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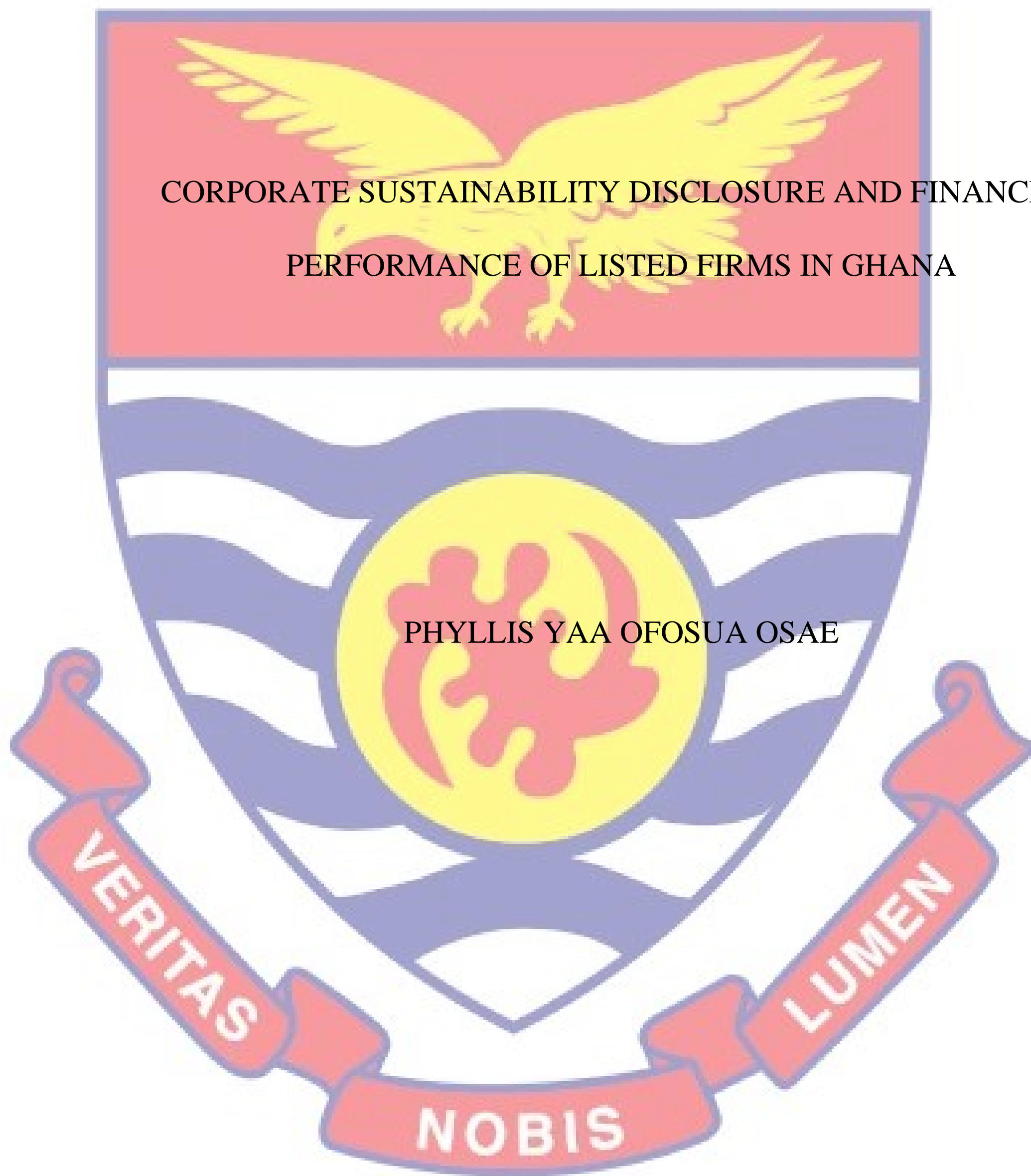

CORPORATE SUSTAINABILITY DISCLOSURE AND FINANCIAL PERFORMANCE OF LISTED FIRMS IN GHANA

PHYLLIS YAA OFOSUA OSAE

2021

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CORPORATE SUSTAINABILITY DISCLOSURE AND FINANCIAL PERFORMANCE OF LISTED FIRMS IN GHANA

BY

PHYLLIS YAA OFOSUA OSAE

Dissertation submitted to the Department of Accounting of the School of Business, College of Humanities and Legal Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Business Administration degree in Accounting.

DECEMBER 2021

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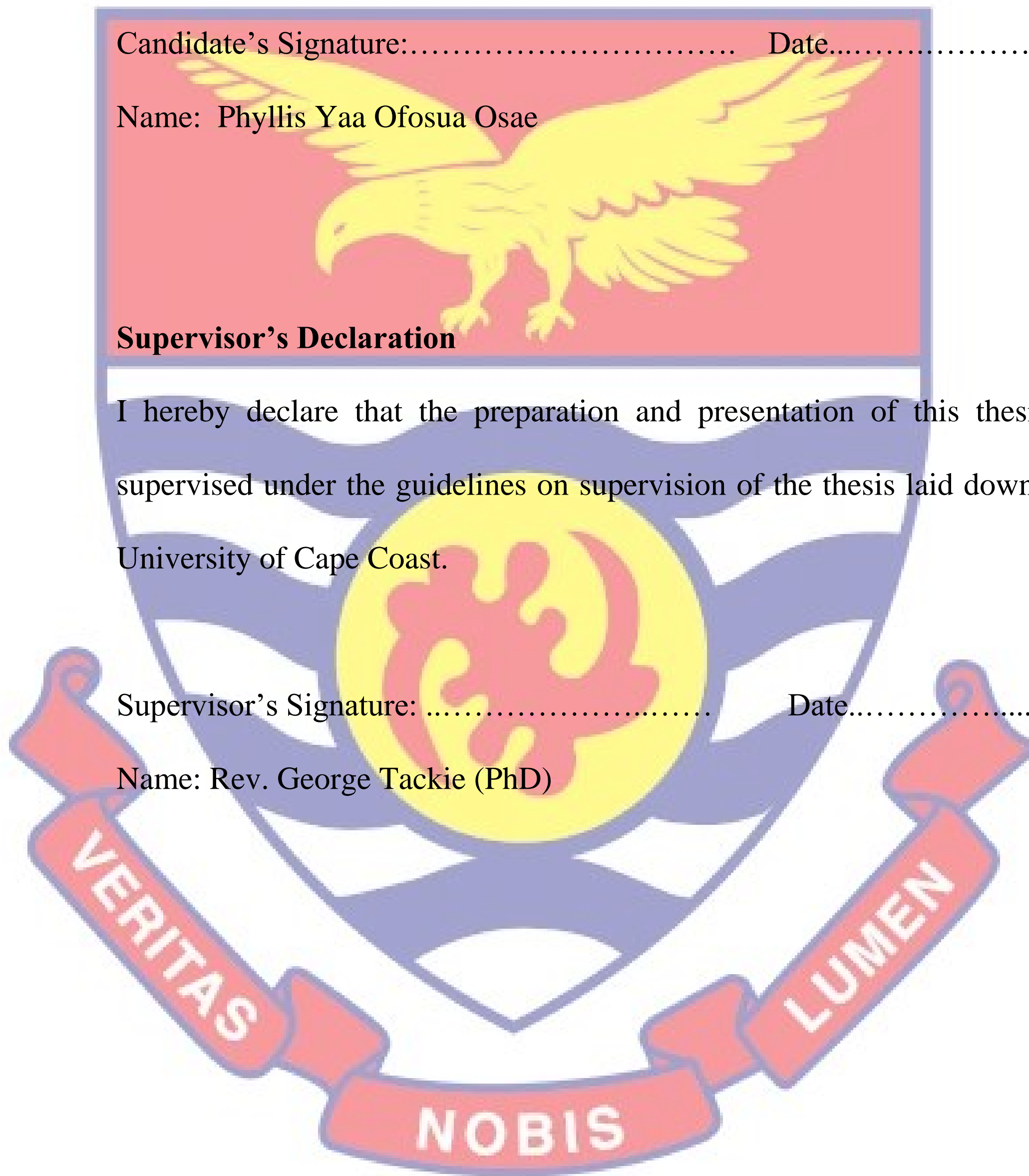
DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my original research and that no part of it has been presented for another degree in this university or elsewhere.



Candidate's Signature:………………………….. Date...………………………

Name: Phyllis Yaa Ofosua Osae

Supervisor's Declaration

I hereby declare that the preparation and presentation of this thesis were supervised under the guidelines on supervision of the thesis laid down by the University of Cape Coast.

Supervisor's Signature: ..…………………..…… Date..…………….............

Name: Rev. George Tackie (PhD)

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ABSTRACT

The relevance of sustainability disclosure, as far as its effect on financial performance is concerned, has not really been accentuated in literature. Thus, this study assessed the effect of sustainability disclosures on financial performance of firms listed on the Ghana Stock Exchange. Using the criterion sampling technique, 28 firms were sampled for the study. The explanatory design was employed, and descriptive statistical tools, such as frequency, percentage, mean and standard deviation; and inferential statistics, such as the Pearson product-moment correlation and regression were used for the analyses. Results revealed that the extent of sustainability disclosure practices among listed firms was between (0%) and (40%). Also, it was found that economic performance disclosure had a statistically significant positive effect on financial performance. Further, social performance disclosure was found to have a statistically significant negative effect on financial performance. Furthermore, both environmental performance disclosure and overall sustainability disclosure practices showed statistically significant positive effects on financial performance. It was then concluded that many listed firms in Ghana do not really have full appreciation of sustainability disclosure indicators documented by the GlR yet. In line with this, Management of firms listed on the Ghana Stock Exchange should encourage key employees to pay attention to overall sustainability disclosure practices, and report all information related economic, social and environmental performance, as stakeholders' access to these pieces of information positively influences the overall financial performance of the firms.

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KEYWORDS

Economic performance disclosure

Environmental performance disclosure

Ghana Stock Exchange

Global Initiative Reporting

Overall sustainability disclosure practices

Social performance disclosure

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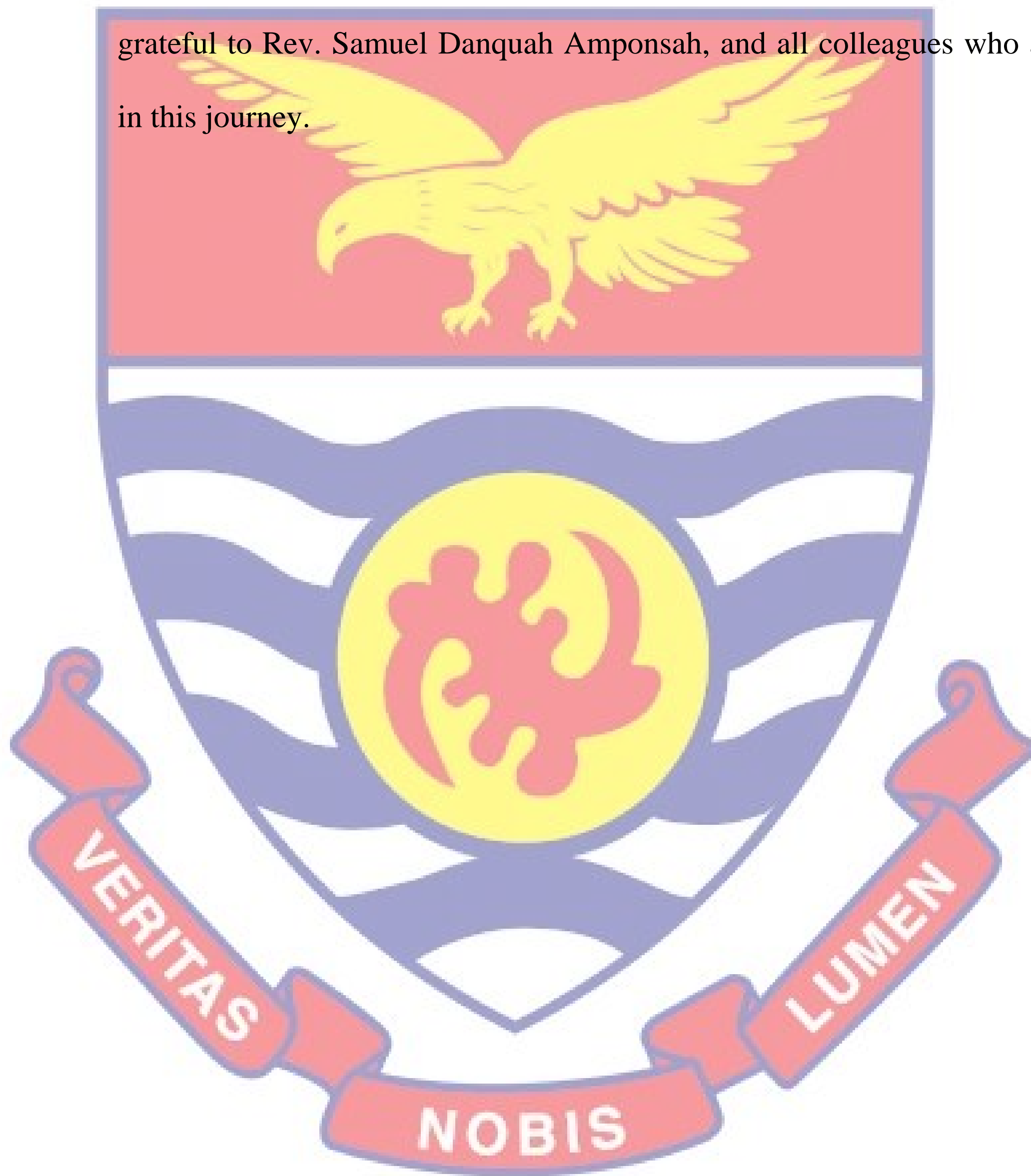

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DEDICATION

To my lovely husband, Mr. Romeo Elorm Amuzu; my daughter, Zarabelle Seli Amuzu; my son, Bryan Edudzi Amuzu and my parents

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VERITAS LUMEN NOBIS

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CHAPTER ONE

INTRODUCTION

Corporate sustainability disclosure, which involves reports by companies to make available the state of affairs of the companies to internal and external stakeholders, has been said to have influence on the financial performance of companies. Corporate sustainability disclosure, usually, revolves around economic, environmental and social dimensions. The possibility of a relationship between corporate sustainability disclosure and financial performance has sparked research interest among researchers. It is, thus, not surprising the current researcher sought to assess the effect of sustainability disclosure on financial performance. This chapter presents the background to the study, statement of the problem, purpose of the study, research objectives, research questions, research hypotheses, significance of the study, definitions of terms, limitations, delimitations, organisation of the study and the chapter summary.

Background to the Study

Businesses do not exist and operate in vacuums. Considering the regular activities of business firms, they need to connect, interact and have impact on their environment, society and the economy at large (Uwuigbe, Teddy, Uwuigbe, Emmanuel, Asiriuwa, Eyitomi, & Taiwo, 2018). Taking this assertion by Uwuigbe et al. into consideration, it is obvious companies have realised the importance of integrating social, environmental and economic issues into their business strategies (Palit, 2018). These dimensions – environmental, social and economic – have usually been a core part of corporate sustainability disclosures.

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Sustainability disclosure (SD), according to Palit (2018), ESG Report (2017) and GRI Guideline (2011), is termed as reporting on economic, social and environmental activities to satisfy the diverse interests of corporate stakeholders. Also, sustainability development was described as the ability to meet the present needs without endangering the ability of the future generation to meet their needs (Common Future Report, 1987). Though the concept of sustainability disclosure is gaining global importance, unlike financial reporting which is a regulatory requirement for registered companies, disclosures on sustainable activities are voluntary in most countries (Palit (2018), including Ghana (Arthur, Wu, Yago, & Zhang, 2017). Despite the non-mandatory nature of sustainability disclosure, many business organisations are taking to being more transparent in their economic, social and environmental activities (Asuquo, Dada, & Onyeogaziri, 2018).

However, disclosure of these pieces of information, as far as corporate sustainability is concerned, comes with its own cost (Elkington, 2018). It is, thus, clear that, to some extent, sustainability disclosure would have influence on financial performance. Financial performance, according to Palit (2018), is the ability and capability of a firm to create new resources over a specified period of time, from their day-to-day activities. Often, a firm's financial performance is evaluated using profitability ratios such as net income margin, return on equity (ROE), and return on assets (ROA) (Palit, 2018).

From the foregoing, it could be seen that sustainability disclosure has influence on financial performance, and also is specifically linked to economic, environment, and social activities of business firms (Asuquo et al., 2018). According to Asuquo et al., the economic dimension or economic

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performance disclosure of sustainability disclosure involves procurement practices, economic performance, among others; the environmental dimension or environmental performance disclosure focuses, among other things, on emissions, effluents and waste management practices; and finally, the social dimension or social performance revolves around occupational health and safety of workers, product and service labelling, among others.

As indicated earlier, sustainability disclosure is gaining global recognition and importance among corporate players and stakeholders. For instance, the Brutland report published by the World Commission on Environment and Development (WCED) in the United Nations over three decades ago gave an insight to the concept of sustainability (Krasniq, Vardari, & Luan, 2018; Carp, Pavaloaia, Afrasine, & Georgescu, 2019). Palit (2018) reported that, of the 250 biggest firms in the world, 92% of them report on sustainability performance and amongst these entities, 74% of them report on sustainability using GRI standards. Forty-four (44) firms reported on sustainability in the year 2000 (Krasniq et al., 2018). Ten years after, the number of firms issuing sustainability reports had increased to 1,973, including firms based in the United States, Europe, Asia, and South Africa, among others (Krasniq et al., 2018).

