CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

Sustainable development is a significant issue facing society today. Investors and other stakeholders in Nigeria and beyond demand holistic view of business through corporate reporting. Stakeholders want information that will enable them to more effectively assess the total economic value of an organisation (IRCSA, 2011). They needed to have more detailed information about the present and the expected future rather than just the past economic situation of companies.

Corporate report is used by corporate managers to communicate their activities to wide range of stakeholders. Some of these company's activities will have future impact on the society, ecosystem and the economy which affect the chance of future generations meeting their needs (Suttipun, 2012). Thus the public want to know through disclosures which companies it can trust and, more importantly, which it cannot. Reporting to provide users with broad data about all activities and uncertainties which they need to make correct judgment about a company is in the public interest in this century of global financial and economic crunch, increased sharp business practices, global warming, ozone depletion, water scarcity among other challenges of this century.

Unfortunately the information that will enable investors to assess all the significant risks of firms' activities are missing from the conventional corporate report (Lubber & Moffat, 2010). Many drivers of value are not accounted for in the conventional corporate report. There have been increasing concerns that existing system of corporate reporting lack transparency and no longer provide all the information stakeholders need to assess corporate performance and value. It is inadequate to meet the information needs of a variety of stakeholders. Numerous studies have highlighted the criticisms and limitations of the existing financial reporting model (Gatimbu & Wabwire, 2016; Feyitimi, 2014; Thiagarajan & Baul, 2014; Institute of Chartered Accountants Australia , 2014; Omoye, 2013; Adekunle & Taiwo, 2013; Binh, 2012; Kass, 2012; Cohen, Holder-Webb, Nath, & Wood, 2012;

ACCA, 2012; Chvatalová, Kocmanová, & Dočekalová, 2011; Adams, Fries, & Simnett, 2011). It contain little non-financial information necessary to provide a clear view on current performance and enable more accurate predictions regarding future prospects. The global climate change and the subsequent depletion of natural resources; financial and economic crunch has raised fundamental questions about the functioning of the capital markets and the extent to which existing corporate disclosures highlight systemic risks and the true cost of doing business in today's world. Commenting on the shortcomings of current corporate reporting model, Arnold (2014) noted that the well-established practice of reporting on a company's development and progress in purely financial terms has been challenged for some time on the grounds that financial figures alone cannot fully represent and reflect the impact a corporation has on other stakeholders and society.

The climax of the criticism is the crises of confidence and credibility that marked investment scene following the collapse of world known corporation in the developed countries, many financial institution in Nigeria and the resultant loss of confidence in capital market (Uwuigbe, Peter, & Oyeniyi, 2014; Abubakar, Garba, Sokoto, & Maishanu, 2014). Incessant corporate scandals have resulted in increased attention to improve and enforce financial reporting disclosures worldwide in order to reform the global economy. Succinctly put there has been increased awareness in the business world and general public for a sound corporate reporting and governance system (Hawkamah & Ernst & Young 2014). Thus, directors and managers find themselves in a vastly more complex environment, increasingly accountable to and influenced by multiple stakeholders and pressured from all sides for better reporting on corporate health and behaviours (Thiagarajan & Baul, 2014).

To overcome the criticisms and the corresponding lack of trust in the conventional corporate report many are now calling for the introduction of a reporting model that provides a strategic picture of the company, focusing on all the issues which have a material impact on its business model. No wonder Aruwa (2010) noted that changes in the corporate reporting environment have led to call for changes

in the current reporting practices. A significant factor in developing this trust is communication, bearing in mind that disclosure and dissemination of meaningful data to enable the shareholders and others to make informed decisions has long been considered a cornerstone of corporate report. Companies have been striving to improve stakeholder reporting (Ib, Jide, & Zik-Rullahi 2015; Boesso & Kumar, 2007; Financial Accounting Standard Board - FASB, 2001). It created opportunities for new reporting models and institutional innovations. Companies in an attempt to address the shortcoming have experimented with different types of information disclosures. They continuously seek new ways to improve performance, win shareholders and other stakeholders trust. This saw the emergence of interim reporting, statement of other comprehensive income, segmental reporting, quarterly earnings announcements, and focus on audit quality, fair value measurement, intangible assets reporting, disclosure of changes in equity, investment quality, corporate governance mechanisms, convergence to International Financial Reporting Standards (IFRS), internet financial reporting to mention but a few (Usman, Amran, & Shaari, 2016; Oladipupo & Izedomi, 2013; Gul, Kim, & Qiu, 2010; Cairns, Massoudi, Taplin, & Tarca, 2011; Okougbo, 2011; Stanko, Utterback, & Fitzgerald, 2011; Adeyemi & Fagbemi, 2010; Bolton, 2013; Butler, Kraft, & Weiss, 2007; Kanagaretnam, Lobo and Whalen, 2007; Okoye and Ofoegbu, 2006; Uddin & Chowdhury, 2005; Mangena, 2004; Gelb, 2002; Schadewitz, Hannu, Blevins & Dallas 1998).

However, these emergent reporting frameworks were somehow futile as they focus on conformity and compliance with little regard to the information requirements of different stakeholder groups (Everingham & Kana, 2008). These previous attempt focus only on economic performance of firms. According to Simnett, Vanstraelen and Chua (2009), financial figures alone does not give a complete picture of a firm and is too short-term in orientation. They fail to communicate performance on all the measures that companies use internally (financial and nonfinancial, quantitative and qualitative), and thus limits investors' decisions. They do not promote better risk assessment in order to protect long-term returns. Investors are expressing their expectations for corporate disclosures beyond what

is currently provided in annual report (Cohen et al, 2011; CICA, 2010). In the words of Knight (2010), conventional corporate reporting has lost its way and there is need to think differently. No wonder Eccles and Krzus (2010) cited in Thiagarajan and Baul (2014) noted that, rethinking reporting is at the very heart of the success and survival of companies and even the economy.

Many companies have attempted to improve the information available for stakeholder decisions through supplementing their traditional financial reporting with the reporting of non-financial information (Cohen, Holder-Webb, Nath, & Wood, 2012; KPMG, 2011). The reporting model that should address the above criticisms of the conventional financial reporting is the one that should reflect both positive and negative aspects of the organization's performances to enable a reasoned assessment of overall performance. The desired reporting model should capture how companies view and react to the world around them, the reporting framework that reveals the resources they can bring to bear on their strategic position, should allow investors to allocate their capital to those companies who will generate wealth over the long term (Wood, 2010). The solution is offered by the reporting on financial and nonfinancial indicators covering Environmental, Social and Governance issues (hereafter referred to as ESG). Companies now disclose on emerging ESG issues.

Sustainability report is a concept that is gaining acceptance around the globe. It often overlaps with various terms/approaches such as triple bottom line reporting, corporate responsibility reporting, ESG reporting, sustainable development reporting, sustainability, corporate social responsibility, corporate citizenship, citizenship reporting, corporate social performance, integrated reporting, environmental social and governance performance among other terms. Firms had previously believed that their obligation is solely to maximize shareholders' value while neglecting the social, governance and environmental issues, but no business can survive longer by disintegrating itself from these issues (Bahadur & Waqqas, 2013).

Sustaianbility reporting has to do with measuring and disclosing on various non-financial information and firms performance in relation to the goal of sustainable development. It means integration of environmental, social and governance factor into investment analysis, security selection, portfolio construction and risk management (ESG Matters, 2015). Uzonwanne, Yekini, Yekini, and Otobo (2014) define sustainability reporting as a medium through which management relays the environmental, social and economic impact of their operations to the immediate and wider community in which the impact of its operations is felt. Sustainability reporting has become a mainstream in corporate reporting because investors and companies foresaw the need to measure and report ESG performance, to supplement the financial information disclosed and to establish a dialogue with other groups in society (Ligteringen & Arbex, 2010). Sustainability is about "future-proofing" the business (Hawkamah & Ernst and Young 2014:15). The aphorism that no business can succeed in a society that fails has never been truer, and as such it is no longer tenable that we continue to wait and wash the society and companies collapse (Heaps, 2010)..

Growing number of companies are becoming more responsive to investors' concern and are now providing sustainability report in both developed and emerging economies for well over a decade (Ceulemans, Molderez, & Van Liedekerke, 2015; Alkababji, 2014; Hawkamah and Ernst & Young, 2014; 2014; KPMG, 2008; FEE 2006). Upholding this view, Ligteringen and Arbex (2010), noted that in the last ten years, sustainability reporting has become an extremely important and critical exercise for companies to assess their business performance as a whole, and for society to understand its complexity. To support this development in sustainability reporting, World Travels and Tourism Council (2014) reported that recent trends show that ESG reporting is becoming a mainstream platform for organisations through which to communicate with and engage stakeholders. ESG reporting is now the norm among the largest companies in most countries and is becoming more prevalent across all sectors. In a report by KPMG (2011), 95 percent of the largest 250 public companies in the world (G250) issued sustainability reports. Sustainability reporting is now

considered a pivotal and mandatory endeavor for a large number of multinational companies in almost all parts of the world (Hawkamah and Ernst & Young, 2014). The European Commission recently intensified its endeavors to introduce mandatory sustainability disclosure (European Commission, 2013). Companies' worldwide, especially large corporations, have come to realize the competitive advantage and the monetary return gained from improving their corporate governance strategy, hence it is expected that ESG integration will continue to increase in international markets.

