 7/ EN 27 302-5 Mitigation of environment impact of product and service
304-1 Operational sites owned, leased, managed in or adjacent to, protected areas and areas of high
biodiversity value outside protected areas
304-2 Significant impacts of activities, products and services on biodiversity
304-3 Habitats protected or restored
304-4 IUCN Red List species and national conservation list species with habitats in areas affected by
operations
EN 15 305-1 Direct (Scope 1) GHG emissions
EN 16 305-2 Energy indirect (Scope 2) GHG emissions
EN 17 305-3 Other indirect (Scope 3) GHG emissions
EN 18 305-4 GHG emissions intensity
EN 19 305-5 Reduction of GHG emissions

EN 20 305-6 Emissions of ozone-depleting substances (ODS)
EN 21 305-7 Nitrogen oxides (NOx), sulphur oxides (SOx) and other significant air emissions
EN 22 306-1 Water discharge by quality and destination
EN8 306-2 Waste by type and disposal method
EN 10 Percentage and total volume of water recycled and reused
EN 25 306-4 Transport of hazardous waste
EN 9 306-5 Water bodies affected by water discharges and/ or runoff
EN 31 Total environmental protection expenditures and investments by type
EN 32 308-1 New suppliers that were screened using environmental criteria
EN 34 Number of grievances about environmental impacts filed, addressed and resolved through formal grievance mechanisms

Social Disclosures

LA 1 401-1 New employee hires and employee turnover
LA2 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time
employees
LA 3 401-3 Parental leave
LA 4 402-1 Minimum notice periods regarding operational changes
LA 5 403-1 Workers representation in formal joint management-worker health and safety committees
LA 6 403-2 Types of injury and rates of injury, occupational diseases, lost days and absenteeism, and
number of work-related fatalities
LA 7 403-3 Workers with high incidence or high risk of diseases related to their occupation
LA 8 403-4 Health and safety topics covered in formal agreements with trade unions
LA 9 404-1 Average hours of training per year per employee
LA 10 404-2 Programs for upgrading employee skills and transition assistance programs
LA 11 404-3 Percentage of employees receiving regular performance and career development reviews
LA 12 4051-1 Diversity of governance bodies and employees
LA 13 405-2 Ratio of basic salary and remuneration of women to men
LA 16 Number of grievances about labour practices filed, addressed and resolved through formal
grievance mechanisms
HR3 406-1 Incidents of discrimination and corrective actions taken
HR4 407-1 Operations and suppliers in which the right to freedom of association and collective bargaining
may be at risk
HR 5 408-1 Operations and suppliers at significant risk for incidents of child labour

HR6 409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour
SO 1 413-1 Operations with local community engagement, impact assessments, and development programs
SO2 413-2 Operations with significant actual or potential negative impact on local communities
SO 10 414-1 New suppliers that were screened using social criteria
PR 1 416-1 Assessment of the health and safety impacts of product and service categories
PR 2 416-2 Incidents of non-compliance concerning the health and safety impacts of products and services
PR3 417-1 Requirements for product and service information and labelling
PR4 417-2 Incidents of non-compliance concerning product and service information and labelling
PR 6 Sale of banned or disputed products
PR7 417-3 Incidents of non-compliance concerning marketing communications
PR5 Results of surveys measuring customer satisfaction
PR8 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data
PR 9 419-1 Non-compliance with laws and regulations in the social and economic area