Therefore, businesses devoted to contributing to socio-economic development are expected to practise corporate sustainability (World Business Council for Sustainable Development, 2002). For this reason, there is a growing need from stakeholders demanding organisations to manage operations in a more sustainable manner (Asuquo et al., 2018), and one medium to update stakeholders on sustainability matters is through

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sustainability reporting (SR) (Elkington, 2018). Sustainability disclosure could be traced to the concept of Triple Bottom Line (TBL) which was conceived by John Elkington in 1994.

The motivation behind the idea of the TBL model was to shift focus from the traditional way of using profit as a key measurement for business performance to a more balanced approach which is to integrate profit, people and planet. The profit, people and planet reflect the performance of a business in the area of financial, social and environment, respectively (Elkington, 2018). Moreover, sustainability disclosure enables companies to disclose non-financial information much like financial information in order to keep stakeholders informed and to ensure transparency (Whetman, 2018). Non-financial information may be disclosed in annual reports, sustainability reports and on companies' websites.

Thus, sustainability disclosure has become a necessity for most companies (Doktoralina, Anggraini, Safira, & Melzati, 2018). The 10th survey conducted by KPMG on corporate sustainability disclosure showed 78% of the world's top companies included report on sustainable activities in their annual reports in 2017 as compared to 44% in 2011; also, among the N100, 60% included reports on sustainable activities in their 2017 annual reports as compared to 56% in 2015 (KPMG, 2017). Though there has been a continuous rise in the disclosure of sustainable activities over the years, one basic challenge has been lack of standardization (Elkington, 2018), as various sustainability disclosure guidelines have been published in the past years, such as DOW Jones Sustainability Indexes, Global Reporting Initiative (GRI), FTSE4Good, Global Impact (Harun, Rashid, & Alrazi, 2013). However, GRI

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has been widely used (Ong, 2016; Aggarwal, 2013; Lamprinaki, 2016; Elkington, 2018).

The GRI was to guide companies in preparing sustainability reports that integrate economic, environment and social impacts of commercial enterprises (Elkington, 2018). Thus, it is in the right direction to use the GRI guide to assess the sustainability disclosure practices among listed firms in Ghana, as literature does not have enough empirical evidence as far as assessment of sustainable disclosure practices among listed firms in Ghana are concerned (Agu, & Amedu, 2018; Musah, 2015). Also, an understanding of sustainability disclosure and its effect on financial performance is very important in appreciating the relevance of its application (Kwaghfan, 2015), as studies in this area considering listed firms in Ghana are inadequate (Arthur et al., 2017; Musah, 2015).

Finally, with regards to listed firms' financial performance, Every firm places importance on performance; especially, financial aspect of performance. Thus, measurement of performance is given attention by many firms. To measure firm performance, accounting performance measures or market performance measures can be used (De Silva, Chinna, & Azam, 2020). Market performance expresses expectations of a firm's prospects and its ability to adapt to likely changes (Saeidi, 2015). However, the market measures suit only some listed firms and are only material if the market shows a high level of efficiency (De Silva et al., 2020).

Therefore, return on asset shows the capability of the management of a firm to be able to create profit using the firm's assets (Dei Ofosu-Hene, & Amoh, 2018). Many researchers have opted for using return on asset to

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measure performance due to the fact that it takes financial leverage into consideration (Ndoka, Islami, & Shima, 2017) and widely used by firms in their financial performance measures (Daouia, Simar, & Wilson, 2017). Further, Rasiah (2019) proposed that it is beneficial to apply profitability ratios in measuring firm performance in the sense that it is not influenced by price level changes.

Statement of the Problem

According to Cantele, Tsalis and Nikolau (2018), in order to gain legitimacy from stakeholders, more companies are disclosing information concerning their contributions towards sustainable development. Nevertheless, sustainability disclosure still remains a voluntary or non-mandatory phenomenon (Cantele et al., 2018) for firms of which Ghanaian listed firms are no exception (Arthur et al., 2017). It may be possible that the voluntary nature of the reporting system may give rise to irregular disclosure on matters of sustainability; thus, voluntary system may only work if everyone is willing to volunteer (Cantele et al., 2018).

Further, it should be pointed out that sustainability disclosure is not generally guided by international acceptable standards; hence, leading to inconsistencies in companies' sustainability reports, and these may affect measurement and quality of disclosures (Lamprinaki, 2016) as firms may ignore to publish bad news but publish good news to improve their images. Also, the relevance of sustainability disclosure, as far as its effect on financial performance is concerned, has not really been accentuated in literature. Some studies have been conducted to assess the effect of sustainability disclosure on firm performance (Lamprinaki, 2016; Carp et al., 2019; Whetman, 2018; Agu,

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& Amedu, 2018). Musah (2018), and Carp et al. (2019) found corporate sustainability disclosures to have low impact on firm's performance. Also, Whetman (2018), and Agu and Amedu (2018) found a positive effect of sustainability disclosure on firm's performance.

However, little is known about how their findings have influenced the extent of sustainability disclosure practices among listed firms in Ghana. Further, unlike prior studies that approached the problem from general firm performance and sustainability disclosure perspective using descriptive design, the current study, although sustainability and firm performance oriented research, specifically assessed the effect of economic performance disclosure, social performance disclosure and environmental performance disclosure on listed firm's financial performance in Ghana, adopting the explanatory research design.

Purpose of Study

The purpose of the study was to examine the relationship between sustainability disclosures and financial performance of listed firms in Ghana.

Research Objectives

Specific study objectives were to:

1. Examine the extent of sustainability disclosure practices among listed firms in Ghana using the Global Reporting Initiative (GRI) G4 performance indicator.
2. Assess the effect of economic performance disclosure on financial performance of listed firms in Ghana.
3. Analyse the effect of social performance disclosure on financial performance of listed firms in Ghana.

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4. Determine the effect of environmental performance disclosure on financial performance of listed firms in Ghana.
5. Determine the overall effect of sustainability development practices on financial performance of listed firms in Ghana.

Research Questions

The research question which guided this is: To what extent do listed firms in Ghana engage in sustainability disclosure practice?

Research Hypotheses

Based on the research objectives and question, the following research hypotheses were formulated and tested.

1. H_0: There is no statistically significant effect of economic performance disclosure on financial performance of listed firms in Ghana.

   H_1: There is statistically significant effect of economic performance disclosure on financial performance of listed firms in Ghana.
2. H_0: There is no statistically significant effect of social performance disclosure on financial performance of listed firms in Ghana.

   H_2: There is statistically significant effect of social performance disclosure on financial performance of listed firms in Ghana
3. H_0: There is no statistically significant effect of environmental performance disclosure on financial performance of listed firms in Ghana.

   H_3: There is statistically significant effect of environmental performance disclosure on financial performance of listed firms in Ghana.
4. H_0: There is no statistically significant effect of sustainability disclosure practices on financial performance of listed firms in Ghana.

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H_4: There is statistically significant effect of sustainability disclosure practices on financial performance of listed firms in Ghana

Significance of the Study

The findings of this study would contribute to practice and literature. In the area of practice, the findings would be useful to firm managers and directors as it would inform them about the state of their companies' sustainability disclosure and how sustainability disclosure would influence performance of their companies. Also, policy makers and regulatory bodies would be guided by these findings to come out with suitable policies in relation to sustainability development and sustainability reporting. Further, companies could use findings of this study as a benchmark for evaluating their sustainability reports. Additionally, companies yet to adopt corporate sustainability disclosure practices would be in a better position to decide if it is relevant to adopt. The study would also contribute to literature, as it would serve as a reference point to future researchers.

Delimitation of the Study

The study was limited to only firms listed on the Ghana Stock Exchange who had annual reports from 2015 to 2019. The reason for this choice was to get easy access to annual reports because all listed firms are expected to publish their annual reports. Moreover, most firms draw strategic plan to cover a period of, at least, five years; thus, the likelihood of having access to annual report for each of the five years. Also, the implementation of corporate sustainability goals might reflect on the firms' annual reports. The study focused on corporate sustainability disclosures – economic performance disclosure, social performance disclosure and environmental performance

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disclosure as independent variables – and financial performance as dependent variable. Acts of economic, environment and social responsibility were not considered. The study also applied only GRI G4 as a framework for the construction of disclosure index and used Returns on Assets (ROA) as a measure of financial performance.

Limitation of the Study

The study used only secondary data obtained from the annual reports of the listed firms used for this study. Thus, it was possible the data might not be entirely reliable. With regards to this, the findings should be applied cautiously. Also, the GRI framework used for the disclosure index construction might not produce a complete picture of the reality. It should also be noticed that the design used for this study sought to only determine whether sustainability disclosures had effect on financial performance and there were no qualitative data collected from the firms to contextualise or corroborate the quantitative results produced using this design. Nevertheless, the researcher ensured that elements that could further influence the reliability of the findings were held at bay by sticking strictly to the scope defined, under delimitation, for the study.

Definition of Terms

The following definitions were operationalised for this study:

Corporate sustainability disclosure: This is synonymously termed as corporate sustainability reporting. It is assessing information on economic, environmental and social dimensions or performance of a firm's activities and disclosing the outcomes to internal and external stakeholders of a firm.

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Economic performance disclosure: Is the measurement and disclosure of information which concerns the firm's impacts on the economic conditions of its stakeholders and on economic systems at local, national and global levels. It is more of a firm's contribution towards large economic system and reporting of same.

Social performance disclosure: Has to do with the measurement and disclosure of information concerning the impacts a firm has on the social system within which the firm operates.

Environmental performance disclosure: Refers to the measurement and disclosure of information provided on the impacts a firm has on living and non-living natural systems including ecosystems, land, air and water.

Overall sustainability disclosure practices: This refers to the combination of all disclosure activities which revolve around economic performance disclosure, social performance disclosure and environmental performance disclosure.

Financial performance: It is the measurement of a firm's overall financial health over a given period. Return on assets was used as the basis for measuring the financial performance of the listed firms used for this study.

Sustainability report: It is a report published by a firm about the economic, environmental and social performance of the firm.

Organisation of the Study

The study was organised in five chapters. The introduction, which was the Chapter One, highlighted the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, research hypotheses, significance of the study, delimitation of the study,

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limitation of the study, and organization of the study and finally, the chapter summary. In the Chapter Two, the underpinning theories, concepts and related empirical studies were reviewed, as well as the conceptual framework. Chapter Three discussed the research methods employed for this study. Chapter Four focused on analysis and discussion of results. The final chapter, Chapter Five, concluded the dissertation by highlighting the summary, key findings, conclusions, and recommendations as well as suggestions for further research.

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CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter focuses on the review of relevant literatures on sustainability disclosure and financial performance. The chapter presents the review of theories underpinning the study, review of the main concepts, review of related empirical studies, the conceptual framework, and finally, the chapter summary. The theories focused are the legitimacy theory (Freeman, 1984) and the stakeholder theory (Dowling, & Pfeffer, 1975). The main concepts reviewed herein are listed firms and Ghana Stock Exchange, Global Reporting Initiative (GRI), sustainability disclosures, and financial performance.

Theoretical Review

To well situate this study in literature, two theories have been employed to underpin the study. These theories have been comprehensively tuned to accommodate the main study concepts, and help explain the relationships hypothesised between the concepts. The theories employed are the Freeman's (1984) legitimacy theory and Dowling and Pfeffer's (1975) stakeholder theory. These two theories were employed due to their close links to the study hypotheses. These theories are discussed in detail below; first, the legitimacy theory and then the stakeholder theory.

Legitimacy theory

The legitimacy theory was developed by Dowling and Pfeffer (1975). Dowling and Pfeffer's legitimacy theory defines the social contract between society and organisation. The theory posits that firm legitimacy is a

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relationship between firms' social values associated with or implied by the firms' activities and the norms of acceptable behaviours in the larger social systems of which the firms are a part. Employing the legitimacy theory, Hadi (2017) confirmed that firms engage their stakeholders in their sustainability practices to ensure the firms' continued social contract with society. Over the years, social scientists have offered their views on legitimacy. This is to say that if firms respect social norms and deliver to societal expectations, the firms' legitimacy is upheld and this affects the firms' general performance positively (Hadi, 2017); Deegan, 2019; Mahmood, Kouser, & Masud, 2019; Suchman, 2017).

From the foregoing, it could be inferred that firm's conformity to norms and values of the environment and society in which the firm operates will lead to the firm gaining acceptance. This is to say that adherence to overall sustainability practices and disclosure of same will likely influence the performance of the firm in that society will recognise this firm as law-abiding, and thus, patronise the firm. High patronage will then lead to increased performance, financially, and in other aspects of the firm's businesses. Drawing from this, a direct link can be drawn between sustainability disclosures – economic, social and environmental performance disclosures – and financial performance, as well as overall sustainability disclosure practices and financial performance.

Stakeholder theory

The stakeholder theory was propounded by Freeman (1984). The stakeholder theory posits that management of a firm goes beyond just the concept of shareholder value to include influence by a much more complex

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environment. Freeman argues that the business environment is characterised by the influence of multiple stakeholders who are described as any group of individuals who can affect or be affected by the achievement of a firm's objectives. Also, Freeman explains that stakeholder theory has both moral and managerial branches. The moral perspective argues that all stakeholders have the right to be treated fairly by a firm. The management perspective argues that managers should ensure they manage the firm for the benefit of all stakeholders regardless of the state of the firm's financial performance.

Prior researchers who employed the stakeholder theory averred that for a firm to be fair, there is the need for the firm to provide information to all stakeholders, and not to only shareholders; and these pieces of information can be made available through sustainability reporting; and that firms that take into consideration stakeholders' requirements perform better than firms that do not (Doktoralina et al., 2018; Mahmood et al., 2019; Hahn, & Kuhen, 2017). Thus, firms that make voluntary reports, such as disclosure reports on environment, economic and social performance are likely to perform, financially, better than firms that do not make these disclosure reports available. From this, sustainability disclosures can be said to have a direct influence on a firm's financial performance.

Conceptual Review

Global Reporting Initiative (GRI)

Global Reporting Initiative (GRI) is a worldwide, non-profit network based organisation. The organisation strives to give a thorough sustainability reporting system which can be utilised globally by all organisations. The development process of the framework was done through a global multi-

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stakeholder groups and experts (Aggarwal, 2013). The GRI guidelines were initially introduced in 2000. The second (G2), third (G3) and fourth (G4) were issued in 2002, 2006 and 2013, respectively (Aggarwal, 2013; Harun et al., 2013). According to the Global Reporting Initiative (GRI) (2011), sustainability reporting is an overview of a firm's economic, environmental and social impacts caused by the firm's everyday activities.

The GR4 guidelines are presented in two parts – Reporting Principles and Standard Disclosures, and Implementation Manual. Reporting Principles and Standard Disclosures which is the first part contains the criterion to guide organisations in the preparation of sustainability reports. The second part which is the Implementation Manual contains explanations of how to apply the Reporting Principles, how to prepare the information to be disclosed, and how to interpret the various concepts in the guidelines. The Reporting Principles which ought to be applied by all organisations during their reporting are categorised into two groups – Principles for defining report Content and Principles for defining report Quality (GRI, 2011; Hadi 2017).

Principles for defining report Content outline procedures that guide what the content of the report should contain and cover, considering the firm's activities, stakeholder's interest and expectations. These procedures include stakeholder inclusiveness – the firm should recognise its stakeholder's reasonable interest and expectations and note how they have been responded to; sustainability context – the report should present how the firm is contributing and plans to contribute in the future to sustainable development in a wider context**;** materiality – the report should cover relevant aspect of sustainability which is the economic, environment, and social as well as

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aspects that impact on the decisions of stakeholders; and completeness – the scope and boundaries of the report should sufficiently cover the economic, environmental and the social impact in order to give the stakeholders a holistic picture of the performance of the firm (GRI, 2011).

Principles for defining report Quality offers the right information, quality of content and correct presentation of report necessary to guide the stakeholders to make useful assessment. These are: Balance – the content of the report should be unbiased. Information on the firm's performance should reflect both positive and negative to enable stakeholders make adequate assessment; comparability – presentation and disclosure of information on performance should be consistent to enable stakeholders easily do a proper comparison of performance for important decision; accuracy – the information provided in the report should be sufficient and detailed enough to guide stakeholders evaluate the firm's performance; timeliness – the reports should be issued periodically and on time to help stakeholders assess relevant information to make quick and useful decisions; clarity – information should be presented in a way that stakeholders can easily understand; reliability – report should be presented in way that when subjected to examination it will establish the veracity of its contents (GRI, 2011).

The guideline presents two different types of standard disclosure – general disclosure and specific disclosure. The general standard disclosures are divided into seven parts and each includes various indicators totaling 58 indicators. These are: Strategy and analysis (2 indicators), organisational profile (14 indicators), identified material aspects and boundaries (7 indicators), stakeholder engagement (4 indicators), report profile (6

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indicators), governance (22 indicators) and ethics and integrity (3 indicators). The specific standard disclosures contain three categories – economic, environment and social (GRI, 2011).

However, a firm's sustainability report reflects information relating to material aspects (Hadi 2017); this means those aspects which impact are considered as material. The material aspects are those that reflect the firm's significant economic, environmental and social impacts or those that essentially influence the assessment and decisions of stakeholders; only for their material aspects firms are called to report on Specific Standard Disclosures, which have two categories: Disclosures on Management Approach and Indicators (GRI, 2011).