On the extent of this sustainability reporting in emerging economies, Sobhani, Zainuddin, and Amran, (2011) explained that corporate sustainability disclosure (CSD) is lagging in developing countries. However, Fifka and Meyer (2013) and Ngwakwe (2013), noted that many emerging markets have shown great improvement in ESG integration in the last decade. Continuing, Ngwakwe (2013), asserted that investment in these countries has increased greatly over the last few years resulting in an increased level of sustainability reporting amongst companies in that region. The leading emerging markets identified in the last decade have been Brazil, Russia, India, China, and South Africa, often referred to as the BRICS countries (Hawkamah and Ernst & Young 2014). Continuing they reported that investments in companies in these countries have significantly expanded over the last decade resulting in an increased demand from investors for ESG information. Commenting on the motivation for unprecedented commitment by emerging economies in driving corporate sustainable reporting initiatives, Hawkamah and Ernst & Young (2014) asserted that since many of the companies in emerging markets serve as suppliers for the global economy, they will be required to standardize their systems and improve their transparency and disclosure levels on their relative ESG performance. Meanwhile emerging markets are characterised by lack of appropriate technology, lack of organized pressure groups to influence corporate behaviour, inadequate regulatory framework, resources and weak investors' protection and these have implication for corporate behaviour towards sustainability disclosures (Emeakponuzo & Udih, 2015; Thoradeniya, Lee, Tan, & Ferreira, 2012; Oti, Effiong, & Tapang, 2012).

Concerning the state of sustainability initiatives and Nigeria reporting framework, the 2011 Code of Corporate Governance stated that companies should engage in increased disclosure beyond the statutory requirements in the (CAMA Companies and Allied Matters Act). The report should include company's sustainability policies and programmes covering issues such as corruption, community service, environmental protection, HIV/AIDs and general corporate social responsibility issues. Part G Section 32 of the code specifically required that the board should report annually on the nature and extent of its social, ethical, safety, health and environmental policies and practices. Report on these issues is termed sustainability report.

Sustainable reporting practices is still voluntary and extent of disclosure very low in Nigeria. Companies in Nigeria report sustainability issues in different ways and comply with different reporting framework. The use of wide range of framework by companies to report their sustainability activities in the view of Reddy and Gordon (2010), has resulted to production of various types of reports. According to them, companies fail to produce structurally homogeneous sustainability reports due to pick and choose type of practices. No wonder Nigeria is classified by KPMG (2011) in the corporate sustainability quadrant as starting behind. While companies in developed economies publish separate sustainability report, Nigeria companies mostly disclose some specific sustainability measures. No wonder Isa (2014), provides empirical evidence that sustainability disclosure constitute only two percent of the corporate disclosures in Nigeria. Also Asaolu, Agboola, Ayoola, and Salawu (2011) found an arbitrary and incompatible sustainability reporting not in line with global best practices among all the sampled companies in Nigeria. In line with this finding, Onyali, Okafor, and Onodi (2015), documented dissatisfaction from investors and consumers on the extent of firms triple bottom line disclosure practice in Nigeria based on the fact that most organizations' reports were often vague and far from the expression of actual performance.

Despite the considerable advances in the practice of sustainability reporting, increase in theoretical argument on the benefit of such report, the empirical literature from developed economy on influence of sustainability disclosure on firm value, Nigerian literature have not resolved the theoretical prediction about valuation effect of linking corporate governance as a sphere of sustainability disclosures in an inclusive model. Thus it is yet not clear from Nigeria whether disclosing on sustainability metrics including corporate governance is in fact related to higher company valuations as the costs associated with the implementation of stronger governance mechanisms may outweigh the benefits. In order words, although sustainability disclosures is becoming increasingly important, the empirical evidence for its real benefits and particularly the degree to which reporting on sustainability dimensions might influence firms financial performance and market participants' perceptions, however, remains relatively unaddressed in the academic literature in Nigerian context. In this paper, we seek to provide empirical evidence to help resolve this problem.

Meanwhile, on the benefit of sustainability report; theoretical findings show that sustainability reporting is becoming increasingly important to all the stakeholders thus ignoring them will lead to distortions and incomplete performance measurement. There is also growing recognition amongst investment analysts that numerous business drivers of a company's profit or loss statement including ESG factors contribute to long term financial performance and investment returns (Kocmanová, Hrebicek, & Docekalova, 2011; KPMG, 2008). Thus making sustainability disclosures in the financial statement can help investors assess company's exposure to sustainability risk and invest in companies that are sustainably effective. Commenting on the benefits of sustainability disclosure, Binh (2012), is of the view that both financial and non-financial items included in the list which companies disclose could be relevant to investment decision-making. Preparing report to cover all the activities of a company does not mean that companies should abandon the goal of profitability. In

fact, by forcing industry to focus on the long term security of its natural resource base, sustainability reporting can help ensure that industries remain profitable into the future.

1.2   Statement of Problem

The problem areas that spurred the interest in researching on this topic are specifically the perceived inadequacy of conventional reporting framework in informing the capital market about an organization's true value-creation potential, stringent environmental degradation (unsustainable usage) and depletion of natural resource, current financial crises in the country, company's labour and community relations practices, increased sharp business practices and resultant loss of confidence in corporate reports, failure of previous studies to consider governance mechanism as an important sphere of sustainability disclosure in a holistic model (dimensional approach). That is, there are limited studies in the Nigeria context that use a multidimensional construct including corporate governance to measure sustainability disclosures. These research issues are discussed more explicitly below:

Investors and other stakeholders in Nigeria and beyond demand holistic view of a business through corporate reporting (Frias-Aceituno, Radriguez-Ariza & Garcia-Sanchez, 2012; Damagum & Chima, 2013; Ebimobowei, 2011). They needed data that allow them to assess whether an entity is being socially, financially and environmentally responsible among others. Unfortunately the current corporate reporting model has been criticised for its inability to portray a rounded picture of companies, not covering all significant information, unable to address the interests and concerns of a broader range of stakeholders. The information that will enable investors to assess all the significant risks of firms' activities are missing (Lubber & Moffat, 2010). Meanwhile reports based largely on financial information do not provide sufficient insight to enable stakeholders to form a comprehensive picture of the organisation's performance and of its ability to create and sustain value, especially in the context of growing environmental, social and governance challenges (ACCA

2012). This situation led to increasing demand for sustainability information by market and other stakeholders.

Degradation of the natural environment and finiteness of resources is one of the main threats to human survival in the long term. As observed by Garg (2015), current generation has degraded the environment more than previous generations which might lead to end of these resources one day. Consider that gas flaring is a controversial environmental issue which contributes significantly to greenhouse gas (GHG) emission yet, as observed by Hassan and Kouhy (2013), Nigeria flares more natural gas than any other country in the world except Russia. This lead to reputational damage based on perceived misuse of resources. Our environment suffers from different forms of attacks, resource constraints, emissions trading, the price of carbon and waste disposal are already having impact on company operation which reduces the productivity of the environment and even reduces the pleasure we can derive from it (Uzonwanne, et al 2014; PwC, 2012; Kasum, 2010; Collin, 2009). For instance the incessant protest against environmental degradation and pollution by oil and gas industries in the Niger Delta area of Nigeria is an issue of great concern as regards the long term value creation of the companies and sustainable development of the country (Uzonwanne, et al 2014). Excessive pollution levels damage not only economic assets but human health as well. These situations lend uncertainty to the operating environment. Thus environmental issues are crucial in ensuring sustainable financial returns and cannot be ignored by companies or academic literature. It is in this regard that Ngwakwe (2013) noted that global sustainable development campaigns have centered on initiatives to encourage corporate entities to reduce their environmental impacts and to publicly disclose such efforts. In spite of the commitment to sustainable practice in their operational environments, companies in Nigeria are simply not doing enough to tackle the environmental degradation. No wonder the level of environmental disclosure in the annual reports is still very low from what is desirable (Usman & Amran, 2015; Uzonwanne, et al 2014; Oba, et al 2012).

Firms most often engage in socially unsustainable activities which might in the short run have economic growth which is impossible in the long run (Bebbington, Unerman, & O'Dwyer, 2014). Current financial crises in the country, company's labour and community relations practices, social injustice are issues of great concern for sustainable development. Yet most corporate bodies in developing countries are still concentrating on maximizing wealth rather than taking the notion of sustainability into account (Sobhani, Zainuddin, & Amran, 2011). The poverty of a nation's citizens and political unrest have destructive effects for a corporation. Firms tend to forget that it is not possible for them to survive in a collapsed society. In more recent years, growing social challenges e.g., poverty, unemployment and deteriorating social equality have generated renewed pressures on companies to adopt a more systematic approach towards reporting (Ioannou & Serafeim, 2014). Also series of product safety scandals in the mid-2000s aroused global concerns over business ethics and corporate social responsibility (Cheng, Lin, & Wong, 2016). Such negative reputation, in turn, adversely affects the financial prospects of the company in the public eye by depressing revenue or prompting new regulatory burdens (Collin, 2009). Inspite of investors increased awareness and emphasis on social risks that threaten the reputation and brand integrity of the companies in which they invest (CFA Institute, 2008). Ebimobowei (2011), noted that while firms in developed economies are responding to increasing need to disclose various activities that affect the society in their annual report such is not the case with Nigeria. Citing Iyoha (2010), he emphasised that no serious thoughts are given to social issues as fair business practice, community involvement etc in the annual report of Nigerian companies. Most companies establish Codes of Ethics and statement of business practices to fulfill righteousness without discharging social responsibility to stakeholders largely due to weak legal process for redressing corporate wrongs and crimes (Usman & Amran, 2015).