The Disclosure on Management Approach should contain enough information to explain a firm's response to material aspects of the firm's business activities. The following disclosures should be analytically reported for each identified material aspect of the firm, according to the Global Reporting Initiative. One, report why the aspect is material and the impacts that make this aspect material; two, report how the firm manages the material aspect or its impacts; and three, report the evaluation of the management approach.

Further, the indicators category has three subcategories; namely, economic, environmental and social, and these contain, in total, 91 indicators (GRI, 2011). The subcategories and number of indicators are as follows: Economic – Economic performance (4 indicators), Market presence (2 indicators), Indirect economic impacts (2 indicators), and Procurement practices (1 indicator); Environmental – Materials (2 indicators), Energy (5

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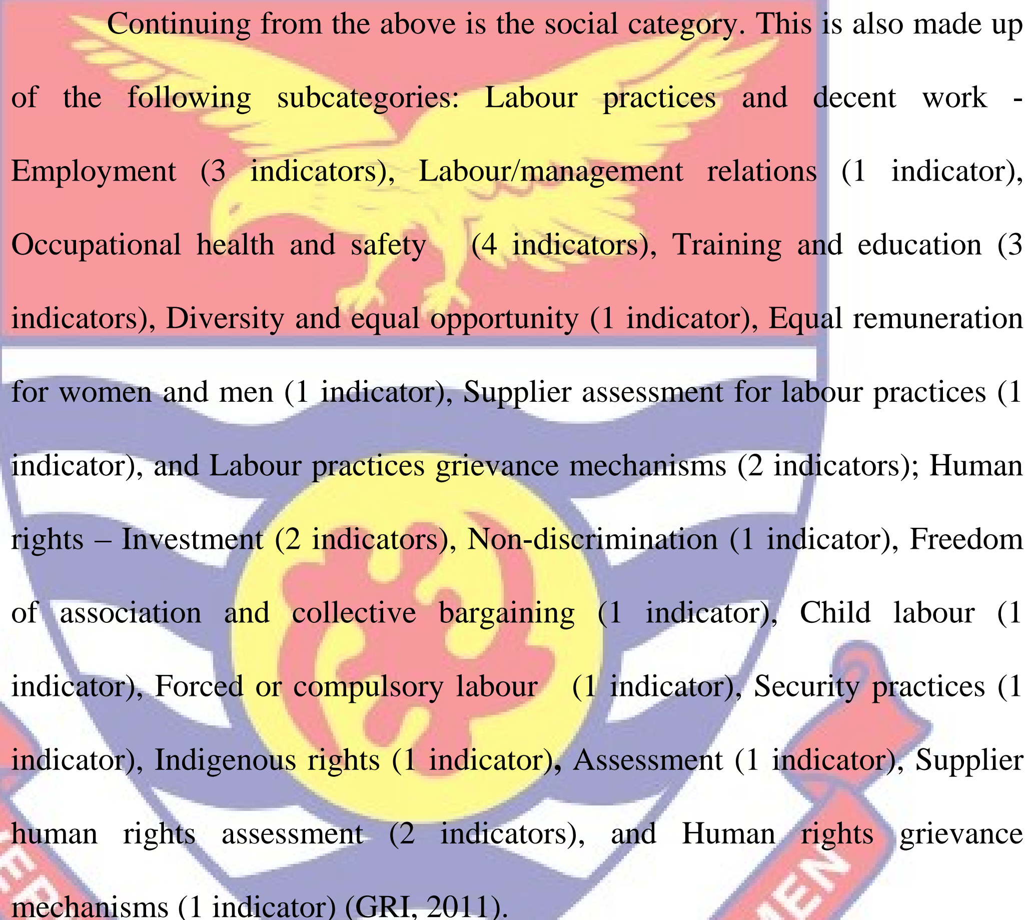
indicators), Water (3 indicators), Biodiversity (4 indicators), Emissions (7 indicators), Effluents and waste (5 indicators), Products and services (2 indicators), Compliance (1 indicator), Transport (1 indicator), Overall (1 indicator), Supplier environmental assessment (2 indicators), and Environmental grievance (1 indicator).



Continuing from the above is the social category. This is also made up of the following subcategories: Labour practices and decent work - Employment (3 indicators), Labour/management relations (1 indicator), Occupational health and safety (4 indicators), Training and education (3 indicators), Diversity and equal opportunity (1 indicator), Equal remuneration for women and men (1 indicator), Supplier assessment for labour practices (1 indicator), and Labour practices grievance mechanisms (2 indicators); Human rights – Investment (2 indicators), Non-discrimination (1 indicator), Freedom of association and collective bargaining (1 indicator), Child labour (1 indicator), Forced or compulsory labour (1 indicator), Security practices (1 indicator), Indigenous rights (1 indicator), Assessment (1 indicator), Supplier human rights assessment (2 indicators), and Human rights grievance mechanisms (1 indicator) (GRI, 2011).

Additionally, there are the Society and Product responsibility as subcategories of the social category. These are composed as follows: Society – Local communities (2 indicators), Anti-corruption (3 indicators), Public policy (1 indicator), Anti-competitive behaviour (1 indicator), Compliance (1 indicator), Supplier assessment for impacts on society (2 indicators), and Grievance mechanisms for impacts on society (1 indicator); Product responsibility – Customer health and safety (2 indicators), Product and service

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labeling (3 indicators), Marketing communications (2 indicators), Customer privacy (1 indicator), and Compliance (1 indicator) (GRI, 2011; Hadi 2017).

Listed firms and Ghana Stock Exchange

As the name suggests, listed firms are the firms or companies whose stock trade on a stock exchange, and conform listing requirements (Pivac, Vuko, & Cular, 2017). In other words, listed security stock is a publicly-traded company that is on a particular stock exchange. For the purpose of this study, only firms listed on the Ghana Stock Exchange (GSE) were considered. As of 11th April, 2021, there were 38 firms listed on the Exchange (GSE, 2021). These were AngloGold Ashanti Depository Shares, Access Bank Ghana, Agricultural Development Bank, AngloGold Ashanti Limited, Aluworks Ltd., Benso Oil Palm Plantation Ltd., CalBank PLC, Clydestone (Ghana) Ltd., Camelot Ghana Ltd., Cocoa Processing Company, Daspharma, Digicut Advertising and Production Ltd., Ecobank Ghana Ltd., Enterprise Group Ltd., Ecobank Transnational Incorporation, Fan Milk Limited, and Ghana Commercial Bank Limited (GSE).

The list continues with Guinness Ghana Breweries Ltd., New Gold Issuer Limited, Ghana Oil Company Limited, Golden Star Resources Ltd., Hords Ltd., Mega African Capital Limited, Mechanical Lloyd Company Plc., Meridian-Marshalls Holdings, MTN Ghana, Produce Buying Company Ltd., Republic Bank (Ghana) Ltd., Samba Foods Ltd., Standard Chartered Bank Ghana Ltd., Standard, Chartered Bank Ghana Ltd., SIC Insurance Company Limited, Societe Generale, Ghana Limited, Sam Wood Ltd., Unilever Ghana Limited, Tullow Oil Plc, Total Petroleum Ghana Ltd., and Trust Bank Limited (THE GAMBIA) (GSE, 2021).

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The Ghana Stock Exchange was incorporated in July, 1989 and commenced trading in 1990 (GSE, 2021). The GSE is a public company limited by guarantee but has no owners or shareholders; however, members are either corporate bodies or individuals. There are three categories of members; namely, Licensed Dealing Members (LDMs), Associate Members, and Government Securities Dealers (PDs). An LDM is a corporate body licensed by the Exchange to deal in all securities**.** An Associate member is an individual or corporate body which has satisfied the Exchange's membership requirements but is not licensed to deal in securities. A PD is a corporate body, which is approved by the Bank of Ghana and registered by the Exchange to deal only in government securities.

Ghana Stock Exchange has two categories of listing. These are Official list and the Ghana Alternative Market (GAX). The GAX is essentially aimed at small and medium sized enterprises (SMEs). Types of securities that can be listed include shares (preference or equities); Debt in the form of corporate bonds (and notes), municipal bonds (and notes), and government bonds (and notes); and Close-end unit trusts and mutual funds. Also, the Exchange has various provisions in its rules which have been designed to protect the investor in addition to what the securities regulator – Security and Exchange Commission – provides.

Under the security industry law PNDCL 333 (1993), as amended, the apex regulatory body in the securities market is the Securities and Exchange Commission. The Commission's functions include maintaining surveillance over the securities business to ensure orderly, fair and equitable dealing in securities; registering, licensing, authorising stock exchange, investment

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advisors, securities dealers, among others; and protecting the integrity of the securities markets against any abuses arising from the practice of insider trading, among other functions (GES, 2021).

Sustainability disclosures

According to Asuquo et al. (2018), sustainability has become a relevant issue in the corporate world in recent times. In addition, current business practices are changing to adopt the concepts of sustainability and responsible growth (Afjei, 2015). In 1982, the United Nations commissioned a new agency, the World Commission on Environment and Development (WCED). The purpose of this establishment was to engage both developed and developing countries on how to have effective roles in sustainable development. In 1987, the WCED published a major report known as "Our Common Future Report".

The "Our Common Future Report", among other things, focused on development, and thus, defined sustainability development as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The report made it clear that sustainable development is achieved as a result of interconnection between economy, society and environment. The following objectives of sustainable development were highlighted in the report (Afjei, 2019): Stimulating growth; changing the quality of growth; meeting necessities like jobs, food, energy, water and sanitation; ensuring a sustainable degree of populace; conserving and improving the resource base; reorienting technology and handling risk, and merging environment and economies in decision.

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Firms of all kinds have an important role to play in achieving these goals. Transparencies about the sustainability of firm activities are of interest to diverse range of shareholders; including businesses, employees, non-governmental organisations, investors, accountants and others (GRI, 2011). The best way to meet these stakeholders' interest is to disclose information on economic, social, and environmental sustainability. Hassan and Martson (2020) established that corporate disclosure can be in two forms – mandatory disclosure and voluntary disclosure. Mandatory disclosures are pieces of information provided to meet certain requirements of law, professional regulation, standards and stock exchange rules whereas voluntary disclosures are pieces of information provided in excess of mandatory disclosures. This may include disclosures recommended by an authoritative body (Hassan, & Martson, 2020).

Corporate sustainability disclosure or just sustainability disclosure has been described differently by different scholars. Nobanee and Ellili (2019) defined corporate sustainability disclosure as public report provided by companies to inform internal and external stakeholders about the corporate position and activities on economic, environmental and social dimensions. The economic, environmental and social dimensions are the key measures of corporate sustainability quality because they define the extent to which firms comply with good disclosure practices. Hassan and Martson (2020) noted that disclosure can vary between firms with respect to timing (annual or quarterly report), item disclosed (qualitative or quantitative) or type of news (good and bad). Asuquo et al. (2018) asserted that sustainability reporting as part of

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corporate reporting is advancing; especially, with the adoption of International Financial Reporting standards (IFRS) which emphasises disclosures.

Also, Hadi (2017) described sustainability disclosure as accounting for social, environmental and economic issues in corporate reporting. Elkington (2019) further asserts that the sustainability disclosure or reporting is synonymous to Triple Bottom Line (TBL) reporting. The TBL concept maintains that while a firm endeavours to accomplish its conventional targets of profit maximisation, it is significant that this profit is maximised through activities that seek to incorporate social and environmental considerations into the decision-making process.

An organisation being an essential part of a large system which has both direct and indirect impacts on its activity and continued survival should adequately think about the social, environmental and economic effects of its activities. According to GRI (2011), the economic dimension of sustainability is about the firm's influence on the financial state of its stakeholders and on economic systems at local, national, and worldwide levels. The environmental element of sustainability concerns a firm's impact on living and non-living natural systems; including, ecosystems, land, air, and water. The social dimension of sustainability concerns the impact a firm has on the social frameworks inside which it works.

If a firm resolves to effectively follow corporate sustainability disclosure practices and endeavours to engage in activities which contribute to its chance of survival, and has the strategy to be seen by society as a firm that values sustainability, then this firm should take three sets of measures. To begin with, it is fundamental for a firm to proactively address every one of the

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three mainstays of sustainability (economic, environmental, and social). Second, stakeholders must acknowledge that each of these three dimensions of sustainability is important for the firm.

Thus, the firm is not overlooking or giving deficient significance to any dimension. If, for instance, one dimension is ignored by the firm, then the stakeholders interested in that dimension will perceive the firm as a less legitimate entity, and this mindset can harm perception of other stakeholders as well; thereby, the firm needs to keep a harmony among the three dimensions and focus on every one (Hadi 2017). This is to say that for a firm to gain acceptability from its stakeholders and everyone, in general, there is the need to take these three dimensions into consideration so as to ensure that each and every one is satisfied.

It should also be pointed out that in the works of Kumar and Devi (2018), the benefits and barriers of corporate sustainability disclosure were discussed. With regards to the benefits of sustainability disclosure, the following were outlined: It identifies risk and failures thereby achieving learning and innovation in the courses of risk minimisation, as a result opening doors for opportunity for business improvement; it drives societal competition because the quality of report would inform the decisions of stakeholders, whether to engage with a firm or not; it reduces reputational risk thereby increasing brand value; it strengthens communication between the company and stakeholders like government regulators, employees and investors; it drives corporate transparency therefore increase trust from stakeholders; and it helps in the overall assessment of emerging non-financial risk and identifying

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mitigating factors risk, thus, reassuring investors that the firm is managing non-financial risk.

Furthermore, according to Kumar and Devi (2018), the following were listed as some of the barriers to sustainability disclosure: Uncertainty about evolving frameworks; resources in terms of cost, time, and expertise are limited; difficulty in adapting to change, especially stakeholder engagement; the fear of risking firm's credibility and reputation; and perception that stakeholders and investors do not read sustainability reports produced. However, if firm managers are able to surmount these barriers to sustainability disclosure, there is the likelihood that many more benefits can be reaped from disclosure of sustainability practices – economic performance disclosure, social performance disclosure, and environmental performance disclosure.

Additionally, sustainability disclosures of economic, social and environmental are measured using indicators advanced by the Global Initiative Reporting (2011). The economic performance disclosure is measured using indicators such as economic performance which has four items, market presence which has two items under it, indirect economic impact which has two items measuring it, and procurement practices which has only one item assessing it. In all, there are nine items used to measure economic performance disclosure of a firm, according the Global Initiative Reporting.

Also, the environmental performance disclosure is measured based on 12 main indicators which also have sub-dimensions (GRI, 2011). These are materials which has two sub-indicators, energy which has five items assessing it, water which has three sub-indicators, biodiversity with four items under it, emissions having seven items measuring it, effluents and waste assessed using

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five sub-indicators, products and services evaluated using two items, compliance measured with one indicator, transport with one sub-indicator, overall with one item under it, supplier environmental assessment assessed using two items, and environmental grievance evaluated using one sub-indicator.

Further, societal performance disclosure is measured using four main subcategories with indicators. These are: Labour practices and decent work – Employment (3 indicators), Labour/management relations (1 indicator), Occupational health and safety (4 indicators), Training and education (3 indicators), Diversity and equal opportunity (1 indicator), Equal remuneration for women and men (1 indicator), Supplier assessment for labour practices (1 indicator), and Labour practices grievance mechanisms (2 indicators); Human rights – Investment (2 indicators), Non-discrimination (1 indicator), Freedom of association and collective bargaining (1 indicator), Child labour (1 indicator), Forced or compulsory labour (1 indicator), Security practices (1 indicator), Indigenous rights (1 indicator), Assessment (1 indicator), Supplier human rights assessment (2 indicators), and Human rights grievance mechanisms (1 indicator) (GRI, 2011).

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labeling (3 indicators), Marketing communications (2 indicators), Customer privacy (1 indicator), and Compliance (1 indicator) (GRI, 2011; Harun et al., 2013).

Having identified the foregoing indicators for the measurement of disclosure of the three dimensions – economic, social and environment, there is the need for the construction of indices. Index construction is aimed to enable the quantification of information obtained from the firms' annual reports, sustainability reports and firms' websites. Sustainability disclosure indices have been constructed differently by different researchers. For instance, Tilakasiri (2020), in his study, constructed an index for measuring corporate social responsibility (CSR) activities using a dichotomous process to score the CSR index. All disclosures scores used in his study were unweighted. The reason for this was to eliminate any bias inherent in a weighted score (Tilakasiri, 2020). A score of one (1) was assigned if an item is disclosed and (0) when it is not.

Also, Gandhi and Singhania (2016), to construct social and environmental disclosure indices for Indian companies, the unweighted disclosure index approach was adopted; an item scores one (1) if disclosed and zero (0) if not disclosed. A similar approach was adopted by Hadi (2017) to achieve environmental disclosure index used for a study in the paper and pulp sector in Brasil. Further, in the work of Li, Toppinen, Tuppura, Puumalainen and Hujala (2018), employing the GRI framework to evaluate sustainability disclosure of the world's largest forest companies, scores assigned for disclosed information or indicator ranged from one (1) to five (5).

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Further, Hadi (2017) employing the GRI index to measure the quality of sustainability in Malaysia commercial banks, evaluated the indicators using a polychotomous scoring technique – a scale from zero (0) to four (4). In similar manner, Garg (2017) conducted a study to develop sustainability reporting index and came out with an index on sustainability reporting. Garg (2017) formulated the index based on extensive literature review as well as the disclosures made in prominent indexes, such as Dow Jones Sustainability Index (DIS), and Global Reporting Initiative. The scoring methodology Garg defined were: zero (0), if no information was disclosed; one (1), if information provided was neither qualitative nor qualitative; two (2), if information was quantitative; three (3), if information provided was monetary figures; four (4), if information provided was both quantitative and qualitative; and five (5), if report was GRI checked.

In summary, it could be seen that corporate sustainability disclosures are necessary to firm legitimacy. Also, measurement of the three main dimensions – economic performance disclosure, social performance disclosure and environmental performance disclosure – of corporate sustainability disclosure is mostly based on the framework developed by the Global Initiative Reporting. Each dimension is measured using a number of main indicators or categories and sub-indicators or subcategories. These measures have been widely accepted and used by prior researchers in their measurement of sustainability disclosures (Hadi (2017; Tilakasiri, 2020; Gandhi, & Singhania, 2018). Also, to construct indices using these indicators, scores of zero (0) for non-disclosure of sustainability disclosure indicator and one (1)

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for disclosure of sustainability disclosure indicator have been commonly used in literature.

Firm growth

Firms Growth plays has a crucial impact in the planning activities of banks. For example, Hadi (2017) reported that the size of a firm and its growth are significant in tax management processes. They noticed that, small scale businesses that have high growth prospects tend to attract high tax rates from its operations. Bank growth is estimated as the percentage change in the interest cost from year to year. Wang (2020) suggested that both firm's growth and financial performance are covariant and move in the same direction. Nwaobia, (2019) assets that the knowledge companies apply in their tax planning is determined by its growth and the accumulated knowledge of managers in tax matters. Therefore, in this study growth is approximated in line with Nwaobia (2019) as a ratio of profit to turnover or sales (revenue).

Firm size

This refers to the operation capacity of firms. It shows how big or small a company is with respect to others in the industry. Company size signals to investors an expectation of the financial performance of a company. It is often expected that companies with large operational size will perform well. In this study the size of the listed firms is measured in line with Zemzem (2017) as a Natural logarithm of total assets at the disposable of a company at the end of the accounting year.

Liquidity

Liquidity of a firm is the capacity of a business to achieve its short-term financial liabilities when they fall due. That is, a company is said to be

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liquid when it can pay all its debts that become due within the accounting year. Abor et al. (2018) opined that liquidity is measured as a ratio of current assets to the current liabilities. It assesses the amount of current assets a company has that could be marshalled to defray any outstanding liability within one accounting year.

Financial performance

Every firm places importance on performance; especially, financial aspect of performance. Thus, measurement of performance is given attention by many firms. To measure firm performance, accounting performance measures or market performance measures can be used (De Silva, Chinna, & Azam, 2020). Market performance expresses expectations of a firm's prospects and its ability to adapt to likely changes (Saeidi, 2015). However, the market measures suit only some listed firms and are only material if the market shows a high level of efficiency (De Silva et al., 2020).

In some prior studies, the researchers used different kinds of performance indicators to measure firm performance (Eniola, & Entebang, 2015). Whilst some used financial performance measures, others used non-finance performance measures. However, in the fields of accounting and finance, financial measures are commonly used (Eniola, & Entebang, 2015). For example, measures such as return on investment, return on sale, return on assets (ROA), and return on equity (ROE) are some of the frequently used parameters to measure financial performance (Saeidi, 2015), and even among these measures, return on assets and return on equity have been more frequently (Zattoni et al., 2017).

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In essence, financial performance provides measure on how well a firm uses its assets to earn profit (Zattoni et al., 2017). Just as indicated earlier, Zattoni et al. also averred three measures that justify the performance of a firm, and these are the return on asset, return on equity (ROE), and return on sales. According to Saeidi (2015), financial performance is the company's financial condition over a certain period that includes the collection and use of funds measured by several ratios – liquidity, leverage, solvency and profitability. Further, Uwuigbe et al. (2018) opined that performance of firms can be measured in terms of growth of its size (total assets), profitability – ROA, ROE and earnings per share – and market-based proxies such as market price per share.

For example, in their studies, Asuquo et al. (2018), and Burhan and Rahmanti (2019) return on asset was used as a measure of financial performance. According to Burhan and Rahmanti, return on asset is a profitability ratio which measures the income or operating expenses success of a firm for a given period of time. According to the Institute of Chartered Accountants, Ghana (ICAG) (2019), return on asset is measured as (Profit before interest and taxation/ Total Assets)*100. The higher the ratio, the more effective a firm is in utilising its assets to generate net income (Saragih, 2018). Thus, a firm's performance is more effective when the rate of return is greater. The size of the return on asset depends on two factors – the profitability of the goods or services that the firm has sold and volume of sales that the entity has achieved with the assets it has employed; this is known as asset utilisation or asset turnover (Saragih, 2018).

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In essence, return on asset shows the capability of the management of a firm to be able to create profit using the firm's assets (Dei Ofosu-Hene, & Amoh, 2016). Many researchers have opted for using return on asset to measure performance due to the fact that it takes financial leverage into consideration (Ndoka, Islami, & Shima, 2017) and widely used by firms in their financial performance measures (Daouia, Simar, & Wilson, 2017). Further, Rasiah (2018) proposed that it is beneficial to apply profitability ratios in measuring firm performance in the sense that it is not influenced by price level changes.

In all, aside from all that has been discussed in the foregoing, return on asset is a practical measurement when comparing the profit of one firm to another; either between firms within the same industry or firms in different industries. It is, therefore, not surprising that most of the related prior studies used return on asset to measure firm financial performance. Also, the data for measuring return on asset for firms are readily available, in most cases; especially, for firms which have been listed on stock exchanges, such as the Ghana Stock Exchange.

Empirical Review

A number of empirical studies looked at sustainability disclosure and firm performance. However, only few studies specifically mentioned sustainability disclosures – with specific reference to economic, social and environmental performance disclosures – and their effect on firm financial performance. Also, only few studies looked at the extent of sustainability disclosure practices among listed firms; especially, in Ghana, using the Global Reporting Initiative (GRI) G4 performance indicators. The succeeding

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discussion reviewed related empirical studies on extent of sustainability disclosure practices among firms, and the effect of the three dimensions of sustainability disclosures on financial performance.

Level of sustainability reporting

For instance, to find out the extent of corporate social responsibility practices of firms listed on the Ghana Stock Exchange, Hadi (2017) sampled 33 firms, employing qualitative techniques in his study, and found out that corporate social responsibility disclosure has increased over a six years period from 2008 to 2013. However, the quality of the disclosure was found to be generally low; meaning, majority of the disclosures were on general statement, and information on community were considered the most disclosed. Though Hadi (2017) considered listed firms in Ghana, his study focused on social responsibility instead of sustainability disclosures. This implies that a study considering sustainability disclosures of listed firms is necessary; thus, the current study addressed this gap.

Also, using purposive sampling techniques, Mohammadi, Mardani, Khan and Streimikiene (2018) employed 7+1 core subjects of the international organisation for standardisation (ISO) 2600 to assess the extent of effectiveness of sustainability disclosures by listed companies on Tehran Stock Exchange. On the average, sustainability disclosure score was shown to be low – about 12% for all listed firms. Besides, the average disclosure scores of firms operating in sensitive and non- sensitive industries were compared and firms operating in the sensitive industry had much higher sustainability disclosure scores than others. Though Mohammadi et al. considered sustainability disclosure, they conducted the study in a country whose

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economic and business conditions were different from that of the current study area; hence, the need for a study that considers firms listed on the stock exchange of the current study area, Ghana.

Further, in the study of Saygili, Saygili and Yargi (2019) to assess popularity of sustainability disclosure among textiles and apparel companies in Turkey, using descriptive design and employing statistical tools such as frequency and percentage, they found out that among 184 textiles and apparel companies listed on the Turkey top 500 industrial Enterprise, only 34 representing 18% issued sustainability reports. Saygili et al. conducted this study in Turkey; thus, applying their findings to the Ghanaian context should be done carefully. Meaning, conducting a study in Ghana to consider Ghanaian listed firms would be in the right direction.

Furthermore, Li, Toppinen, Tuppurra, Puumalainen and Hujala (2018) conducted a study on determinants of sustainability disclosure in the global forest industry. One of the objectives of the study was to investigate the current pattern of sustainability disclosure in accordance with GRI framework. A content analysis was used to evaluate the economic, environmental and social performance of the voluntary disclosure of 66 largest forestry companies worldwide. The result of the study mirrored environmental disclosures as the most significant emphasised area whilst human rights and social responsibility received the least attention. The current researcher realised that Li et al. focused purposely on forestry companies; thus, the need to consider variety of firms listed on the Ghana Stock Exchange. Also, the current study took into consideration the effect of sustainability disclosures on firm financial performance.

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In another study, Faisal, Tower and Rusmin (2019) conducted a survey on legitimising corporate sustainability throughout the world. The study sampled 2009 sustainability reports from some of the world largest company in 24 countries. The Global Reporting Index performance indicators were used as the benchmark disclosure index checklist. The result indicated that the average level of sustainability disclosure was surprisingly high. Faisal et al. focused on only larger firms; thereby, ignoring average firms. The current study was indiscriminate among the firms listed on the Ghana Stock Exchange, as all the listed firms at the time of the study were included in the study.

Furthermore, Hadi (2017) conducted research on corporate social responsibility disclosures and their consequence on firms' value in Ghana. The study sampled 33 listed firms over a six year period from 2008 – 2013. Using content analysis and regression analysis, Musah found out that both the quality and the quantity of corporate social responsibility disclosures are not significantly associated with firm value. This is to say that disclosure of corporate social responsibility does not really have any remarkable influence on firm value; implying that these disclosures do not effect on elements that contribute to firm value.

The relationship between sustainability reporting and financial performance

In yet another study, Sampong, Song, Boahene and Wadie (2018) studied disclosure of corporate sustainability performance reporting and firm value in South Africa. Sampong et al. adopted the GRI G.3 guidelines as a measure of disclosure. One hundred and twenty-six (126) listed companies

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were sampled over a period 6 years (2010 – 2015) producing a total of 756 observations. Tobin's Q was used as a measure of firm value and dependent variable. Based on the panel data regression model, the findings documented revealed a positive but insignificant relationship between corporate sustainability disclosure performance and firm value. It was then concluded that corporate sustainability disclosure should only be undertaken when a firm envisages a positive influence firm value.

Also, Mohammadi et al. (2018) conducted a study on corporate sustainability disclosure and market valuation in a Middle Eastern Nation. The study aimed to provide the corporate sustainability disclosure level organised according to the'7+1', seven core subjects of the international organisation for standardisation (ISO) 2600 and the energy disclosure item. Data were collected using purposive sampling techniques. The generalised method of moments (GMM) approach was conducted for a dynamic panel data. Data were attained for a five-year period, employing one year lag. The findings showed that firms with high extent of sustainability disclosure emerge to have much higher stock prices.

Using a cross-sectional data, Whetman (2018) examined the impact of sustainability reporting on firms' profitability, focusing on high and low amount of institutional ownership. Ninety-five (95) publicly traded American firms in 2015 – 2016 were sampled. The dependent variable ROE, ROA and profit margin were used as proxies for profitability. Using regression model, the results showed that there was a positive relationship between corporate sustainability reporting and profitability for firms with low institutional ownership in the subsequent year.

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A literature review conducted by Aggarwal (2019) on sustainability reporting and its impact on corporate financial performance using 30 studies found out that, majority of the studies, 12, provided evidence of a positive and significant association between sustainability and financial performance, two (2) showed short term negative relationship, seven (7) showed no significant relationship and 9 studies provided mixed results. These findings showed that the influence of corporate sustainability disclosures on firms' financial performance might be dependent on other factors such as study locale and the type of firm or industry being considered.

In their study, Wasara and Ganda (2019) sampled 10 listed mining firms on the Johannesburg Stock Exchange to investigate the relationship between corporate sustainability disclosure and firms' financial performance. Data collection was undertaken by the adoption of content analysis approach. A multi regression analysis was used to analyse the relationship between environmental disclosure and return on investment and same approach used for social disclosure and return on investment. The result showed a negative relationship between environmental disclosure and return on investment, and a positive relationship between social disclosure and return on investment.

In yet another study, Razali, Sin, Lunyai, Hwang and Yusoff (2018) conducted a study on corporate social responsibility disclosure and firm performance of Malaysian public listed firms. Three hundred and twenty-four (324) firms were sampled for a period of 2014 – 2016. Multiple-regression model was used to analyse the relationship between financial performance and corporate social responsibility disclosure. The financial performance was expressed in terms of market value added (MVA), ROE and ROA. After

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accounting for control variables such as firm size, firm age, firm leverage and firm liquidity a positive significant relationship between corporate social responsibility disclosure and firm's performance in terms of ROA and ROE was established. However, in relation to MVA a positive insignificant relationship was found.

Further, Agu and Amedu (2018) conducted a study to determine the effect of sustainability reporting on the profitability of listed pharmaceutical firms in Nigeria. Secondary data were obtained from the annual reports of seven (7) firms. Data were analysed using ordinary linear regression. The results showed negative and insignificant relationship between economic disclosure index and ROA whereas both environmental and social disclosure indexes had statistical positive but insignificant relationship with ROA. The findings further revealed that environmental disclosure index had statistical negative and insignificant relationship with ROE whereas there was positive but insignificant relationship between both economic and social disclosure indexes and ROE of pharmaceutical firms in Nigeria. The result also showed economic and social disclosure indexes to have statistical positive but insignificant relationship with net profit margin whereas there was negative and insignificant relationship between environmental disclosure index and net profit margin.

To examine the relationship between sustainability reporting and corporate performance of firms in Nigeria, Asuquo et al. (2018) obtained data from the audited financial statement for a period of 2012 – 2016 of three (3) brewery firms. Using regression analysis, the result showed that economic performance disclosures do not significantly affect return on assets of selected

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quoted firms in Nigeria. Environmental performance disclosures have no effect on return on asset. Moreover, social performance disclosures do not significantly affect return on assets of firm. This study considered the three dimensions being looked at in the current study. However, the study locale might have influenced the study results; thus, a further study in Ghana was expected to yield different set of results.

To determine the relationship between sustainability reporting and firm's performance of deposit-taking banks listed on the Nigeria Stock Exchange, Uwuigbe et al. (2018), using judgmental sampling, a total of 10 banks were selected. Content analysis was used to obtain sustainability disclosure index in annual reports and stand-alone sustainability reports of sampled banks for the period 2014 – 2016. Data were analysed using a panel regression technique. The empirical findings showed that there was a bi-directional relationship between sustainability reporting and firm performance of banks in Nigeria. Hence, the outcome of the study basically implies that sustainability performance via sustainability reporting would invariably bring about an improvement in the financial performance of listed banks in terms of revenue generation ability.

Furthermore, to examine how sustainability disclosure affects institutional performance, De Silva (2018) derived disclosure index from the Global Reporting Initiative Guideline, G4, and this was used to evaluate the content of the annual reports and sustainability reports of listed banks on Colombo Stock Exchange for a period of two (2) years, 2017 – 2018. Employing the explanatory research design and using regression analysis, the

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study revealed that sustainability disclosures of a firm create no impact on the return on equity and return on assets of the firm.

Additionally, Kwagfan (2019) sampled 64 companies out of 76 non-financial institutions quoted on the Nigerian Stock Exchange. Objective of the study was to find out if sustainability reporting impacts financial performance of quoted companies in Nigeria. To achieve this objective T- test statistic was employed in testing the hypothesis. Findings from the study showed that, the economic and social performance index has positive impacts on ROA while environmental performance index has negative impact on ROA. The findings further showed that economic, social and environmental performance index impacted positively on ROE. Lastly, environmental and social performance index has positive and significant impact on Net Profit Margin (NPM) while economic performance index has negative impact on (NPM).

Also, Laskar, Charaborty and Maji (2017) used secondary data collected from annual and corporate sustainability reports of 28 and 35 listed and non-financial firms from India and Japan from 2009 to 2014, respectively. Content analysis was used to score the disclosures based on the GRI reporting guideline. Market-to-book ratio was used as a measure for financial performance. Both panel data model and logit regression model was employed to examine the impact of corporate sustainability performance on financial performance. From the study, average level of disclosure is more in case of Japanese firm as compared to Indian firms. The study also showed that the influence of corporate sustainability performance on financial performance in both countries are both positive.

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In summary, deduction from the empirical review showed mixed results in the literatures regarding corporate sustainability disclosures and financial performance. The differences in the results might be due to differences in methodology adopted, study period and institution settings, as well as scoring of disclosure indexes. From the review, it could be seen that there were a number of gaps in literature concerning corporate sustainability disclosures and financial performance. Firstly, majority of the prior studies were conducted outside the current study locale, Ghana. Secondly, most of the prior studies used only few firms in their sample size construction. These might have influenced the outcomes of the prior studies. Thus, the current study used comparably sufficient sample, employing the explanatory research design.

Conceptual Framework

Drawing from the theories and empirical studies reviewed, and giving cognisance of the study hypotheses, the researcher constructed the conceptual framework in Figure 1. From the figure, financial performance measured using return on assets (ROA) served as the dependent variable. Economic performance disclosure, social performance disclosure and environmental were the independent variables. From the figure, the path labelled H_0^1 showed the effect of economic performance disclosure on financial performance; H_0^2 showed the effect of social performance disclosure on financial performance, and finally, H_0^3 and H_0^4 indicated the effect of environment performance disclosure and overall sustainability disclosure practices on financial performance, respectively. This framework guided the rest of the work.