The crisis of confidence and credibility that marked the investment scene following the collapse of many companies around the world has increased public criticism of the corporate governance

controls. The incidence of frauds and fraudulent financial reporting in firms such as Cadbury Plc., African Petroleum Plc. (AP), over valuation of the shares of Lever Brothers (Uniliver) post-consolidation crisis in Nigerian banking sector during the year 2009 when 10 banks were declared insolvent (Uwuigbe, et al 2014; Abubakar et al., 2014; Osisioma, 2013; Afolabi, 2013; Adekunle & Taiwo, 2013; Damagum & Chima, 2013, Uwuigbe, 2013) has brought to light the risks that all investors are exposed to. These corporate failures has been linked to poor financial reporting and weak corporate governance (Bozec & Dia, 2015, Khanchel El Mehdi, 2007) and thus prompted the development of corporate governance codes to promote good governance. Poor corporate governance has been shown to have serious consequences for individual companies and the wider economy (Collin, 2009). To strengthen the argument, CFA Institute (2008) asserted that corporate scandal and in some instances outright fraud around the globe and the corresponding loss of investment have rendered financial data untrustworthy and brought corporate governance issues to the forefront of investors' consideration. Thus firms have been obliged to publish a report on corporate governance so that users can determine their level of good governance (Frias-Aceituno, et al 2012). Meanwhile corporate governance in emerging market is seen as a relatively new concept and it is quite absent in most companies and organizations (Hawkamah & Ernst & Young, 2014; Zahirul Islam, Nazrul Islam, Bhattacharjee, & Zahirul Islam, 2010).

This study is also inspired by a gap of prior and contemporary research in Nigeria that focuses on a specific element of sustainability metrics in the annual report. Most research considers environmental, social and governance components as disjointed unrelated factors, and thus does not provide a comprehensive overview of all the metrics. This approach is often criticized because the dimensions are conceived as independent of each other (Davidson, 2014; Ng & Rezaee, 2014), creating compartmentalization and disregarding synergies and inter-linkages among the dimensions (Lozano and Huisingh, 2011 cited in Hahn & Kühnen, 2013). Thus prior and contemporary research in Nigeria focused mostly on specific element of sustainability reporting: environmental dimension

(Bassey, Effiok, & Eton, 2013; Oti, et al 2012; Asuquo, 2012; Uwuigbe, 2012; Oba, et al 2012 and others), social dimension (Folajin, Ibitoye, & Dunsin, 2014; Odetayo, Adeyemi, & Sajuyigbe, 2014; Abogun, Fagbemi, & Uwuigbe, 2013; Abdulrahman, 2013 and others), governance dimension (Akinyomi & Olutoye, 2015; Uwuigbe, et al 2014; Duke, Kankpang, & Okonkwo, 2012; Okougbo, 2011 and others). These previous research has partial focus because they consider environmental, social and governance components of sustainability reporting as disjointed unrelated factors, and thus does not provide a comprehensive overview of all the metrics. The single approach researches provides inconsistent results concerning the effect of these metrics on firms' financial performance.

Few research that attempted to examine sustainability disclosure within a single inclusive model (Aondoakaa, 2015; Usman and Amran, 2015; Asaolu, Agboola, Ayoola and Salawu, 2011,) did not consider governance as a sphere of sustainability. Even their approach produced mixed results. Thus the inability of previous studies to examine the effect of sustainability disclosure taking cognizance of governance as an enforcement mechanism have created gap for this study. As a mechanism to make a company's strategies, actions and achievements more transparent, efficient corporate governance framework will help in mitigating reoccurrence of global financial crises (Usman & Amran, 2015). Meanwhile "the economic dimension of sustainability which refers to aspects of value and wealth creation is never relevant for explaining any change in firm's financial performance" (Hussain, 2015:29). He strengthen his argument by adding that the dual presence of the same economic performance information in the annual financial reports of companies and sustainability report makes it less useful. More so, the few studies that used multidimensional measures of sustainability in a Europe, US and other developing countries arrived at contradictory results.

On the performance measures used by extant studies, single accounting based and market based performance measures such as ROS, ROA, ROE, PBT, market value, abnormal returns, stock

returns, share prices, price to book value, stock performance, market to book value, and Tobin's Q were mostly utilized by researchers. However accounting performance measures has been criticized as been subject to bias from managerial manippulation and differences in accounting prodedures (Gregory, Tharyan, & Whittaker, 2012). Meanwhile concentrating solely on investors' evaluation which is the emphasis of market based performance measures may not be sufficient performance (McGuire, Sundgren, & Schneeweis, 1988). Thus integaration of both measures ROA and Tobins' Q will help to clarify the cummulative and disaggregated effect of sustainability related issues. This is in line with the assertion of of Becchetti, Di Giacomo, and Pinnacchio (2005) that an empirical research broadening the scope of the analysis and integrating measures of corporate performance, gives more complete picture.

These scenerio justified the need for theoretical and empirical examination on cumulative and disaggregated dimensions of sustainability disclosures and corporate performance in different sectors of Nigeria. It is in line with the assertion of Dibia and Onwuchekwa (2015), that firms must think about value creation in a holistic sense when formulating strategy and allocating dwindling resources for their action to be sustainable in the long run. To the best of our knowledge, this study is the first from Nigerian environment to investigate the effect of sustainability report on firm value taking into account environmental, social and governance attributes; accounting and market based performance measures of ROA and Tobins' Q.

In summary, scholars have empirically investigated the relationship between sustainability disclosure and financial performance without converging to a consensus answer to the above research question. And despite the rising profile of corporate scandal consequence of weak governance mechanism, researchers have overlooked governance as an important aspect of sustainability. Researchers have rarely looked beyond the boundaries of the environmental and social disclosures when evaluating

sustainability disclosures. To the best of our knowledge, no empirical evidence exists to explain the relationship between ESG disclosures and financial performance in the context of Nigeria.

Thus the major concern for this work in form of question is: has sustainability disclosures including governance dimension by Nigerian companies any material effect on firm value? To what extent can a firm improve its market value by upgrading its ESG disclosure practices? Are firms practicing sustainability reporting doing better than those who are not? Put in yet another way does companies that disclose their sustainability issues have higher market value and generate higher returns to shareholders in Nigeria. The extant research so far in Nigeria has failed to give a definitive answer hence the need for this study. This study is reponding to the call by Calace (2013), on the need to measure sustainability effectiveness and its effects on firms' performance which is currently one of the major issues in the corporate sustainability theory building.

1.3 Objectives of the Study

The main objective of the study is to examine the effect of sustainability reporting on performance of quoted on financial firms in Nigeria. Specifically, the study intends to:

1. Determine the extent to which environmental sustainability disclosures affect firm performance.

2. Determine the effect of social sustainability disclosures on firm performance.

3. Ascertain the effect of corporate governance sustainability disclosures on firm performance.

4. Evaluate the effect of aggregate sustainability disclosures on firm performance.

1.4 Research Questions

1 To what extent does environmental sustainability indicators affect firm performance?

2 What effect does social sustainability indicators have on firm performance?

3 How does corporate governance sustainability indicators affect on firm performance?

4 What is the effect of aggregate sustainability disclosures on firm performance?

1.5 Research Hypotheses

The null form of the hypotheses of the study is stated below:

1. Environmental sustainability indicators have no significant effect on firm performance.

2. Social sustainability indicators have no significant effect on firm performance.

3. Corporate governance sustainability indicators have no significant effect on firm performance.

4. Aggregate sustainability indices does not significantly affect firm performance.

1.6 Significance of the Study

This study will be beneficial with respect to:

Stakeholders that have been calling for enhanced disclosure of non-financial information, which prior and concurrent research focuses on a specific element of sustainability metrics in the annual report failed to provide, this study contributed to knowledge by providing a triangulation of the relationships observed in prior research concerning sustainability metrics.

Evidence from this study can help standard setters, regulators and other interest groups to better undersand sustaianability disclosure practices of Nigerian firms.

Since evidence was found from this study that demonstrates a strong link between sustainability reporting and financial performance, then this will lead to a change in the perception of firms, practitioners, investors, regulators concerning disclosing on sustainability related issues. Thus it will

enable firms to offer a systemic and holistic image of their sustainability actions rather than a business vision divided into aspects.

The findings of this study will be of interest to regulatory bodies and accounting profession considering results from enhanced disclosure for adequate accounting policies and benchmarking exercises. Observed variation in reporting format across sampled firms might reduce the comparability, effectiveness and accuracy of sustainability reporting.

By using theoretical approach that combines agency, stakeholder and legitimacy theory the study shed light on the incidence of sustainability disclosure and firm performance and enlighten investors on the need to make sustainable responsible investment.

By highlighting relationship between sustainability and firm performance this study will motivate analysts make sustainability reporting mainstream investment practice.

The study will provide further understanding to academics from Nigeria and beyond as to the interplay between the sustainability practices and firm performance.

The finding of this study will enable stakeholders contribute to public debate on environmental social and governance issues, policies and regulations.

1.7 Scope of the Study

The study basically looked at the sustainability disclosure practices and performance of non-financial firms (Agriculture, Conglomerate, Construction/Estate, Consumer Goods, Healthcare, Financial, Industial Goods, Natural Resources, Oil and Gas, Services Sectors) quoted in the Nigerian Stock Exchange from 2006 – 2015. As collected data covers ten years period, it is sufficient to draw conclusion regarding the long run effect (Clarkson, Overell, & Chapple, 2011). The study did not

consider all the banks, insurance companies, and other finance firms because they show several specific reporting requirements and are subject to different accounting standards and market regulations. Also there exist significant differences in the evaluation of their wealth and in their corporate structures. Their business model is fundamentally different and many of the environmental, social and governance policies are not likely to be applicable or material to them. So they are excluded from the population to avoid systematic bias.

The study started from 2006 considering that this period witnessed financial crises which put traditional financial reporting under microscope. The justification also follows a report by United Nations Development Programme UNDP in 2006 that revenues from an international industry have barely touched the Niger Delta's own pervasive local poverty. This has spurred formidable challenges to sustainable human development in the region, particularly as conflicts over resources tighten their often vicious grip. More so, it was around that period that National Assembly of the Federal Republic of Nigeria enacted an act establishing National Environmental Standards and Regulations Enforcement Agency (NESREA) precisely in 2007. No wonder there was a 29% reduction in gas flaring in the Niger Delta between 2005 and 2010 (Yakubu, 2017). The body have responsibility for the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources in general. Though the agency has mandate to enforce compliance with laws, guidelines, policies and standards on environmental matters, it is not compulsory for firms in Nigeria to make disclosures concerning such compliance in the annual report. These form the rational for collection of data for the purpose of the study from 2006.

The study focused only on aggregated data from company specific disclosures with respect to Environmental, Social and Governance dimensions of sustainability disclosures. It did not consider other categorization existing in other countries literature such as seven first-generation of sustainability indicators introduced by Sustainability Accounting Standard Board (SASB), GRI, SIGMA, SustainAbility, ISO etc since companies in Nigeria do not comply with particular guideline.

1.8   Limitations of the Study

The findings of the present study is subject to certain limitations. The results of study should therefore be interpreted in light of these limitations and the future researchers should attempt to overcome them while doing further research in this area.

The study is based on quoted companies in the Nigeria stock exchange where sustainability reporting is still voluntary and at embryonic stage. These companies in Nigeria report sustainability issues in different ways and comply with wide range of framework compared to firms in other countries. Sometimes the title sustainability will not appear as a heading yet sustainability issues are disclosed. To overcome this difficult challenge and prevent unreliable conclusions, we extracted company specific disclosures relating to sustainability to ensure that all the sustainability related issued are considered.

Another major limitation of this study is that the results is not generalizabe to all countries due to different social context. Sustainability disclosure at this stage is influenced by national law, accounting traditions among other national differences. Results of the study should be applied bearing in mind these differences.

The study is limited from the methodological perspective as it failed to examine the mediating and moderating roles of some countries characteristics like macroeconomic context, institutional framework, financial system along with other companies' characteristics.

Another limitation of the study is fund. The researchers had wanted the do a comparative analysis of firms quoted in Nigeria Stock Exchange and Johannesburg, the only emerging market that have made sustainability disclosure mandatory. Considering the high exchange rate of Naira to Dollar and cost of hiring a research assistant in South Africa the study is based only in Nigeria where sustainability disclosure is only done one voluntary basis.

Another major contraints of this study that is related to the first one is unavailability of data. Similar studies in developed counties rely on database maintained by governmental and international agency like Thomson Reuters Asset4 database used by Ferrero-Ferrero et al (2016), Kinder, Lydenberger and Domini (KLD) database used by Hasan, Kobeissi, Liu, & Wang (2016). Overcoming this limitation took the resarchers and research assistant employed for this study several months of content analysis to obtain the data used in this study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This section review the extant literature on sustainability reporting and firm performance including the three dimensions of sustainability upon which this study revolves. The review is based on available literature in both local and international journals.

2.1 Conceptual Framework

The signpost or map of the territory being investigated is depicted in the diagram below.
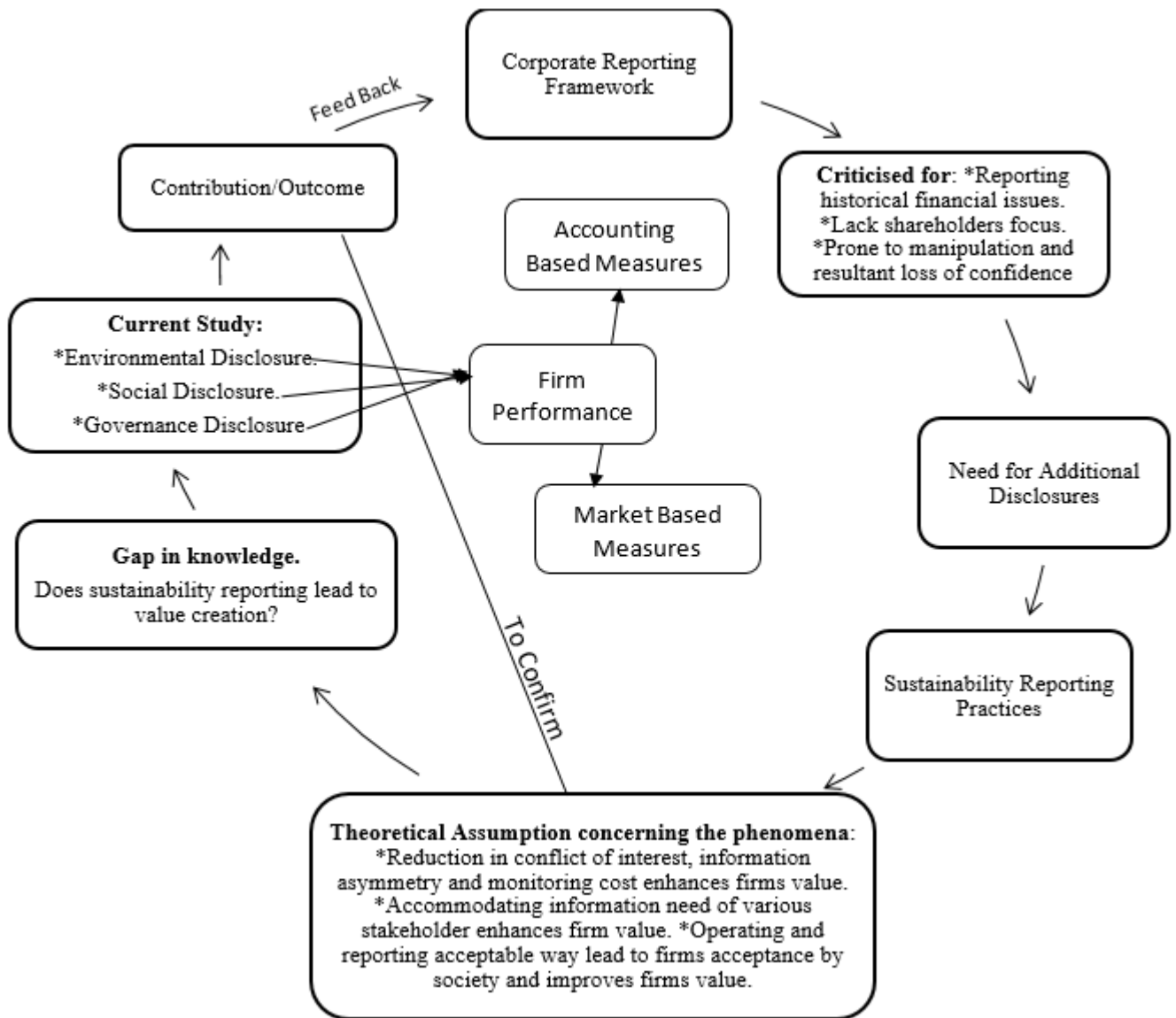
Fig 1: Conceptual framework developed by the researcher for this study.

2.1.1 Corporate Reporting

Corporate reports are primary mechanism used to impart unbiased knowledge about the organisation in an informative, structured and cost-effective manner. Investors, creditors, regulators, and other users of financial reports make business and economic decisions based on information in corporate reports. Corporate reporting is a means of communicating the accumulated corporate information about development and events that occurred during the year under consideration. Conventional

corporate reporting is based on accounting information which is gathered within organisations and then prepared for presentation to external parties through disclosure in external reports. The information which is disclosed revolved around a number of statements which are related to the organization's financial activities and both based on accrual-based accounting information. In particular the statement of financial position show the financial position of an organisation at a particular date, and the statement of profit or loss provided informantion about financial performance. Separate information about cash movements in a period is reflected in a cash flow statement. Other information like chairman's report, auditors report, and audit committee report are also included.