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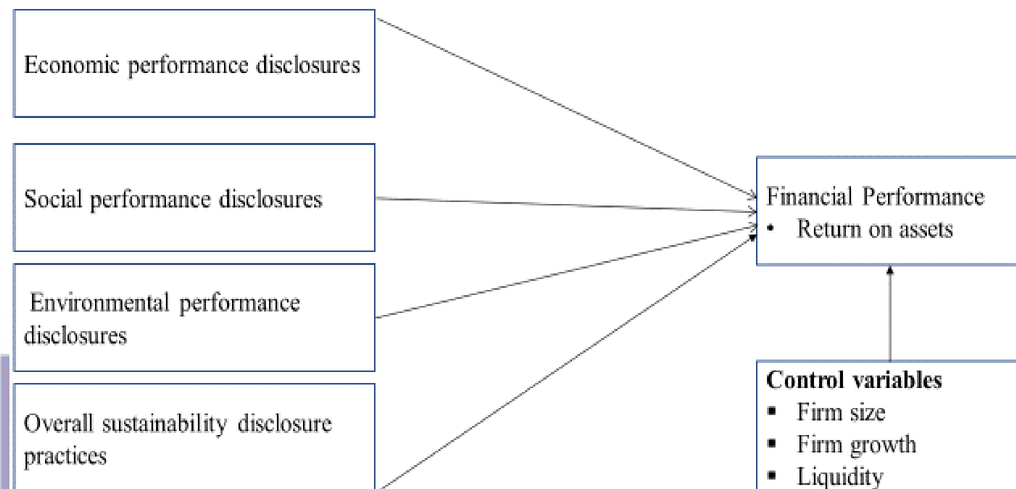

Figure 1: Conceptual Framework

Source: Authors' construct (2021)

Chapter Summary

This chapter discussed the underpinning theories of this study, concepts, empirical studies relating to the current study, and the conceptual framework. The theories employed were the Freeman's (1984) legitimacy theory, and Dowling and Pfeffer's (1975) stakeholder theory. The related empirical studies reviewed showed that relationship exists between sustainability disclosures and financial performance. Nevertheless, the empirical review revealed a number of gaps. With regards to location or geography, no study specifically considering the current objectives has been carried out in the current study locale; even those closely related to them were carried outside the current study country, Ghana. Also, sample size used in most of the prior studies was insufficient. Further, most of the prior studies used proxies other than return on assets for financial performance.

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CHAPTER THREE

RESEARCH METHODS

Introduction

The purpose of the study was to examine the relationship between sustainability disclosures and financial performance of listed firms in Ghana. This chapter presents the research methods employed for this study. Research method is a systematic way of solving a problem. It is essentially, the procedures followed by a researcher in describing, explaining and predicting phenomena. It provides the work plan of a research. The methods used herein are informed by the purpose and objectives of this study. The chapter specifically presents the research approach, research design, the study area, population, sample size and sampling procedure, data collection instrument, validity and reliability, data collection procedure, data processing and analysis, model specification and ethical consideration as well as chapter summary.

Research Approach

The study utilised a quantitative research approach as it sought to assess the relationship between study variables. Quantitative approach puts emphasis on measurement, and data are analysed in a numerical form to provide brief description, and also enables analysis of causal relationships between variables (Goundar, 2018). The study used quantitative approach for the reason that the data collected were secondary quantitative in nature, which could be analysed easily by utilising standard statistical tools to determine causal relationships between study variables (Goundar, 2018). Also, quantitative approach has techniques, measures and designs that come up with numerical and quantifiable data (Simon, Lee, Cottrell, & Verleysen, 2017).

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Further, this approach depends on the principles of verifiability of proof, substantiation and confirmation utilising the correct measurement of variables being studied.

Research Design

The study used the explanatory research design. Explanatory research design is a design, in which a researcher measures two variables – a dependent and an independent – understands and assesses the statistical relationships between them with no influence from any extraneous variable, and with intention of assessing cause-effect relationships between the variables (Goundar, 2018). This design was appropriate for the current study because the researcher sought to assess a linear relationship between two set of variables – economic disclosure and financial performance, social disclosure and financial performance, and environmental disclosure and financial performance, with intention of analysing causal relationship between these sets of variables. This design was also appropriate for testing the statistical significance of the hypotheses formulated (Saunders, Lewis, & Thornhill, 2019; Majid, 2018).

Study Area

The country prides itself on different types of firms listed on the Stock Exchange. The Ghana Stock Exchange is dominated by financial institutions and mining firms, among other manufacturing companies. It should also be pointed out that the financial institutions on the Exchange were mostly banks which were involved mostly in deposit-taking among other financial services. At the time of this study, there were 38 firms duly listed on the Ghana Stock Exchange (GSE, 2021).

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Population

The population for this study was all firms listed on the Ghana Stock Exchange. At the time of this study, 11th April, 2021, there were 38 listed firms (GSE, 2021). According to Saunders et al. (2019), population is a full set of cases from which a sample is taken. Banerjee and Chaudhury (2010) also state that population is an entire group about which some information is required to be ascertained. The researcher chose listed firms because firms listed on the GSE are big firms and their operations could have a significant impact on economic, social and environmental factors. Also, this choice was necessary because these firms are mandated to publish their audited annual reports; thus, difficulties in obtaining annual reports was minimised. Further, there was the possibility that sustainability issues might have been disclosed voluntarily in the published reports by these firms. See Appendix A for the list of listed firms on the Ghana Stock Exchange.

Sampling Procedure

The sample for this study was made up of 28 listed firms on the Ghana Stock Exchange. Banerjee and Chaudhury (2010) referred to a sample as any part of a fully defined population. Also, to arrive at the sample size stated herein, the purposive sampling technique was used, following a set of criteria. Purposive sampling has to do with considering specific groups to be included in a sample based on some characteristics deemed necessary to make a study possible (Banerjee, & Chaudhury, 2010). Thus, the purposive sampling process for this study began with the total population of 38 firms which were all required to have been listed on the GSE.

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Additionally, to include a listed firm in the sample, the following criteria must be met: One, the firm should be listed on the GSE from not after the beginning of 2015 to, at least, the end of 2019 after having published annual reports. It was expected that the choice of the five (5) years study period would help to analyse more current information in relation to sustainability disclosure. Also, the 5-year period was enough to analyse the trend of sustainability development over a period and its impact on financial performance. The 5-year period was made up of data on corporate sustainability disclosure from 2015 – 2019, and financial performance data from 2015 – 2019; two, the firm must have a complete set of annual reports and financial data for five years, 2015 – 2019, 2015 and 2019 inclusive; finally, though sustainability reports were highly recommended, in cases where they were unavailable, complete annual reports sufficed. Based on criteria, 10 firms could not make it; bringing sample to 28. See Appendix B for listed firms in the sample.

Data Collection Instruments

The researcher employed, mainly, the internet for the collection of secondary data for the study. Saunders et al. (2019) described secondary data as data used for a research project that were originally collected for some other purpose. The published annual reports, sustainability reports and other financial data of the firms sampled were retrieved from the firms' individual official websites and the official website of the Ghana Stock Exchange via internet, as the researcher was able to have access to these pieces of information through the internet. The internet, as an instrument for the collection of this kind of data, has been used by prior researchers (Faisal et al.,

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2017; Li et al., 2018; Mohammadi et al., 2018; Saygili et al., 2019). Further, the various variables considered in the study and their respective measurements are presented in Table 1

Table 1: Variables and Measurements

Variables	Indicators/Proxy	Measurements	Source
Economic performance disclosure	Economic performance Market presence Indirect economic impact Procurement practices	Scored one (1) if item is disclosed; otherwise, zero (0)	Global Reporting Initiative (2011) G4
Social performance disclosure	Labour practices and decent work Human rights Society Product responsibility	Scored one (1) if item is disclosed; otherwise, zero (0)	Global Reporting Initiative (2011) G4
Environmental performance disclosure	Materials Energy Water Biodiversity Emissions Effluents and wastes Products and services Compliance Transport Overall Supplier environment Environmental grievance	Scored one (1) if item is disclosed; otherwise, zero (0)	Global Reporting Initiative (2011) G4

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Overall sustainability disclosure practices	Economic performance disclosure Social performance disclosure Environment performance disclosure	Scored one (1) if item is disclosed; otherwise, zero (0)	Global Reporting Initiative (2011) G4
Financial performance	Return on assets	Profit before interest and taxation/ Total Assets)*100	ICAG (2019)

Source: Global Reporting Initiative (2011), ICAG (2019)

Instrument Validity and Reliability

Unlike primary data collection instruments which have to undergo a rigorous validity and reliability tests, secondary data collection instruments do not really need any validity or reliability test because the data used are already prepared and available to use (Banerjee, & Chaudhury, 2010). Also, considering the internet and related instruments used as a secondary data collection instrument in this study, there was nothing much to do about them, in terms of modifying the internet. Further, this instrument has been used by prior researchers (Faisal et al., 2018; Li et al., 2017; Mohammadi et al., 2018; Saygili et al., 2019) and thus, this researcher inferred some level of reliability.

Notwithstanding, scholars proposed a number of ways to follow in order to ensure reliability of the data extraction process and the data extracted. For instance, Samaha, Dahawy, Hussainey and Stapleton (2019, as cited in Atinyo, 2021) suggested that for reliability of indices or measures constructed from annual reports to be achieved, the firms' annual reports and websites should be read twice; the computing of measures or scoring of indices for each firm should be done or computed twice to ensure that similar measures or

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scores are obtained both times; finally, discrepancies between the first and second computations for a specific firm should make the firm liable for a third and last assessment. The current researcher followed these approaches to ensure reliability of all measures.

Data Collection Procedure

First and foremost, the internet was employed to retrieve annual reports and sustainable reports from the websites of the 28 listed firms and the Ghana Stock Exchange website. After all the reports for the periods 2015 to 2019 had been retrieved from the various websites, their contents were analysed to check the disclosure or otherwise of the various indicators for economic, social and environmental performance disclosures, and overall sustainability disclosure practices. The disclosure index was then constructed based on the GRI G4 performance indicators. It should, however, be stated that the GRI G4 contains 91 performance indicators in total across the three sustainability dimensions.

Further, the unweighted or dichotomous scoring scheme widely used to evaluate and rate the level of corporate sustainability disclosure items (Abdullah, & Minhat, 2017; Faisal et al., 2018; Hawashe, 2016; Li et al., 2017; Mohammadi et al., 2018; Saygili et al., 2019) was used to score the various indicator items. Using the dichotomous scoring approach, an item was scored one (1) if disclosed and zero (0) if not disclosed. The researcher employed this scoring technique because unlike the weighted approach which places unequal importance on users of annual reports, thereby, placing weights on the information disclosed according to the perceived importance placed on users, the dichotomous approach assumes that all information disclosed is

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equally important to the user. The final data collected, after the scoring, were entered into Eviews 10 for analysis of the study objectives and hypotheses.

Data Processing and Analysis

To analyse the study objectives, both descriptive and inferential statistical tools were employed by the researcher. The descriptive statistical tools used included mean, standard deviation, frequency and percentage. On the other hand, the inferential statistical tools used were multilinear regression and Pearson product-moment correlation coefficient. Specifically, the first objective was analysed using frequency and percentage; this was done following the techniques used by prior researchers (Hawashe, 2016; Mohammadi et al., 2018) to measure the extent of voluntary sustainability disclosure practices, where the total disclosure score obtained by a firm out of a total of 91 for all the 91 GRI indicator items (one score for each item disclosed) was converted to percentage. The frequency was also used to present the number of firms against extent of disclosure.

Also, the second, third, fourth and the fifth objectives were analysed using the regression techniques. Before the regression analysis, the Pearson product-moment correlation coefficient was conducted to examine the bivariate associations between the study variables. A correlation co-efficient of (+1) represents a perfect positive correlation whilst a value of (-1) represents a perfect negative correlation. Further, the descriptive statistical tools such as mean, standard deviation, minimum, maximum and range, among others were used to present the general distribution of the data.

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Model Specification

The following regression model was specified and estimated to test the hypotheses formulated.

$FP_{it} = \alpha_{it} + \beta_{1it}EPD_{it} + \beta_{2it}SPD_{it} + \beta_{3it}EPD_{it} + \beta 4_{it}OSDP_{it} + \beta_{5it}FS_{it} + \beta_{6it}FG_{it} + \beta_{7it}L_{it} + \varepsilon_{it}$……. equation 1

Where:

FP = Financial Performance measured using return on assets (ROA)

α = Constant term

β = Regression Coefficient (magnitude of change in financial performance with respect to a change in independent variable of EPD, SPD, or EPD)

EPD = Economic Performance Disclosure

SPD = Social Performance Disclosure

EPD = Environmental Performance Disclosure

OSDP = Overall Sustainability Disclosure Practices

FS = Firm size

FG = Firm growth

L = Liquidity

ε = Error Term

it = Data of firm *i* at time *t*

Ethical Considerations

The researcher observed all internet protocols in the course of the online data extraction from the websites of the firms. Also, due to the fact that secondary data were used for the study, high level of data integrity was achieved as data were not exposed to researcher manipulation. Further, the researcher contacted some of the firms whose reports were not online and

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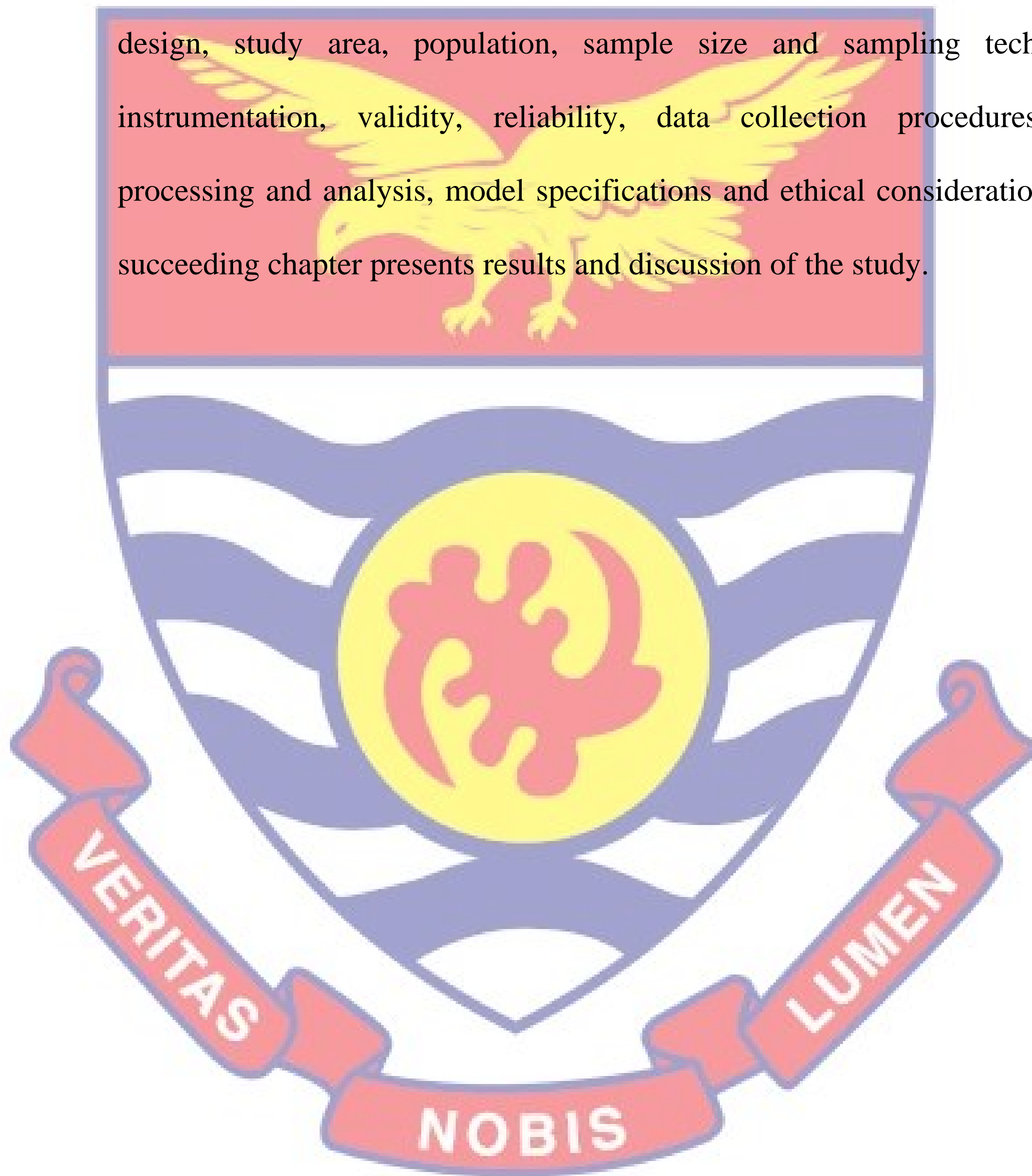
sought for their consent before using the physical documents collected from their offices.

Chapter Summary

The chapter presented the research methods of the study. The chapter presented, specifically, the quantitative research approach, the explanatory design, study area, population, sample size and sampling techniques, instrumentation, validity, reliability, data collection procedures, data processing and analysis, model specifications and ethical considerations. The succeeding chapter presents results and discussion of the study.



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CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

Purpose of the study was to examine the relationship between sustainability disclosures and financial performance of listed firms in Ghana. The study assessed the effect of corporate sustainability disclosures on financial performance of firms listed on the Ghana Stock Exchange. The first section presents descriptive statistics; the second section presents correlation coefficient matrix; the third section present results and discussion on the first research objective – extent of sustainability disclosure practices among listed firms in Ghana using the Global Reporting Initiative (GRI) G4 performance indicator; the fourth section presents results and discussion on the second research objective – effect of economic performance disclosure on financial performance; the fifth section presents results and discussion based on the third research objective – effect of social performance disclosure on financial performance; the sixth section presents results and discussion on the fourth study objective – effect of environmental performance disclosure on financial performance, and the seventh section on the fifth objective. Summary of hypotheses tests as well as chapter summary is presented.