The objective of financial statements according to IASB (1989, 2008) is to provide high-quality financial reporting information concerning economic entities, primarily financial in nature, useful for economic decision making. high quality financial reporting information is important because it will positively influence capital providers and other stakeholders in making investment, credit, and similar resource allocation decisions enhancing overall market efficiency Also NASB now FRCN (2006) stipulated in SAS 2 that: all accounting information about a business entity, quantitative or qualitative in nature that will assist their users in the assessment of the financial liquidity, profitability and viability of a reporting entity should be disclosed and presented in a logical, clear and understandable manner. The basic financial statements of companies are the statement of financial position, the statement of profit or loss, cash flow statement and footnotes (notes) accompany these financial statements. Annual report must disclose all facts that may influence users' judgments.

Over the years specific rules have been adopted by professional accountancy bodies and regulators on how specific transactions should be accounted for in order to maintain the credibility of financial statements and the organisation in the eyes of external readers.

However, the integrity of financial disclosure has been an issue of constant concern among regulators, financial analyst and accounting practitioners. The various corporate collapses involving Wema Bank, Finbank, Spring bank Afribank, African Petroleum Plc, Cadbury and host of other firms in Nigeria have led to increased scrutiny of deficiencies in the financial reporting process and corporate disclosure requirements of corporate organisations (Feyitimi, 2014; Uwuigbe, et al 2014; Damagum & Chima, 2013; Omoye, 2013; Adeyemi & Fagbemi, 2010) This has had a negative and cumulative impact on the perceived credibility of financial reporting.

Also traditional reporting approach consists of historical financial information and ignores to communicate necessary information about the future performance of a company for investors and other stakeholders' decision making. There is little doubt that such approach is generally inadequate for users to make informed decision, and not meeting the changing needs of the society. Thus gap exists between what managers provide and what users required (Crow, 2003), making the statements less useful. This implies that financial reports as currently structured is outdated and plagued with many serious problems that if not seriously addressed will simply be prepared and published to fulfill all righteousness – compliance documents. No wonder Choras (2006) opined that given the change in the external reporting environment, business practices and information technology, it is not surprise that the relevance of the traditional reporting model is being questioned.

These and other criticisms of the conventional corporate report lead to the call for introduction of a reporting model that provides a strategic picture of the company, focusing on all the issues which have a material impact on its business model. In response to above concerns, many companies have attempted to improve the information available for stakeholder decisions through supplementing their traditional financial reporting with the reporting of non-financial information to cover all the activities including impact to the environment. Sustainability reporting came to the limelight.

2.1.2   Sustainability Reporting

Growing awareness of the effects of business activities on the natural environment, local communities, developing nations, employees, customers, suppliers, creditors and concern about the effects of socially "irresponsible" behaviour of corporations, has given additional impetus to the corporate responsibility movement (Overland, 2007). According to Munoz, Rivera, and Moneva (2008), corporate sustainability encompasses the adaptation of corporate processes and strategies to the so-called sustainable development. Sustainability reporting which help in delivering long-term value and enable stakeholders make informed assessments of corporate activities and practices, first appeared `in literature in the early 1990s. The concept appear to have evolved from the release of Our Common Future in 1987, commonly referred to as the Brundtland Report (Williams, Wilmshurst & Clift, 2011) which define sustainable development as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. Since then it has spread quickly worldwide mainly amongst large corporations and especially in Europe, the US, South Africa and Japan under the terms: triple bottom line reporting, corporate responsibility reporting, ESG reporting, sustainable development reporting, sustainability, corporate social responsibility, corporate citizenship, citizenship reporting, corporate social performance, integrated reporting, environmental social and governance performance among others (Khan, et al 2015; Fifka & Meyer, 2013; Sulkowski & Waddock, 2012; Fung, Law, & Yau, 2010; Pat Barrett, 2004). No wonder Commenting on the various terms used to describe sustainability disclosures, Eccles, Ioannou, and Sefafeim (2014) noted that people talk about corporate citizenship, sustainability, corporate social responsibility and corporate responsibility, and sometimes they mean different things and sometimes they use different terms to mean the same thing. Sustainability reporting is one potential tool for progressing sustainability development; it is reporting on an organisation's contribution to sustainable development (Williams, et al 2011). In its simplest meaning, sustainability reporting means reporting on activities that are related to sustainability issues. Sustainability disclosure is consistent with the broader trend toward increased corporate transparency and accountability. It is all about how a company portrays itself responsibly in terms of

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environmental, social and governance issues. The concept of sustainability reports has been on top agenda of the corporate world since a series of significant events in the sustainability arena: the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, the first Sustainable Stock Exchanges global dialogue in New York in 2009, the Earth Summit in Rio de Janeiro, Brazil in June 2012 (INCR, 2013; Brunoro, Sznelwar, & Bolis, 2012).

There is no single, universally accepted definition of sustainability reporting. The term has been used in the past to describe a firm"s voluntary actions to manage its environmental and social impact and increase its positive contribution to society (Khan, et al 2015). Derived from the concept sustainable development which is an evolving process that improves the economy, the environment, and society for the benefit of current and future generations (Singh, Murty, Gupta, & Dikshi, 2009), sustainability reporting aims at reporting on an organization's performance with respect to its contribution to or distraction from sustainability. As businesses take a greater interest in environmental issues, Accountants are getting involved in reporting on such matters as employee health, on-the-job accident rates, emissions of certain pollutants, spills, volumes of waste generated, and initiatives to reduce and minimize such incidents and releases. Sustainability disclosure is described as a form of reporting on the environmental, social and economic impact of corporate activities that stems from a recognition that the financial success of a company is not reliant only on economic sustainability, but also social and environmental sustainability (Overland, 2007). Uzonwanne, et al (2014), define sustainability reporting as a medium through which management relays the social, environmental and economic impact of their operations to the immediate and wider community in which the impact of its operations is felt. The Global Reporting Initiative Sustainability Reporting Guidelines (GRI guidelines 2013:3) defines sustainability reporting as "the practice of measuring, disclosing and being accountable to internal and external stakeholders for organisational performance towards the goal of sustainable development". It is a term used to describe a company's reporting on its environmental, social and governance performance.

Sustainability disclosures means integration of environmental, social and governance factor into investment analysis, security selection, portfolio construction and risk management (ESG Matters, 2015). These indicators are becoming mainstream issue that companies are integrating them in their corporate report and they are key drivers of meaningful progress. Sustainability issues have long-term impact on valuations. Sustainability reporting goes beyond the traditional accounting approach of financial measurement to show linkages between an organization's economic, social and environmental dimensions of its activities, products and services. While the economic dimension includes financial information, it is not limited to that (BHERT News, 2000). The term sustainability reporting as used in this study encompass public disclosures that may use other terms such as a sustainability report, triple bottom line reporting, ESG reporting, sustainable development reporting, corporate responsibility report, corporate social responsibility report, corporate citizenship report, responsible business report, creating shared value report, or environmental report.

Sustainability reporting is a process that assists organizations in understanding the links between sustainability related issues and the organization's plans and strategy, goal setting, performance measurement and managing change towards a sustainable global economy – one that combines profitability with social responsibility and environmental care. The final product of this process is a sustainability report where the organization reports on the most critical (or material) aspects of the organization's economic, social and environmental impacts and the relation of those with its performance (GRI, 2013).   Sustainability reporting brought new impulse to reporting on environmental, social and governance performance. Disregarding such aspects of performance in the corporate report by company managers may result in creating further and even deeper problems (Hřebíček, Soukopová, Štencl, & Trenz, 2014). Still commenting on the consequences of neglecting sustainability, Hawkamah and Ernst & Young (2014), warned that if companies do not meet the rising demand for sustainability reporting, they do not only imperil their reputation, but also risk to loose investors. Also ignoring social and environmental and social impact or a wrong communication

about social and environmental policies in fact, could increase the firm's risk, could lead to wrong relationships with many stakeholders and could affect corporate reputation (Fiori, di Donato, & Izzo, 2008)

Some countries have mandated sustainability reporting in its listing requirements and France was the first country to mandate sustainability reporting. A growing number of regulatory actors, including stock exchanges and government agencies, are introducing rules that mandate sustainability disclosure. As of 2012, the governments or stock exchanges of 33 countries have required or encouraged some level of sustainability reporting (EY and Boston College Center for Corporate Citizenship, 2016). Australia, Germany, Belgium, Brazil, Canada, China, Denmark, Finland, France, India, Italy, Malaysia, Brazil, Hong Kong, Japan and South Africa are some of the countries that have adopted various forms of mandatory sustainability disclosure policies (EY and Boston College Center for Corporate Citizenship, 2016; Corporate Knights Capital, 2014; Ioannou & Serafeim, 2014; Asaolu, et al 2011). However, disclosure of potential risks related to environmental, social and governance practices is not mandatory in most countries, companies that opt to report their environmental and social sustainability information can do so on voluntary basis (Fung, Law, & Yau, 2010). It is important to note that overwhelming majority of sustainability data in the market today has been reported voluntarily. Even in these countries where sustainability reporting is voluntary, companies are facing pressure to release information on their sustainability practices from investors and other stakeholders due to increased awareness that sustainability issues can affect company's performance. Many indicators suggest that mandatory sustainability reporting will be the future in both developed and emerging economies (EY and Boston College Center for Corporate Citizenship, 2016).