Descriptive Statistics

Before addressing the main study objectives, the researcher conducted an analysis to ascertain the level of firms' economic performance disclosure, social performance disclosure, environmental performance disclosure, overall sustainability disclosure practices, financial performance, and control variables of firm growth, firm size and liquidity. The descriptive statistical

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tools of mean, standard deviation, minimum and maximum were used for this analysis. The outcome of the analysis helped the researcher to ascertain the overall distribution of the data. The outcome also helped to check how normal the data have been distributed. The results are presented in 2

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Table 2: Descriptive Statistics

Statistics	Economic performance disclosure	Environmental performance disclosure	Social performance disclosure	Financial performance	Overall sustainability disclosure practices	Firm growth	Firm size	Liquidity
Mean	0.1500	0.4333	0.5802	2.9870	3.5455	0.2113	2.3431	0.3442
Std. Deviation	0.1317	0.8110	0.0736	0.0684	2.1762	0.2121	1.3211	0.5221
Minimum	0.0000	0.4000	0.3000	0.1508	2.3560	0.0002	0.0033	0.0212
Maximum	0.4000	0.6000	0.6000	6.9343	13.4600	2.0011	3.0212	2.0101

Source: Annual reports of listed firms on GSE (2015-2019) Obs. 135

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From Table 2, social performance disclosure showed the highest average score (M = 0.5802; SD = 0.0736) among the corporate sustainability disclosures among listed firms on the Ghana Stock Exchange. This was followed by environmental performance disclosure (M = 0.4333; SD = 0.8110), economic performance disclosure (M = 0.1500; SD = 0.1317), Firm growth of (M= 0.2113, SD = 0.2121), Firm size of (M= 2.3431, SD = 1.3211) and then Liquidity of (M = 0.3442, SD = 0.5221). This implies that listed firms on the Ghana Stock Exchange disclose more information on their social activities or performance than they do on economic performance and environmental performance. Also, the maximum scores recorded under economic performance disclosure, environmental performance disclosure, social performance disclosure, Firm growth, Firm size, and Liquidity were (Max. = 0.4000), (Max. = 0.6000), (Max. = 0.6000), (Max = 2.0011), (Max = 3.0212) and (Max = 2.0101) respectively. Minimum scores were (Min. = 0.0000), (Min. = 0.4000), (Min. = 0.3000), (Min. = 0.0002), (Min. = 0.0033) and (Min. = 0.0212) respectively. The overall sustainability disclosure practices showed descriptive scores of (M = 3.5455; SD = 2.1762; Max. = 13.4600; Min. = 2.3560).

Also, an appreciable mean value has been shown for financial performance (M = 2.9870; SD = 0.0684). It should be recalled that financial performance was computed as the ratio of returns (Profit before interest and taxation) and total assets. Thus, this result implies that, on average, firms listed on the Ghana Stock Exchange would be able to cover or take care of the total value of their assets, more than two times, using their returns. Also, the maximum showed a high value (Max. = 6.9343) indicating that firms listed on

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the Ghana Stock Exchange are performing well, financially. However, the minimum showed a very low value (Min. = 0.1508) implying that at a firm's lowest financial performance, the firm would not be able to cover its total assets using its returns.

Finally, drawing from Table 2, it could be seen that the mean values are, to some extent, close to the maximum values, as well as the minimum values in the cases of environmental performance disclosure and social performance disclosure. This suggests that, the data used were fairly distributed. Thus, issues of outliers were kept minimal. This also implies that the performance disclosures in the areas of economic, social and environmental of firms listed on the Ghana Stock Exchange are similar in nature across these firms listed on the Ghana Stock Exchange.

Correlation Coefficients

As a precursor to the regression analysis, the researcher conducted the correlation matrix to assess the associations among the study variables. Thus, association between economic performance and environmental performance disclosures was assessed; correlation between economic performance disclosure and social performance disclosure was assessed; association between economic performance disclosure and financial performance was also evaluated. Further, the associations between environmental disclosure and social disclosure, and financial performance were analysed. Association between social performance disclosure and financial performance was considered. Finally, correlations between overall sustainability disclosure practices and the other variables are presented. The results are shown in Table 3 below.

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Table 3: Correlation Coefficients

		Economic performance disclosure	Environmental performance disclosure	Social performance disclosure	Financial performance	Overall sustainability disclosure practices	Firm growth	Firm size	Liquidity
Economic performance disclosure	Pearson Correlation	1	0.057	0.020	0.691**	0.239	0.022	0.122	0.32
	Sig. (2-tailed)		0.386	0.764	0.000	0.457	0.003	0.065	0.56
	Obs.	135	135	135	135	135	135	135	135
Environmental performance disclosure	Pearson Correlation	0.057	1	-0.021	-0.087	0.661	0.34	0.34	0.122
	Sig. (2-tailed)	0.386		0.753	0.190	0.065	0.541	0.541	0.884
	Obs.	135	135	135	135	135	135	135	135
Social performance disclosure	Pearson Correlation	0.020	-0.021	1	0.094	0.111	0.121	0.55	0.55
	Sig. (2-tailed)	0.764	0.753		0.154	0.562	0.045	0.71	0.71
	Obs.	135	135	135	135	135	135	135	135
Financial performance	Pearson Correlation	0.691**	-0.087	0.094	1	0.558	0.0002	0.123	0.14
	Sig. (2-tailed)	0.000	0.190	0.154		0.033	0.012	0.065	0.113
	Obs.	135	135	135	135	135	135	135	135
Overall sustainability disclosure practices	Pearson Correlation	0.239	0.661	0.111	0.558	1	0.021	0.456	0.56
	Sig. (2-tailed)	0.457	0.065	0.562	0.033		0.561	0.006	0.045
	Obs.	135	135	135	135	135	135	135	135

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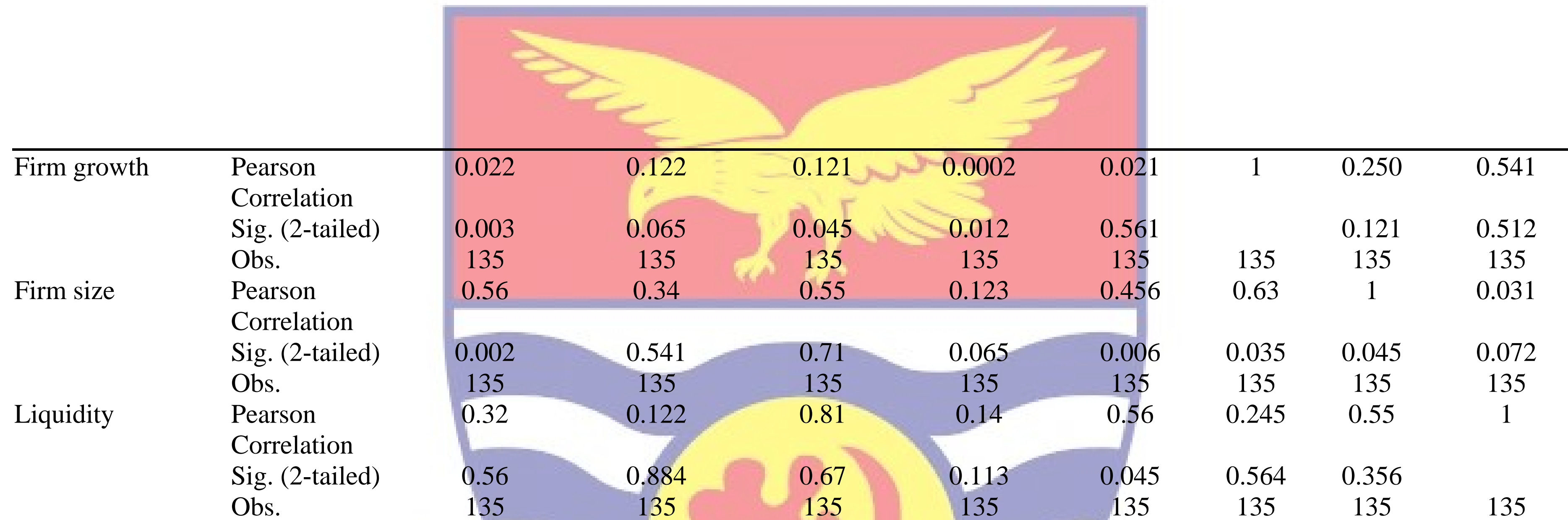

Firm growth	Pearson Correlation	0.022	0.122	0.121	0.0002	0.021	1	0.250	0.541
	Sig. (2-tailed)	0.003	0.065	0.045	0.012	0.561		0.121	0.512
	Obs.	135	135	135	135	135	135	135	135
Firm size	Pearson Correlation	0.56	0.34	0.55	0.123	0.456	0.63	1	0.031
	Sig. (2-tailed)	0.002	0.541	0.71	0.065	0.006	0.035	0.045	0.072
	Obs.	135	135	135	135	135	135	135	135
Liquidity	Pearson Correlation	0.32	0.122	0.81	0.14	0.56	0.245	0.55	1
	Sig. (2-tailed)	0.56	0.884	0.67	0.113	0.045	0.564	0.356	
	Obs.	135	135	135	135	135	135	135	135

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Annual reports of listed firms on GSE (2015-2019)

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From the results in Table 3, it could be seen that the correlation among the variables varied from -0.021 (environmental performance disclosure and social performance disclosure) to 0.691 (financial performance and economic performance disclosure). It could also be seen that all the linear relationships between the variables were insignificant, except for the relationship between financial performance and economic performance disclosure (r = 0.691, p = 0.000). Further, relationships established were either positive or negative. It was shown that there was a very weak positive and statistically insignificant relationship between environmental performance disclosure and economic performance disclosure (r = 0.057, p = 0.386).

Also, it was found that there is a very weak positive and statistically insignificant association between social performance disclosure and environmental performance disclosure (r = 0.020, p = 0.764). Further, it was revealed that financial performance has a strong positive statistically significant relationship with economic performance disclosure (r = 0.691, p = 0.000). Social performance disclosure had a very weak negative and statistically insignificant relationship with environmental performance disclosure (r = -0.021, p = 0.753). Furthermore, financial performance showed a very weak positive and statistically insignificant relationship with social performance disclosure (r = 0.094, p = 0.154). Additionally, financial performance showed a very weak negative and statistically insignificant relationship with environmental performance disclosure (r = -0.087, p = 0.190).

Finally, overall sustainability disclosure practices showed a weak positive insignificant relationship with economic performance disclosure (r =

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0.239, p = 0.457); a weak positive and statistically insignificant relationship with environmental performance disclosure (r = 0.661, p = 0.065); a weak positive and statistically insignificant correlation with social performance disclosure (r = 0.111, p = 0.562); and a moderately strong positive and statistically significant association with financial performance (r = 0.558, p = 0.033). Only the relationship between overall sustainability disclosure practices was significant.

From the results it could be seen that the correlations among the independent variables – economic performance disclosure, social performance disclosure, environmental performance disclosure and overall sustainability disclosure practices – were all weak and insignificant. This implies that the independent variables were not strongly correlated and thus could assume their individual independent statuses. Also, none of the correlation coefficients was equal to or above 0.70; thus, issues of multicollinearity were ruled out (Anderson, Sweeney, & Williams, 1990), as Anderson et al. (1990) proposed 0.70 as the cut-off, and Kennedy (2008) argued 0.90 to be the cut-off. None of the coefficients was more than either of these two cut-offs.

Extent of Sustainability Disclosure Practices among Listed Firms in Ghana Using the Global Reporting Initiative (GRI) G4 Performance Indicator

The first research objective sought to assess the extent of sustainability disclosure practices among listed firms in Ghana using the Global Reporting G4 performance indicator. The objective was basically to find out, in percentage terms, the level of disclosure practices exercised by firms listed on the Ghana Stock Exchange, with respect to the 91 performance indicators set

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forth by the Global Reporting Initiative (2011). To achieve this objective, annual reports of listed firms included in the study were analysed to check the number of indicator items disclosed, out of the 91 indicator items, on the surface of the reports. A score of one (1) was indicated if an item was disclosed, and zero (0) for nondisclosure of an item. The scores were then added together for each listed firm and converted to percentage. The percentage scores were grouped using intervals of 10. The results are presented in Table 5.

Table 4: Extent of Sustainability Disclosure Practices

Disclosure score (%)	Frequency	Percent
0 – 10	16	57
11 – 20	7	25
21 – 30	3	10
31 – 40	2	7
41 – 50	0	0
51 – 60	0	0
61 – 70	0	0
71 – 80	0	0
81 – 90	0	0
91 – 100	0	0

Source: Annual reports of listed firms on GSE (2015-2019) N = 28

From the results in Table 4, it could be seen that 16, representing (57%) of the firms listed on the Ghana Stock Exchange, disclosed (0% - 10%) of their sustainability performance of economic, social and environmental. Also, the results showed that seven (7) firms, representing (25%) of the total number of listed firms involved in this study, made a sustainability disclosure of from 11% to (20%). Further, three (3) firms (10%) had a score from (21%) to (30%) with respect to sustainability disclosure practices. Furthermore, only

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two (2) firms, representing (7%) of total number of firms used in the research, disclosed their sustainability activities to the extent of from (31%) to (40%). Finally, no firm was found to have reported extent of sustainability disclosure above a score of 40% as could be seen in Table 4.

This result was not surprising as, though firms are now beginning to accept and implement sustainability disclosure practices, most of the listed could be said to have idea about sustainability disclosure practices. This has been shown in Table 4, as out of the 28 sample listed firms, majority has been seen to have reported on sustainability practices, to some extent. This result implies that firms listed on the Ghana Stock Exchange have, over the years, improved on their understanding of benefits of sustainability disclosure. It could also be that due to the requirements for listing onto the Ghana Stock Exchange, the listed firms find it needful, to make public, information related to all aspects of their operations in order to gain public trust and stakeholder confidence. These reasons might have accounted for the extent of sustainability disclosure recorded in Table 5, though the general extent of disclosure was below 50% which was not really encouraging.

This finding correlates with the findings of Musah (2015) who found that corporate social responsibility disclosure has increased; however, the quality of the disclosure was found to be generally low; meaning, majority of the disclosures were on general statement, and information on community were considered the most disclosed. Just as averred by Musah, the extent of disclosure among the listed firms on the Ghana Stock Exchange, as displayed in Table 5, was generally low, and the current researcher also realised that most of the disclosures were focused community based activities. Also, this

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finding shows consistency with Mohammadi et al. (2018) who found that, on the average, sustainability disclosure score was shown to be low – about 12% for all listed firms. Considering this finding, it could be seen that majority of the listed firms showed scores lower than 12%.

Further, this finding is in line with Saygili et al. (2019) who reported that among 184 textiles and apparel companies listed on the Turkey top 500 industrial Enterprise, only 34 representing 18% issued sustainability reports. This only goes to affirm that even the number of firms willing to disclose their sustainability activities is not encouraging, let alone talk of the number of indicator items they include in their reports for public consumption. Furthermore, Li et al. (2019) revealed that environmental disclosures seem to be the most significant emphasised area in sustainability disclosures whilst human rights and social responsibility received the least attention. This is to say that, though firms are trying their best to disclose information, there is still a long way to go for these firms to appreciate the importance of sustainability disclosures. Perhaps there has not been a thorough understanding of these disclosures yet.

In another study, Faisal, Tower and Rusmin (2019) found an average level of sustainability disclosure. This finding is not far from the current finding as the disclosure level was not above average. In all, it could be seen from the results that firms listed on the Ghana Stock Exchange are now trying to start disclosing their corporate sustainability practices. This might have accounted for the low extent of disclosure, in that most of these firms have not really experienced the impacts of these disclosures on their performance. Even some of these firms might attribute their nonperformance to these kinds of

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disclosures; thereby, discouraging the firms from making full disclosures which would result in a high degree of sustainability disclosure among firms listed on the Ghana Stock Exchange.

Regression Analysis

The first regression model presented outcomes on the effect of economic performance disclosure on financial performance, effect of social performance disclosure on financial performance, effect of environmental performance disclosure on financial performance, and the effect of overall sustainability disclosure practices on financial performance. The second model presented the regression results after the control variables have been included in the model. Subsequently, the results were discussed, giving cognisance of the study objectives. The results, as shown in Table 6, present the regression coefficients, standard error, the F-statistic, t-statistics, significance level of the coefficient, the model summary (R, R-square, adjusted R-square, and the collinearity statistics which produced the variance inflation factor (VIF) and tolerance.

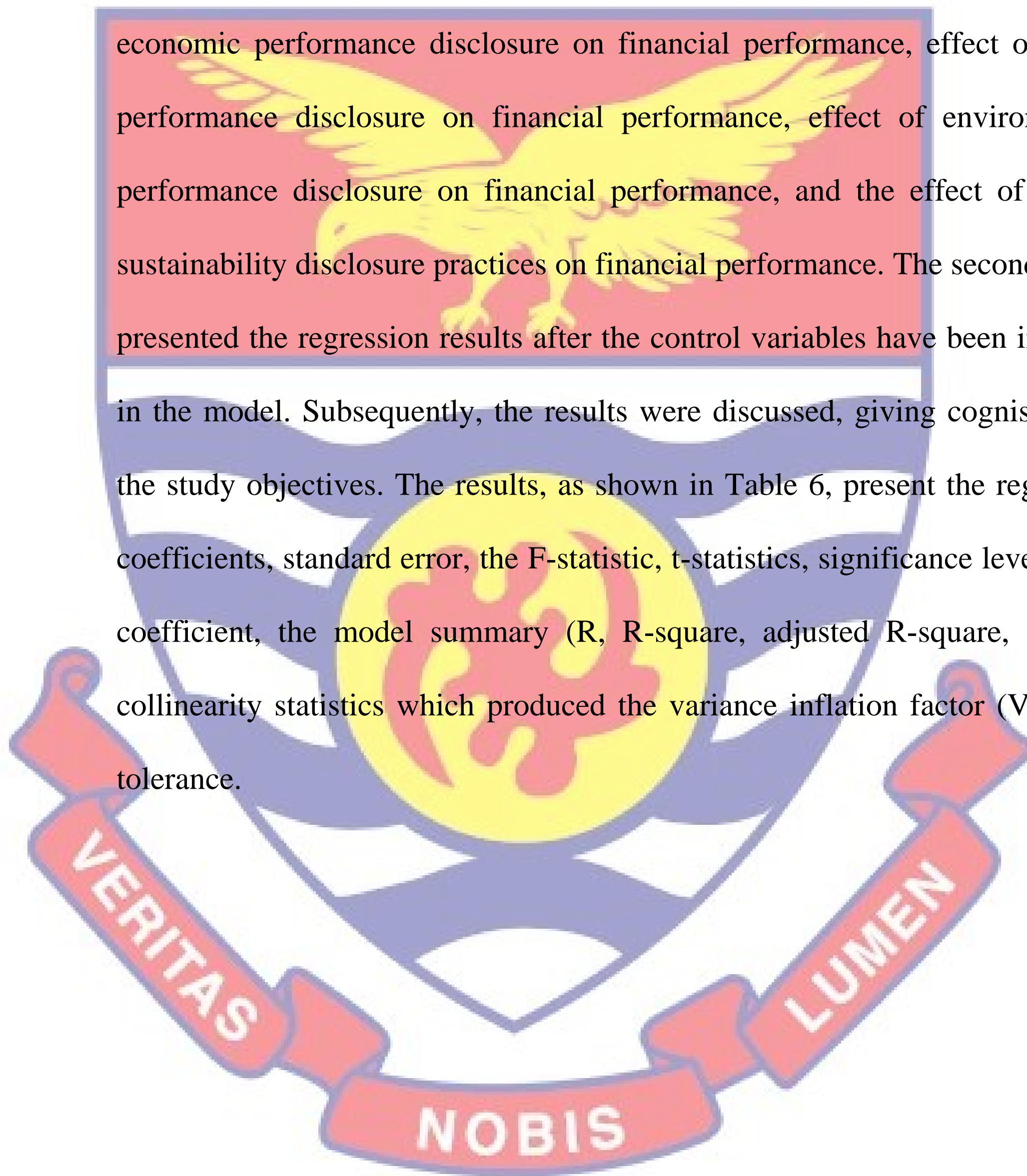

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Table 5: Regression Results

	Model 1							Model 2	
	Unstd. Coeff.		Std. Coeff.			Collinearity Statistics			
Variables	*B*	*Std. Error*	*Beta*	*t-value*	*Sig.*	*Tol.*	*VIF*	*B*	*Sig.*
(Constant)	5.920			6.359	.000			1.204	.000
Economic performance disclosure	130.231	9.017	0.691	14.442	.000	.853	1.173	.234	.000
Social performance disclosure	-1.125	0.486	-0.087	-2.314	.000	.647	1.545	.241	.000
Environmental performance disclosure	12.991	5.346	0.094	- 2.430	0.004	.591	1.692	.242	.002
Overall sustainability disclosures	1.215	0.404	0.558	3.004	0.007	.702	1.424	.228	0.000
Firm growth								.189	.051
Firm size								.062	.067
Liquidity								.049	.145
R	0.691								.651
R Squared	0.478								.424
Adjusted R Squared	0.475								.417
F-statistic (4, 311)	208.583								1.231
P-value	0.000								.070
Dependent variable: Financial performance									

Source: Annual reports of listed firms on GSE (2015-2019) Obs. = 135

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From Table 5, the results in model 1 showed Adjusted R Squared value of 0.475 indicating that, collectively, economic performance disclosure, social performance disclosure, environmental performance disclosure and overall sustainability disclosures appeared to account for (47.5%) of variation in financial performance of listed firms in Ghana. The remaining (52.5%) could be said to have been accounted for by factors other than those considered by this study. This implies that financial performance of listed firms in Ghana is, to a considerable extent, dependent on economic performance disclosure, social performance disclosure, environmental performance disclosure and overall sustainability disclosures.

Further, the results revealed F-statistics of ($F = 208.583$, $p < 0.001$). This indicates that the entire model was significant at 0.05. This is to say that, the model can be relied on as far as production of valid and reliable results is concerned. It should also be pointed out that the independent variables in the model are devoid of issues of multicollinearity or collinearity, and this was reflected in the values of Tolerance which were all greater than 0.1 but less than 1.0, and the Variance Inflation Factor (VIF) statistics which were also all greater than 1.0 but less than 10. Scholars recommend a minimum Tolerance value of 0.1 and a maximum of 1.0, and a minimum VIF of 1.0 and a maximum of 10 to state that there are no issues of multicollinearity (Hair, Anderson, Tatham, & William, 1995; Neter, Wasserman, & Kutner, 1989), and the results in Table 5 fell within these recommendations.

Furthermore, in model 2, it could be seen that the effects of economic performance disclosure, social performance disclosure, environmental performance disclosure and overall sustainability disclosures on financial

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performance remained significant; implying that the inclusion of covariates, firm growth, firm size and liquidity, did not have significant effect on the relationship between the independent variables - economic performance disclosure, social performance disclosure, environmental performance disclosure and overall sustainability disclosures – and the dependent variable – financial performance. This was reflected in the variation in financial performance explained by the independent variables, which did not change significantly (*Adjusted R Squared = 41.7%*). Model 2 also appeared to be less robust as seen in the F-statistics which was insignificant (F = 1.231, p > 0.05). All the control variables had insignificant effect on financial performance.

The effects of the individual independent variables – economic performance disclosure, social performance disclosure, environmental performance disclosure and overall sustainability disclosures – on the dependent variable – financial performance – were discussed in the subsequent sections in the following order: Effect of economic performance disclosure on financial performance, effect of social performance disclosure on financial performance, effect of environmental performance disclosure on financial performance, and effect of overall sustainability disclosures on financial performance.

Effect of Economic Performance Disclosure on Financial Performance of Listed Firms in Ghana

The second research objective sought to assess the effect of economic performance disclosure on financial performance of listed firms in Ghana. To achieve this objective, the researcher conducted the linear regression analysis,

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as shown in Table 5. The results showed that economic performance disclosure had a positive and statistically significant effect on financial performance of listed firms in Ghana (β = 130.231, t = 14.442, P = 0.000). This suggests that, holding all other factors constant, a unit change in the extent of economic performance disclosure will lead to 130.231 units change in financial performance of listed firms in Ghana. Considering the direction of the relationship or the effect, it suffices to say that a unit increase or improvement in economic performance disclosure will lead to 130.231 units increase or improvement in the financial performance of firms listed on the Ghana Stock Exchange.

This finding was not surprising, as contributions of firms towards the economic conditions of individuals, other organisations and nation at large are considered very important. For instance, stakeholders of firms attach high importance to their economic conditions so when a firm's activities impact their economic conditions positively, the likelihood that these individuals will patronise the businesses of the firm is very high; thus, the finances of the firm will see improvement as well. Also, when a firm's economic performances are disclosed, the public is likely to repose more confidence in the firm and its activities; thus, leading to positive impacts on all profit-generating units of the firm, hence, improved financial performance.

This finding is inconsistent with the findings of some prior researchers (Asuquo et al., 2018; Kwagfan, 2015) who looked at sustainability disclosure, with a special focus on economic performance disclosure, and corporate performance, measured using financial performance indicators. For instance, Asuquo et al. found economic performance disclosure to have negative effect

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on financial performance of firms in Nigeria. This finding might be inconsistent with Asuquo et al.'s finding because of the study location and the general economic condition of the setting. It could then be said that the setting of the current study influenced the results obtained. Also, Kwagfan found economic performance disclosure to have no significant effect on financial performance of firms in Nigeria. Again, Kwagfan's study was conducted in Nigeria; thus, confirming the fact that study locales play a role in how economic performance disclosure influence financial performance of firms. This is to say that stakeholders in Ghana are more sensitive to information disclosure.

However, in studies where the effect of corporate sustainability disclosure on financial performance was considered a whole without considering the various aspects of sustainability disclosures, the results revealed a positive but insignificant effect of sustainability disclosures on financial performance (Sampong et al., 2018). Also, Whetman (2018) found a positive relationship between sustainability disclosures and financial performance. These results might have been possible due to the fact that the researchers did not focus separately on economic performance disclosure and its effect on financial performance.

Further, some of the prior studies which considered sustainability disclosures and financial performance found that sustainability disclosures have high impact on profitability (Mohammadi et al., 2018; Agu, & Amedu, 2018). However, it was noticed that, as posited by Asuquo et al. (2018), the significance of the effect was dependent on the study area. This implies that the positive significant effect of economic performance disclosure on

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financial performance found in this study might be due to the location of the study. Thus, as stated earlier, stakeholders of firms are influenced differently dependent on where these stakeholders are found, same with their sensitivity levels.

Ultimately, this finding correlates with the legitimacy and the stakeholder theories by Freeman (1984) and Dowling and Pfeffer's (1975), respectively. These theories postulate that if firms adhere to sustainability disclosure practices and make information available to the public, their general performance may be affected positively; and these disclosures may be in the area of economic performance disclosures. This is to say that the more the firms listed on the Ghana Stock Exchange disclose their economic performance, the more these firms are going to improve in their performance, financially.

All in all, the foregoing discussion points to the fact that among the firms listed on the Ghana Stock Exchange, the more these firms disclose information related to their economic performance, the more their financial performances are expected to improve. This was shown in the results as economic performance disclosure was found to have positive and significant effect on financial performance of firms listed on the Ghana Stock Exchange. Therefore, for the listed firms to improve their financial performance, there will be the need to disclose practices related to their economic performance.

Effect of Social Performance Disclosure on Financial Performance of Listed Firms in Ghana

The third research objective sought to assess the effect of social performance disclosure on financial performance of listed firms in Ghana. To

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achieve this objective, the researcher conducted the linear regression analysis. The results, as shown in Table 5, showed that social performance disclosure had a statistically significant negative effect on financial performance of listed firms in Ghana (β = -1.125, t = -2.314, P = 0.000). This suggests that, holding all other factors constant, a unit change in the extent of social performance disclosure will lead to 1.125 units change in financial performance of listed firms in Ghana. Considering the direction of the relationship or the effect, it suffices to say that a unit increase or improvement in social performance disclosure will lead to 1.125 units decrease or improvement in the financial performance of firms listed on the Ghana Stock Exchange.

This finding could be explained that stakeholders of the firms listed on the Ghana Stock Exchange do not really attach importance to social activities of firms. It could be that social activities or performance of firms are deemed to be obligations of the firms and thus yield nothing in return for firms which disclose them. Therefore, if firms disclose more, in terms of social performance, it means they have invested in more social projects, and if the public does not react to these activities by the firms by patronising the firms' products or services, the firms' finances are likely to suffer. This is to say that the firms' profitability will be adversely affected and thus resulting low financial performance. Also, some stakeholders may deem a firm's disclosure of social impacts as a way the firm is trying to show off, and thus punish the firm by refusing to patronage it; thereby, leading to dwindled income and ultimately, a fallen financial performance.

This finding shows inconsistence with the findings of Wasara and Ganda (2019) who found a positive relationship between social performance

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disclosure and financial performance measured by return on investment. Wasara and Ganda's study was conducted outside the current study area. This might have influenced the result in some way. Also, it could be that stakeholders of firms listed on the Ghana Stock Exchange view social performance differently, compared to stakeholders of listed firms elsewhere. Further, in another study, Razali et al. (2018) found positive and significant relationship between social responsibility disclosure and financial performance, and this finding does not correlate with the current finding. These differences in findings could be attributed to differences in understanding of social impacts made by firms.

Further, this finding does not support the finding of Agu and Amedu (2018) who found social disclosure to have positive but insignificant effect on financial performance of firms in Nigeria. However, in studies where the effect of corporate sustainability disclosure, as a whole, on financial performance was considered, results revealed positive but insignificant effect of sustainability disclosures on financial performance (Sampong et al., 2018; Whetman, 2018; Mohammadi et al., 2018). These findings could be said to have been due to the fact that other elements aside social performance disclosure was included in the variable – sustainability disclosure.

Furthermore, this finding does not support the finding of Asuquo et al. (2018) who found that social performance disclosures do not have significant effect on financial performance of firms. Kwagfan (2015) found social performance disclosure to have positive and significant effect on financial performance of firms in Nigeria, and the current finding is inconsistent with Kwagfan's finding. This finding also does not support the stances of the

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legitimacy theory (Freeman, 1984) and the stakeholder theory (Dowling, & Pfeffer, 1975). The current result might be due to locational factor and changes in current business environment.

In summary, the discussion thus far points to the fact that among the firms listed on the Ghana Stock Exchange, the more these firms disclose information related to their social performance and activities, the more their financial performances are expected to dwindle. This was revealed in the findings as social performance disclosure was found to have negative and significant effect on financial performance of firms listed on the Ghana Stock Exchange. Therefore, for the listed firms to improve their financial performance, there will be the need to cut down on disclosures of practices related to their social performance, or just reduce investment in social activities so that there will be only few indicators of social performance to report on.

Effect of Environmental Performance Disclosure on Financial Performance of Listed Firms in Ghana

The fourth study objective sought to analyse the effect of environmental performance disclosure on financial performance of listed firms in Ghana. To achieve this objective, the researcher conducted the linear regression analysis. The results, as shown in Table 5, indicated that environmental performance disclosure had a statistically significant positive effect on financial performance of listed firms in Ghana ($\beta = 12.991$, $t = -2.430$, $P = 0.004$). This suggests that, holding all other factors constant, a unit change in the extent of environmental performance disclosure will lead to 12.991 units change in financial performance of listed firms in Ghana.

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Considering the direction of the effect, it can be said that a unit increase or improvement in environmental performance disclosure will lead to 12.991 units increase or improvement in the financial performance of firms listed on the Ghana Stock Exchange.

This finding could be explained that stakeholders of the firms listed on the Ghana Stock Exchange are interested in the impacts firms have on living and non-living natural systems, including ecosystems, land, air and water. Therefore, if firms report on more environmental performance indicators, individuals tend to pay much attention to the firms and their operations, culminating in increased patronage of products or services of the firms. This implies that if firms disclose more, in terms of their environmental performance, it means they have invested in more environmental related projects such as water, pollution management among others, and if the public reacts to these activities by patronising the firms' products or services, the firms' finances are likely to improve. This is to say that the firms' profitability will be positively affected and thus result in increased financial performance.

This finding does not correlate with the findings of Wasara and Ganda (2019) who found a negative effect of environmental performance disclosure on financial performance measured by return on investment. Wasara and Ganda's study was conducted outside the current study area; this might have influenced the result in some way. Also, it could be that stakeholders of firms listed on the Ghana Stock Exchange view environmental performance differently, compared to stakeholders of listed firms in other countries. Further, in another study, Agu and Amedu (2018) found negative and

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insignificant relationship between environmental performance disclosure and financial performance, and this finding also does not correlate with the current finding. These differences in findings could be attributed to differences in stakeholders' understanding of environmental impacts made by firms.

Further, this finding does not support the findings of Asuquo et al. (2018) who found environmental performance disclosure to have no effect on financial performance of firms in Nigeria. Also, in studies where the effect of corporate sustainability disclosure, as a whole, on financial performance was considered, results revealed, still, positive but insignificant effect of sustainability disclosures on financial performance (Sampong et al., 2018; Whetman, 2018; Mohammadi et al., 2018; Agu, & Amedu, 2018). These prior findings could be said to have been due to the fact that other elements apart from environmental performance disclosure were included in measuring the variable, sustainability disclosures; thus, causing the insignificant results.

Furthermore, this finding does not support the finding of Kwagfan (2015) who found environmental performance disclosure to have negative effect on financial performance, measured using return on assets, of firms in Nigeria. Nevertheless, this finding seems to be in line with the legitimacy theory (Freeman, 1984) and the stakeholder theory (Dowling, & Pfeffer, 1975) which posited that firms' interactions with the community in which they operate contribute to success of these firms, and these interactions can be in the form of undertaking environmental related projects and disclosing same.

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In all, the discussion so far shows that the more the firms listed on the Ghana Stock Exchange disclose information related to their environmental performance and activities, the more their financial performances are expected to increase. This was revealed in the findings as environmental performance disclosure was found to have positive and significant effect on financial performance of firms listed on the Ghana Stock Exchange. Therefore, for the listed firms to improve their financial performance, there will be the need to increase their extent of disclosures of practices related to their environmental performance, or just increase investment on environmental activities so that there will be many environmental performance indicators to disclose.

Effect of Overall Sustainability Disclosure Practices on Financial Performance of Listed Firms in Ghana

The fifth research objective sought to determine the effect of overall sustainability disclosure practices on financial performance of listed firms in Ghana. To achieve this objective, the researcher conducted the linear regression analysis. The results, as shown in Table 6, indicated that overall sustainability disclosure practices had a positive and statistically significant effect on financial performance of listed firms in Ghana ($\beta = 1.215$, $t = 3.004$, $P = 0.007$). This suggests that, holding all other factors constant, a unit change in the extent of sustainability disclosure practices will lead to 1.215 units change in financial performance of listed firms in Ghana. Considering the direction of the relationship or the effect, it could be said that a unit increase or improvement in overall sustainability disclosure practices would lead to 1.215

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units increase or improvement in the financial performance of firms listed on the Ghana Stock Exchange.