Sustainability disclosures often involve a mix of quantitative and qualitative information (Schaltegger, 2012). Quantitative sustainability disclosures are usually not measured in monetary units. For instance carbon emissions reduction can be measured in metric tonnes of CO_2. The internal

control systems and data collection processes may not be as developed as systems and processes for historical financial information. Sustainability reports are published in a company's websites and/or hard copies, in stand-alone reports, social media, the recent trend has been to integrate the sustainability report with the main corporate report (Hussain, 2015; Hawkamah & Ernst & Young, 2014; Makori & Jagongo, 2013; ACCA, 2012b; CICA, 2010).

One common technique is to measure sustainability performance with an appropriate set of indicators. These indicators act as a guide to direction of the performance which is use in monitoring and directing progress towards sustainability (Tahir & Darton, 2010). There is currently lack of standardized metrics that companies can use for sustainability reporting purposes. Commenting on this Eccles, Serafeim, and Krzus (2011) posit that one barrier to widespread acceptance and use of nonfinancial information by investors and other stakeholders is the lack of a generally accepted information framework and reporting standards. No wonder Faisal, Tower, and Rusmin (2012:20) opined that "sustainability reporting is imbalanced globally". To overcome the challenge of intercompany comparability, although no universal reporting standards exist, the guidelines used in the measurement of sustainable development in companies are developed on a continuous basis by different international organizations with the aim of developing an internationally accepted framework for sustainability reporting (Kocmanová, et al 2011).

Thus to enhance comparability and credibility of sustainability disclosures, there are a lot of regulations and guidelines by different organisations regarding the structure and quality of sustainability reporting. These include: SustainAbility, UN Global Compact, a United Nations initiative encouraging corporations to adopt 10 established sustainability principles and report on them. Global Reporting Initiative (GRI), AccountAbility, International Organization for Standardization (ISO), standard (ISO 14000 and ISO 26000), the Sustainability Integrated Guidelines for Management (SIGMA) project, Sustainability Accounting Standards Board (SASB), Carbon Disclosure Project and Global Framework for Climate Risk Disclosure (Overland, 2007;

Siew, Balatbat, & Carmichael, 2013). The use of wide range of framework by companies to report their sustainability activities in the view of Reddy and Gordon (2010) and (Finch, 2005), has resulted not only in a lack of consistency but also in a wide variation in the structure and content between those reports. Companies fail to produce structurally homogeneous sustainability reports due to pick and choose type of practices. According to Reddy and Gordon (2010), lack of consistencies in sustainability reporting means that quality data is not available to undertake studies that could address the right questions that need to be answered. This emphasize the need for a sustainability guidelines.

The most widely known international activity is the Global Reporting Initiative (GRI). Working with the United Nations Environmental Programme (UNEP), Ceres, a Boston-based non-profit organization, founded in 1997 developed this program called the "Global Reporting Initiative" (GRI) (Calace, 2013; Stenzel, 2010). The GRI was established as pointed in the preceding paragraph with the goal of enhancing the quality, rigour and utility of sustainability reporting. It is the most comprehensive guide covering both what information should be reported and how this information should be provided. (ACCA, Reporting pre- and post- King III: what's the difference?, 2012). Modeled after generally accepted accounting principles (GAAP), GRI provide ways to simplify and unify conflicting accounting methodologies. The GRI guidelines for reporting are based on principles of transparency, inclusiveness, auditability, completeness, relevance, comparability, clarity and timeliness (Stenzel, 2010). GRI has its own rating scale to measure the level of transparency of companies based on disclosures.

GRI sets out the principles and indicators which organizations can use to measure and report their sustainability metrics in order to better facilitate meaningful comparison between companies in the same industries or with similar risk profiles by ensuring that reports are of acceptable quality. The GRI should be timely, for example, and clearly understandable to nonexperts. The GRI guideline have been updated thrice since their inception making the current version which was released in May

2013 the "fourth generation" or G4. (Calace, 2013; Popelka, Hodinka, Hřebíček, & Trenz, 2013). The key objective for G4 is to make ESG reporting more mainstream, which require it to be more robust and assurable. The G3 that preceded this G4 Guidelines have seventy-nine specific performance indicators covering Economic, Environmental and Social dimension (Eccles, Serafeim, & Krzus, 2011). At the moment, also to strengthen the quality of sustainability reporting in corporate sector in 2010, GRI announced a partnership with the OECD to give companies worldwide greater guidance and support on how report on their sustainability performance (OECD, 2010). No wonder the number of companies using GRI guideline across the globe has been on the increase. Sustainability Accounting Standards Board (SASB) was also established have to standardize corporate sustainability reporting by creating a menu of well-defined performance indicators (Corporate Knights Capital, 2014). Most recent development to encourage greater disclosure of non financial information through sustainability report to facilitate stakeholder understanding of a company is formation of International Integrated Reporting Council (IIRC) (Cheng, Green, Conradie, Konishi, & Romi, 2014).

Nigerian firms are not completely out of disclosure of potential risks related to environmental, social and governance performance. The 2011 code of corporate governance specified under sustainability issues that companies should pay adequate attention to the interests of its stakeholders such as its employees, host community, the consumers and the general public. Public companies should demonstrate sensitivity to Nigeria's social and cultural diversity and should as much as possible promote strategic national interests as well as national ethos and values without compromising global aspirations where applicable. It went further to state that companies should recognise corruption as a major threat to business and to national development and therefore as a sustainability issue for businesses in Nigeria. Companies, Boards and individual directors must commit themselves to transparent dealings and to the establishment of a culture of integrity and zero tolerance to corruption and corrupt practices. The Board should report annually on the nature and extent of its social, ethical,

safety, health and environmental policies and practices. Issues include disclosure on the company's policies on corruption and related issues and the extent of the compliance with the policies and the company's code of practice (SEC). The effect of these disclosure is not available in the extant literature.

The concept of sustainable development as previously stated proliferated with the publication of the Brundtland Report – our common future in 1987 by United Nations World Commission on Environment and Development. It has since then become a central organizing theme within contemporary society. Sustainability accounting and reporting will affect a company's' ability to pursue sustainable development (Taib, Ameer, & Haniff 2012; Bebbington, et al 2014). A growing number of investors have begun to incorporate ESG factors in their investment decision making processes thus giving rise to the concept of socially responsible investment (SRI). Increasing number of companies in both developed and emerging markets are integrating ESG factors into their core business strategies and publishing sustainability reports (Alkababji, 2014; Hawkamah and Ernst & Young, 2014; Haung, Xu, & Liu, 2014; Bahadur & Waqqas, 2013; Faisal, et al 2012; Fung, Law, & Yau, 2010; Stenzel, 2010; Perego, 2009, KPMG, 2008; FEE 2006). Based on the most extensive study so far (Serafeim, 2014; Makori & Jagongo, 2013; CICA, 2010; Accenture, 2010), found that there have been increasing interest in sustainability – ESG factors.

Specifically Bona-Sánchez, Pérez-Alemán, and Santana-Martín (2014) document a very significant increase in the percentage of firms disclosing sustainability information following the GRI guidelines, rising from 9.57% in 2003 to 18.65% at the end of 2011 representing a growth rate of 94.88%. These results highlight the increasingly important role of sustainability reporting in firms quoted on the developed markets. Upholding this view, Ligteringen and Arbex (2010), noted that in the last ten years, sustainability reporting has become an extremely important and critical exercise for companies to access their business performance as a whole, and for society to understand its complexity. Commenting on the widespread reporting of sustainability reporting, Ioannou and

Serafeim (2014) noted that while fewer than 100 firms globally reported such information twenty years ago, by 2013 more than 6,000 companies were issuing sustainability reports. Base on analysis of sustainability disclosure trends on the world's stock exchanges by Corporate Knights Capital (2014), the top ten countries out of 46 countries base on the Corporate Knights Capital's analysis are: Finland, Netherland, South Africa, France, Denmark, Portugal, Norway, Spain, United Kingdom, Australia. Their study revealed that number of quoted companies in these countries that disclose the sustainability metrics is higher but still disconcertingly low. To strengthen the argument on the extent of sustainability disclosure, KPMG (2013) posits that large companies in Italy, Spain and the UK lead the world in terms of quality of corporate responsibility reports, reflecting the relative maturity of reporting in these markets compared with countries in the emerging economy where widespread reporting is a newer phenomenon.