This finding was not surprising, as contributions of firms towards overall sustainability disclosure practices which revolve around social conditions; environmental conditions; economic conditions of individuals, other organisations and nation at large are considered very important. For example, stakeholders of firms attach high importance to their economic, social and environmental conditions so when a firm's activities impact these conditions positively, the likelihood that these stakeholders will patronize the business activities of the firm is very high; therefore, the finances of the firm will see increment as well. Also, when a firm discloses its overall sustainability practices, the public is likely to repose more confidence in the firm and its activities; thus, leading to positive impacts on all profit-generating units of the firm, hence, improved financial performance.

This finding is inconsistent with the findings of some prior researchers (Asuquo et al., 2018; Kwagfan, 2015) who looked at sustainability disclosure and corporate performance, measured using financial performance indicators. For instance, Asuquo et al. (2018) found sustainability disclosure practices to have negative effect on financial performance of firms in Nigeria. This current finding might be inconsistent with Asuquo et al.'s (2018) finding because of the study locale and the general economic condition of the setting. It could then be said that the area of the current study influenced the results obtained. Also, Kwagfan found sustainability disclosure to have no significant effect on financial performance of firms in Nigeria. Again, Kwagfan's study was conducted in Nigeria; therefore, confirming the fact that study locales

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play a role in how sustainability disclosure practices influence financial performance of firms. This is to say that stakeholders of firms in Ghana are more sensitive to information disclosure as far as sustainability practices are concerned.

However, in studies where the effect of corporate sustainability disclosure on financial performance was considered, the results revealed a positive but insignificant effect of sustainability disclosures on financial performance (Sampong et al., 2018). Also, Whetman (2018) found a positive relationship between sustainability disclosure practices and financial performance. These results might have been possible due to the fact that these researchers might have focused on firms whose stakeholders attach importance to information disclosure.

Further, some of the prior studies which considered sustainability disclosures and financial performance found that sustainability disclosures have high impact on profitability (Mohammadi et al., 2018; Agu, & Amedu, 2018). However, it was noticed that, as posited by Asuquo et al. (2018), the significance of the effect was dependent on the study area. This implies that the positive significant effect of overall sustainability disclosure practices on financial performance found in this study might be due to the location of the study. Therefore, as mentioned earlier, stakeholders of firms are influenced differently dependent on where these stakeholders are located, same with their sensitivity levels as far as information is concerned.

Ultimately, this finding correlates with the legitimacy and the stakeholder theories by Freeman (1984) and Dowling and Pfeffer's (1975), respectively. These theories postulate that if firms adhere to sustainability

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disclosure practices and make information available to the public, their general performance may be affected positively; and these disclosures may be in the area of all the indicators - economic performance disclosures, social performance disclosure and environmental performance disclosures – of sustainability disclosure practices. This is to say that the more the firms listed on the Ghana Stock Exchange engage in sustainability disclosure practices, the more improvement these firms are likely to see in their financial performance.

All said and done, the discussion above pointed to the fact that the more the firms listed on the Ghana Stock Exchange disclose information related to their sustainability practices, the more their financial performances are expected to improve. This was shown in the results as overall sustainability disclosure practice was found to have significant positive effect on financial performance of firms listed on the Ghana Stock Exchange. Therefore, for the listed firms to improve their financial performance, there will be the need to practice sustainability disclosures.

Summary of Hypotheses Tested, Results, Decision, and Conclusion

This section presents a summary of the hypotheses tested, the outcomes, decisions, as well as the conclusions drawn. The summary of the tests are shown in Table 6.

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Table 6: Summary of Hypotheses Tested, Results and Conclusions

Hypotheses statement	Results *Regression coefficient*	Decision	Conclusions
H_1 *: There is no statistically significant effect of economic performance disclosure on financial performance of listed firms in Ghana.*	B = 130.231 $P < 0.05$	H_1 rejected	Statistically significant positive effect of economic performance disclosure on financial performance of listed firms in Ghana.
H_2 *: There is no statistically significant effect of social performance disclosure on financial performance of listed firms in Ghana.*	B = -1.125 $P < 0.05$	H_2 rejected	Statistically significant negative effect of social performance disclosure on financial performance of listed firms in Ghana.
H_3 *: There is no statistically significant effect of environmental performance disclosure on financial performance of listed firms in Ghana.*	B = 12.991 $P < 0.05$	H_3 rejected	Statistically significant positive effect of environmental performance disclosure on financial performance of listed firms in Ghana.
H_4 *: There is no statistically significant effect of overall sustainability disclosure practices on financial performance of listed firms in Ghana.*	B = 1.215 $P < 0.05$	H_4 rejected	Statistically significant positive effect of overall sustainability disclosure practices on financial performance of listed firms in Ghana.

Source: Annual reports of listed firms on GSE (2015-2019) Obs. = 135

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Chapter Summary

This chapter presented results and discussion of the study. The chapter presented descriptive statistics, correlation coefficients, and regression coefficients. The main results were presented and discussed, giving cognisance of the study objectives. Assessment of the first objective revealed that the extent of sustainability disclosure practices of firms listed on the Ghana Stock Exchange was between (0%) and (40%). Analysis of the second objective showed that economic performance has effect on financial performance of firms listed on the Ghana Stock Exchange, and this effect was found to be positive and statistically significant. Assessment of the third objective showed that social performance disclosure has negative and statistically significant effect on financial performance of listed firms. Finally, environmental performance disclosure was found to have significantly positive effect on financial performance of listed firms.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

Purpose of the study was to examine the relationship between sustainability disclosures and financial performance of listed firms in Ghana. This chapter aims at presenting the summary, key findings, conclusions, and recommendations of this study. The summary presents a brief overview of the study problem, objectives, research methods as well as the analytical techniques employed. Key findings section focuses on the summary of the main findings of the study. On the other hand, the conclusions summarise the overall outcomes and implications regarding the findings of the study with cognisance of the research objectives. The recommendations also present specific suggestions to be applied by specific concerned individuals and institutions, based on the findings. The chapter closes with suggestions for further research.

Summary

It should be pointed out that sustainability disclosure is not guided by international acceptable standards; hence, leading to inconsistencies in companies' sustainability reports, and these have affected measurement and quality of disclosures as firms ignore to publish bad news but publish good news to improve their image. Also, the relevance of sustainability disclosure, as far as its effect on financial performance is concerned, has not really been accentuated in literature. It was against this background that the current study was carried out for the purpose of determining the effect of sustainability

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disclosures on financial performance of firms listed on the Ghana Stock Exchange.

The specific objectives the study sought to achieve were: 1, to determine the extent of sustainability disclosure practices of firms listed on the Ghana Stock Exchange; 2, to determine the effect of economic performance disclosure on financial performance of firms listed on the Ghana Stock Exchange; 3, to assess the effect of social performance disclosure on financial performance of firms listed on the Ghana Stock Exchange; 4, to analyse the effect of environmental performance disclosure on financial performance of listed firms on the Ghana Stock Exchange; and five, to determine the overall effect of sustainability development practices on financial performance of listed firms in Ghana.

To achieve the foregoing objectives, the explanatory research design, in the light of the quantitative research approach, was employed. The criterion sampling technique was used to select a sample of 28 listed firms out of a total of 38 listed firms on the Ghana Stock Exchange. Annual reports and other documents were analysed to extract secondary data for the study. The data extracted were analysed using both descriptive and inferential statistical tools. Specifically, descriptive statistics such as frequency, percentage, mean and standard deviation; inferential statistics, such as the Pearson product-moment correlation and regression analysis, were used to analyse the study objectives and test the hypotheses formulated. The following section presents the key findings.

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Key Findings

The first objective aimed at assessing the extent of sustainability disclosure practices of firms listed on the Ghana Stock Exchange. The results showed that 16 out of the 28 listed firms had disclosure scores between (0%) and (10%); seven (7) had sustainability disclosures scores between (11%) and (20%); two (2) had sustainability disclosure scores between (21%) and (30%); and three (3) had sustainability disclosures scores between (31%) and (40%). These show that the firms' extent of sustainability disclosure practices ranges from (0%) to (40%). This implies that majority of the listed firms on the Ghana Stock Exchange do not report on most of the indicators stated by the Global Initiative Reporting.

Also, the second objective sought to analyse the effect of economic performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The result showed a significant positive effect of economic performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The finding actually pointed out that economic performance disclosure was a key antecedent of financial performance of firms listed on the Ghana Stock Exchange. This implies firms that focus on economic impacts and economic conditions of stakeholders are likely to have their finances improved.

Further, the third objective sought to analyse the effect of social performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The result showed a significant negative effect of social performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The finding revealed that social performance disclosure was

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a determinant of financial performance of firms listed on the Ghana Stock Exchange. This finding actually implies that firms that focus less on disclosing social performances are likely to perform well, financially.

Furthermore, the fourth objective sought to analyse the effect of environment performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The result showed a significant positive effect of environmental performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The finding actually pointed out that environmental performance disclosure was an important determinant of financial performance of firms listed on the Ghana Stock Exchange. This implies that firms that focus on environment related elements, such as the land, water and water are likely to have their finances improved.

Finally, the fifth objective sought to determine the effect of overall sustainability disclosure practices on financial performance of firms listed on the Ghana Stock Exchange. The result showed a significant positive effect of overall sustainability disclosure practices on financial performance of firms listed on the Ghana Stock Exchange. The finding actually pointed out that overall sustainability disclosure practices was an important determinant of financial performance of firms listed on the Ghana Stock Exchange. This suggests that firms that focus on overall sustainability disclosure practices, such as economic, environment and social performance disclosures are likely to have their finances improved.

Conclusions

Considering the findings of the study, the following conclusions could be drawn based on the study objectives. The first objective aimed at

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assessing the extent of sustainability disclosure practices of listed firms on the Ghana Stock Exchange. The results showed that the extent of disclosure was between (0%) and (40%). This may imply that firms listed on the Ghana Stock Exchange do not have deep appreciation for and understanding of sustainability disclosures and potential benefits associated with these disclosures.

Also, the second objective sought to analyse the effect of economic performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The result showed a significant positive effect of economic performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. It can then be averred that listed firms which focus on economic conditions of stakeholders and disclose same are more likely to experience increase in financial performance compared to firms which pay less attention to economic performance disclosures. This implies that the more economic disclosures are made, the more improvement firms are likely to see in their financial performance.

Further, the third objective sought to analyse the effect of social performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The result showed a significant negative effect of social performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. It can therefore be said that listed firms which focus less on social responsibility and disclose less information on social performance are more likely to experience increased financial performance compared to firms which pay more attention to social performance disclosures. This implies that

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the less social disclosures are made, the more improvement firms are likely to see in their financial performance.

Additionally, the fourth objective sought to analyse the effect of environmental performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. The result showed a significant positive effect of environmental performance disclosure on financial performance of firms listed on the Ghana Stock Exchange. It can then be safely concluded that listed firms which focus on environmental conditions and disclose information related to same are more likely to experience increase in financial performance compared to firms which pay less attention to environmental performance disclosures. This implies that the more environmental disclosures are made, the more improvement firms are likely to see in their performance, financially.

Last but not least, the fifth objective sought to determine the effect of overall sustainability disclosure practices on financial performance of firms listed on the Ghana Stock Exchange. The result showed a significant positive effect of overall sustainability disclosure practices on financial performance of firms listed on the Ghana Stock Exchange. It can then be concluded that listed firms which focus on sustainability practices and disclose information related to same are highly likely to experience improvement in financial performance compared to firms which pay less attention to overall sustainability disclosure practices. This means that the more sustainability disclosures practices are upheld by firms, the more improvement firms are likely to see in their financial performance.

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Recommendations

Having considered the key findings and the conclusions drawn, it was imperative to make recommendations which might possibly influence the activities of firms listed on the Ghana Stock Exchange. These recommendations focused on extent of sustainability disclosure practices, economic performance disclosure, social performance disclosures and environmental performance disclosures. The researcher, thus, made the following recommendations based on the current findings and conclusions drawn.

1. Management of firms listed on the Ghana Stock Exchange should obtain documents on corporate sustainability disclosures from the Global Initiative Reporting so that management and other key employees can read and understand the various performance indicators used to assess extent of sustainability disclosures. This would help the firms get to know the various areas to focus.
2. Management of firms listed on the Ghana Stock Exchange should educate their employees on the importance of economic performance disclosures so that all information related to economic conditions of stakeholders would be recorded and disclosed accordingly.
3. Also, it is recommended that firms embark on corporate social responsibilities but be moderate in reporting them as too much disclosure has adverse influence on their financial performance.
4. Management of listed firms should increase activities related to improving the environment in which they operate and also report, in their annual report or sustainability report, on as many as the

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environmental performance indicators stated by the Global Initiative Reporting.

5. Management of firms listed on the Ghana Stock Exchange should encourage key employees to pay attention to overall sustainability disclosure practices, and report all information related economic, social and environmental performance, as stakeholders' access to these pieces of information positively influences the overall financial performance of the firms.

Suggestions for Further Research

Considering the gaps identified in literature and the limitation of the current study, a number of topics could be suggested for further studies. For instance, from the literature reviewed, it was revealed that no study has yet been conducted to consider all firms listed on various stock exchanges in Africa. However, the current study has considered firms in Ghana only; thus, a further study can be conducted to consider all listed firms in Africa. This will help, considering how important sustainability disclosure is becoming in the corporate world.

Also, opportunity for research can be seen in the need for different research designs. The current study was based on quantitative approach and employed the explanatory design. Future studies may consider using primary data and incorporate some elements of qualitative data. Also, this study used linear regression to analyse the effect of corporate sustainability disclosures on financial performance of firms listed on the Ghana Stock Exchange. Future studies could employ other analytical tools such as the Structural Equation Modelling to analyse such effects simultaneously, and even consider

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mediation and moderation effects among economic, social and environmental performance disclosures.

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APPENDICES

APPENDIX A

Listed Firms on the Ghana Stock Exchange

SN	Acronyms	Full name of firms
1	AADs	AngloGold Ashanti Depository Shares
2	ACCESS	Access Bank Ghana
3	ADB	Agricultural Development Bank
4	AGA	AngloGold Ashanti Limited
5	ALW	Aluworks LTD
6	BOPP	Benso Oil Palm Plantation Ltd
7	CAL	CalBank PLC
8	CLYD	Clydestone (Ghana) Limited
9	CMLT	Camelot Ghana Ltd
10	CPC	Cocoa Processing Company
11	DASPHARMA	Daspharma
12	DIGICUT	Digicut Advertising and Production Ltd
13	EGH	Ecobank Ghana Ltd
14	EGL	Enterprise Group Limited
15	ETI	Ecobank Transnational Incorporation
16	FML	Fan Milk Limited
17	GCB	Ghana Commercial Bank Limited
18	GGBL	Guinness Ghana Breweries Ltd.
19	GLD	New Gold Issuer Limited
20	GOIL	Ghana Oil Company Limited

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21	GSR	Golden Star Resources Ltd.
22	HORDS	Hords LTD
23	MAC	Mega African Capital Limited
24	MLC	Mechanical Lloyd Company Plc.
25	MMH	Meridian-Marshalls Holdings
26	MTNGH	MTN Ghana
27	PBC	Produce Buying Company Ltd.
28	RBGH	Republic Bank (Ghana) Ltd
29	SAMBA	Samba Foods Ltd
30	SCB	Standard Chartered Bank Ghana Ltd.
31	SCB PREF	Standard Chartered Bank Ghana Ltd.
32	SIC	SIC Insurance Company Limited
33	SOGEGH	Societe Generale Ghana Limited
34	SWL	Sam Wood Ltd.
35	TBL	Trust Bank Limited (THE GAMBIA)
36	TLW	Tullow Oil Plc
37	TOTAL	Total Petroleum Ghana Ltd
38	UNIL	Unilever Ghana Limited

Source: Ghana Stock Exchange (2021)

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APPENDIX B

Listed Firms in the Sample

SN	Acronyms	Listed companies
1	ALW	Aluworks LTD
2	BOPP	Benso Oil Palm Plantation Ltd
3	CAL	CalBank PLC
4	CLYD	Clydestone (Ghana) Limited
5	CMLT	Camelot Ghana Ltd
6	CPC	Cocoa Processing Company
7	EGH	Ecobank Ghana Ltd
8	EGL	Enterprise Group Limited
9	ETI	Ecobank Transnational Incorporation
10	FML	Fan Milk Limited
11	GCB	Ghana Commercial Bank Limited
12	GGBL	Guinness Ghana Breweries Ltd.
13	GLD	New Gold Issuer Limited
14	GOIL	Ghana Oil Company Limited
15	GSR	Golden Star Resources Ltd.
16	MAC	Mega African Capital Limited
17	MLC	Mechanical Lloyd Company Plc.
18	PBC	Produce Buying Company Ltd.
19	RBGH	Republic Bank (Ghana) Ltd
20	SCB	Standard Chartered Bank Ghana Ltd.
21	SCB PREF	Standard Chartered Bank Ghana Ltd.

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22	SIC	SIC Insurance Company Limited
23	SOGEGH	Societe Generale Ghana Limited
24	SWL	Sam Wood Ltd.
25	TBL	Trust Bank Limited (THE GAMBIA)
26	TLW	Tullow Oil Plc
27	TOTAL	Total Petroleum Ghana Ltd
28	UNIL	Unilever Ghana Limited

Source: Ghana Stock Exchange (2021)

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