Emerging markets have experienced an increase in size as well as integration into the global economy in the last decade. Prior research reveals that sustainability reporting is still in its infancy and the level of environmental and social disclosures are not extensive and of a poor standard in developing countries (Craig & Diga, 2009; ACCA, 2005; Chanbers, Chapple, Moon, & M., 2003). Also KPMG (2008) survey documents that sustainability reporting in developed countries is higher than developing countries. However Makori and Jagongo (2013), Faisal, et al (2012) and Setyorini and Ishak (2012), documents a fundamental shift in the status quo with companies from emerging countries demostrating higher communication levels. Environmental and social disclosures which are aspect of sustainability has increased over years in the developing region. In an ealier study, Zhang, Gao, and Zhang (2007), posits that both the quantity of environmental and social disclosure and the areas of coverage have steadily increased in China which is one of the emerging markets. This is largely due to the poor performance of many developed markets in recent years and the lingering volatility of the global stock markets (Hawkamah & Ernst & Young, 2014). Earlier on increase investment in emerging market, Ngwakwe (2013) noted that with the saturation and gradual

weakening of developed economies, investment attention is turning to the emerging markets. The leading emerging markets identified in the last decade have been Brazil, Russia, India, China, and South Africa, often referred to as the BRICS countries. In fact, investment in these countries has increased greatly over the last few years resulting in an increased level of sustainability reporting amongst companies in that region. In their study on how firms in developing countries react to sustainability reporting using seven countries - Brazil, China, India, Russia, South Africa, South Korea and Taiwan. Fung, Law, and Yau (2010), found that South Africa is leading in sustainability reporting while China has the lowest percentage in sustainability disclosure. It is important to note that despite the continued rapid progress in the development of sustainability disclosures, empirical research on sustainability disclosures from the developing country's perspective remains limited (Thoradeniya, Lee, Tan, & Ferreira, 2012). They, therefore, posit that it is necessary to undertake more sustainability disclosures research in developing countries to order to increase coverage, depth and quality of sustainability accounting information.

Generally, the widespread practice of sustainability disclosures is based on the recognition that the ability of a company to communicate its broad activities effectively with its stakeholders can be critical to its long-term success, viability and growth (KPMG, 2008). Commenting on the need for more disclosure, Sulkowski and Waddock (2012) opined that companies manage what they measure and markets with better information more efficiently lead to either constructive negotiated solutions or punishment of bad actors by investors and consumers for creating risks and liabilities. The increase in sustainability reporting is indicative of the importance of good corporate behaviour and demonstrates that corporations and their stakeholders are in agreement that non-financial reporting is essential to fully characterize all risks and wealth creating potential of a firm. Investors have begun to recognize that the governance issues, social and environmental conditions in society can have a direct impact on the business operations of a company and its long-term viability. For instance, how a company protects the health and safety of its workers and the communities where it operates helps

investors understand management's practices. No wonder US SIF Foundation (2013) noted that today, few companies can ignore sustainability reporting while also attracting-or maintaining-sustainable and responsible investors. With the growing awareness among companies and investors that sustainability-related risks are increasingly material to corporate performance and value. The trend has been towards enhanced disclosure for increased transparency in the financial markets. Enhanced disclosure of sustainability indicators is valuable in helping to further integrate these increasingly relevant factors into investors' research and can help institutions better protect against risks.

Still on the benefit of sustainability disclosure CICA (2010), opined that ESG factors can have long-term consequences on a company's financial performance either for better of for worse. Their study showed that ESG factors contribute to the investor decision-making process. It offers investors potential long term performance advantages when it is integrated into investment analysis and decision making. Done properly, reporting on sustainability helps companies establish a reputation for transparency and build stakeholder trust (Ernst & Young, 2010). Supporting this view, Khaveh, Nikhasemi, Haque, and Yousefi (2012) opined that sustainable practices and disclosure would affect customers' perception about a company's product or service; as a result this change can increase number of sale and ultimately can increase total revenue.

Value of a company is impacted by the quality of its relationships with a range of internal and external stakeholders. Sustainability reporting enables companies develop meaningful and credible reporting that meets the needs of various stakeholder. Also, it enables stakeholders to compare overall performance within a company and between companies over time. Sustainability reporting is designed to provide stakeholders with sufficient information to understand the sustainability performance of an organisation and to make informed decisions (AccountAbility, 2008).

A focus on ESG issues can enhance understanding of how companies are likely to adapt, excel or suffer in a changing context. It helps organizations manage their social and environmental impacts; improve operating efficiency and natural resource stewardship, and it remains a vital component of shareholder, employee, and stakeholder relations. Sustainability reporting can benefit a company in terms of reduced cost (avoiding litigation and a better public image), increased revenues, improved profits and mitigate risk (Orlitzky, Schmidt, & Rynes, 2003, cited in Coretez & Cudia, 2011; Collin, 2009).

Also on the need to include the three important dimensions of sustainability in a report, Kocmanová, Hrebicek, and Docekalova, noted that:

> The environmental, social and economic factors and Corporate Governance are at the heart of the corporate and business strategies, they are part and parcel of daily operations, stimulate work for success and work as an indicator of threat and risk and push for seizing opportunity, and of course they should become part of the voluntary corporate reporting on the assessment of links between the environmental and economic assessment of performance, the social assessment of performance and the relation to Corporate Governance. (2011:546)

Though the rewards from sustainability reporting can be great as can be seen from the above paragraphs, it faces daunting challenges but of a different kind of complexity—articulation and measurement, both qualitatively and quantitatively, of the social, environmental and governance performance of the firm, as well as the quality of strategy and management that underpin such performance. Also, the issue of materiality: information that is both relevant to a company's activities and of a magnitude sufficient to affect an investor's decisions—is a continuing challenge in a fast- changing global economy. Specific risks and opportunities are not equally relevant to all firms across all sectors. The weightiness of climate change, occupational health and human rights varies widely, challenge reporters to think carefully and make tough choices about what emphasis each

issue warrants in a sustainability report (White, 2010). Commenting on the criticisms of sustainability reports Serafeim (2014) posits that in sustainability reports, data are not placed in the context of a company's strategy and business model, are less credible and timely compared to the financial data that are audited at a higher level of assurance and the concept of materiality is not effectively addressed. Sustainability reports are often disclosed 180 days after the end of financial year. Therefore, while sustainability data are argued to be value relevant, the aforementioned factors impede their decision usefulness from an investor perspective.

Notwithstanding, since sustainability reporting creates window into the performance of a company across environmental, social and governance dimension, it becomes imperative according to KPMG (2008) that such reporting develops within the context of a company's overall business strategy. ESG should be incorporated into long-term strategic planning so as to provide a more complete picture of company's prospective value. It is also important that companies understand the business environment in which they operate in order to assess the potential materiality of ESG issues. Failure of which may result in a report that is regarded as "greenwash". That is, users believe they are been misled about a company's sustainability practices - using ESG report as public relation tool (Overland, 2007). It is important to add here that sustainability reporting is driven among other things by the need for companies to respond to issues of sustainable development – development that meet the needs of the present generation without compromising the ability of future generations to meet their own needs.

Sustainability issues are complex and measuring them has many challenges as there is no standard measure available like those for financial disclosure, however a range of measures and guidelines have been used by previous studies. To evaluate and compare the sustainability performance of individual companies, it is necessary to devise some parameters that would indicate, with sufficient clarity, how a given company performs in each areas of sustainability (Kocmanova & Simberova, 2012). There is need for appropriate indicators so as to know for sure and tell when firms are on the

path of sustainable development. However, Ameer and Othman (2012), Lopez, Garcia, and Rodriguez (2007), observed that there is no commonly accepted way of measuring, assessing and/or monitoring a company's progress towards sustainability just as there is no single concept of sustainability. Prior research in business sustainability is fragmented with a lack of an integrated approach covering all dimensions with different authors addressing one or more components of business sustainability without a comprehensive framework for interdisciplinary integration (Ng & Rezaee, 2014).

Most scholars measure sustainability by choosing from the following major market indices: ARESE Sustainable Performance Indices, Dow Jones Sustainability Index DJSI, FTSE4Good Indices, Calavert, Domini Social Index, Capital Partners Ethical Index, Ethibel Sustainability Index, Humanix Ethical Index, Jantzi Social Index (Lopez, Garcia, & Rodriguez, 2007; Finch, 2005). KPMG (2008) used economic, environment and social interchangably with environment, social and governance in describing sustainability reporting. Six first-generation metrics of sustainability according to Heaps (2010) include: 1. Gigajoules of total energy consumed 2. Total cubic meters of water consumed 3. Metric tons of total CO_2 emitted 4. Metric tons of total waste produced 5. Company's total number of injuries and fatalities including no-lost-time injuries per one million hours worked 6. Payroll for entire company. Eccles, Serafeim, and Krzus (2011) describe sustainability pillars using Environmental, Social, and Governance (ESG). Chvatalová, Kocmanová, and Dočekalová (2011) used environmental, social and governance performance indicators in measuring corporate sustainability performance. Faisal, Tower, and Rusmin (2012) characterises sustainability with economic, environment, labour practices and decent work, human rights, society, and product responsibility.

The Economic, governance, social, ethics and environmental (EGSEE) performance are the five dimensions of sustainability (Ng & Rezaee, 2014). Ngwakwe (2013) used environmental, social and governance dimension in describing sustainability disclosure. US SIF Foundation (2013) used

environmental, social and governance performance indicators is describing sustainability practices. They asserted that comprehensive sustainability reports, issued on a regular basis, provide valuable information that allows investors to evaluate companies' environmental, social and governance risks and opportunities. Serafeim (2014) used Economic, Environmental, Social and Governance EESG performance score in his study. The Sustainability Accounting Standard Board introduce seven first-generation of sustainability indicators – Employee turnover, Energy, Greenhouse Gas, Injury rate, Payroll, Waste, Water. The first-generation sustainability indicators were used in a study by Corporate Knights Capital (2014). Environmental, Social and Governance (ESG) Metrics are commonly lumped together under the theme of sustainability (Thiagarajan & Baul, 2014:52). The United Nations Commission on Sustainable Development (CSD) constructed a sustainability indicator framework into 38 subthemes and 15 main themes, which are divided between four aspects of sustainable development namely: Social, Environment, Economic and institutional capacity (cited in Labuschagne, Brent, & van Erck, 2005). Hawkamah and Ernst & Young (2014), analysed companies using nearly 200 ESG metrics including carbon emissions, water and energy consumption, employee health and safety, community investment, charitable giving, board independence executive remuneration and others. Krechovská and Procházková (2014), used economic, environmental and social dimensions in their study of corporate sustainability. In the same vein Hunter and Mearns, (2014) used environmental, social and economic measures in describing sustainability and opined that the three pillars of sustainability are intertwined and interdependent elements and must be met at the same time for sustainability to be achievable. Thiagarajan and Baul (2014) sees sustainability report as nonfinancial and include environmental, social and governance issues. In line with this Bloomberg calculates sustainability disclosure score on three sub-scores Environment, Social and Governance to quantify a company's transparency in reporting sustainability information (Ioannou & Serafeim, 2014).

From the metrics used in the above paragraph in measuring and describing sustainability performance, there is general trend towards using either environmental (planet), social (people) and governance (principles) dimensions or economic (profit), environmental (planet), and social (people) dimensions – the three Ps in measuring sustainability. For the purpose of this study, specific sustainability disclosures will be measured based on ESG dimension.

The term sustainability encompasses three divers of firm behaviour: responsibility to the environment, responsibility to the society and responsibility in control. It denotes firm's commitment to environmental, social and governance practices. Incorporating the three divers of firm behaviour to the conventional financial report is sustainability reporting. This study follows the direction of the last definition

The growth of sustainability reporting seems to have invigorated the entire field of research (Hahn & Kühnen, 2013). From the literature on the extent of sustainability reporting practices, it is unlikely that anyone involved even on the periphery of business research is unaware of corporate sustainability reporting. It is not a new idea to firms just as it is not a new idea to business research. Extant empirical research available have tried to investigate the degree to which disclosing on sustainability metrics influence stakeholders understanding of companies' activities to lead to more accurate pricing of equities and firm values (Khan, Serafeim, & Yoon, 2015; Hussain, 2015; Mervellskemper, Streit, & Bochum, 2015; Haryono & Iskandar, 2015; Ioannou & Serafeim, 2014; Ng & Rezaee, 2014; Calace, 2013; Aggarwal, 2013 among others).

The implications of sustainability reporting on firm value from these empirical studies, are still fragmented and competing in order words previous empirical studies has contradictory findings. In line with this view, Joseph (2016) in his reviews of related literature on the effect of sustainability reporting on firm's performance found that researchers have not reached a consensus on whether firms can maximize performance if they implement sustainability reporting. On one side are researchers like Khan, Serafeim, and Yoon, 2015; Aondoakaa, 2015; Yu and Zhao, 2015; Eccles,

Ioannou, and Sefafeim, 2014), they provided empirical evidence that sustainability disclosures leads firms to increasing efficiency, strengthening brand and market value, and improving competitiveness. On the other side are researchers that document that by imposing significant preparation and monitoring costs on firms, for instance by adopting organizational processes that for some reason generate a net cost for the company, experiencing high labor costs, high environmental cost can make sustainability disclosure to be value-decreasing (Usman & Amran, 2015; Lima Crisostomo, de Souza Freire, & Cortes de Vasconcellos, 2011). Yet still some researchers like Nnamani, Onyekwelu, and Ugwu (2017), Hussain (2015), Mervellskemper, et al (2015) found that there is no relation between all the sustainability disclosures and return on asset, changes in capital structure and Market value of equity.

Literature available from Nigeria context on sustainability reporting practices indicate that most of the companies that disclose their sustainability related issues are mainly multinationals operating in Nigeria with their action more likely to be parent company policy driven. Asaolu et al (2011) provide analytical evidence that even the multinationals companies operating in Nigeria fared badly in their environmental and social reporting indicators which may partly explain the upsurge in criticism and unrest that characterized their operations in the last decade. On the individual metrics of sustainability reporting, while some extant literature indicate that there is substantial increase both in size and complexity of environmental disclosure in annual reports (Dibia & Onwuchekwa, 2015; Isa, 2014; Uwuigbe & Jimoh, 2012; Owolabi, 2008). Others found that, the level of corporate environmental disclosure practices is very low and still at its embryonic stage (Uwuigbe & Jimoh 2012). In the view of Oba, Fodio, and Soje (2012), corporations in Nigeria are struggling with a new role which is being more responsive to environmental responsibility issues. In the same vain Ebimobowei (2011), noted that while counties in developed economies are responding to increasing need to disclose various activities that affect the society in their annual report such is not the case with Nigeria. Citing Iyoha (2010), he emphasised that no serious thoughts are given to such social

issues as fair business practice, community involvement etc in the annual report of Nigerian companies.

2.1.2a Justification for consideration of Specific Sustainability Disclosure

This study sets out to investigate the link between industry specific sustainability disclosures by Nigerian firms and performance. The study is based on definite sustainability issues disclosed. This is similar to Sustainable Asset Management (SAM) that focuses on eco-efficiency and environmental reporting along with industry-specific criteria (Delmas & Blass, 2010). Continuing they observed that because quantitative data on corporate sustainability disclosure is seldom publicly available, the risk is to choose variables based on their availability. Thus the rationale for systematic and specific consideration of sustainability measures disclosed in the annual reports of quoted firms in Nigeria is based on the fact that sustainable reporting practices is still voluntary and extent of disclosure very low in Nigeria. Also Dagilienė, (2014), found that only 10% of developing countries sustainability reports were prepared using the GRI methodology of which Nigerian firms is not among. The low score according to Quick (2008) reveals no more than a mediocre understanding of the prevailing requirements. Companies in Nigeria report sustainability issues in different ways and comply with different reporting framework. The use of wide range of framework by companies to report their sustainability activities in the view of Reddy and Gordon (2010) and (Finch, 2005), has resulted not only in a lack of consistency but also in a wide variation in the structure and content between those reports. In-depth analysis of annual reports of Nigerian firms with the view to extract sustainability disclosures, showed that even the use of international sustainability reporting standards such as the SustainAbility, ISO, GRI etc is not popular among Nigerian firms. No wonder Nigeria is classified by KPMG (2011) in the corporate sustainability quadrant as starting behind.

While companies in developed economies publish separate sustainability report, Nigeria companies mostly disclose some specific sustainability measures on various sections of corporate reports. Some have attempted to move to sustainability reporting by grafting onto the traditional annual report sections on environmental, governance and social performance. No wonder Michael and Oluseye (2014) cited in Joseph (2016) observed that one of the reason for poor sustainability performance in Nigeria is due to frivolous behaviour of some firms. According to corporate sustainability assessment by Dow Jones Sustainability Emerging Market Index, none of the Nigerian Companies is among the top 10% of the largest 800 companies in 20 emerging markets based on the economic, environmental, governance and social criteria. Also Asaolu, Agboola, Ayoola, and Salawu (2011) found an arbitrary and incompatible sustainability reporting not in line with global best practices among all the sampled companies in Nigeria. Little wonder Isa (2014), provides empirical evidence that sustainability disclosure constitute only two percent of the corporate disclosures in Nigeria. Consistent with above low level of disclosure, Onyali, Okafor, and Onodi (2015) recommended that companies should disclose more quantifiable triple bottom line indicators. They document dissatisfaction from investors and consumers on the extent of firms triple bottom line disclosure practice in Nigeria based on the fact that most organizations' reports were often vague and far from the expression of actual performance.

Meanwhile, despite the effort to make GRI more robust through constant update and partnering with other organisation, there have a growing number of publications highlighting its problems. It is important to point out that some scholars contest the effectiveness of the framework, arguing that GRI-based reports can mislead decision-makers who are concerned with sustainability, or even camouflage unsustainable practices. Moneva, Archel, and Correa (2006), noted that GRI approach to reporting sustainability has significant problems that may ultimately camouflage organisation unsustainability. Also Fonseca, McAllister, and Fitzpatrick (2014), did a study on things that needs to be changed in mining corporations GRI-based frameworks for the purpose of promoting more

meaningful and reliable sustainability performance information. Their study outlines a number of specific changes that should be promoted in mining corporations frameworks if their reports are to provide meaningful and accurate information about sustainability progress.

Nonetheless, to enhance comparability and credibility, the need for regulations and guidelines regarding the structure and quality of sustainability reporting cannot be overemphasized. The wide range of framework used by companies to report their sustainability activities which resulted to inconsistency and production of various types of reports need to be harmonized. These international sustainability reporting framework and standards include: SustainAbility, a corporate sustainability think-tank and consulting organisation, the UN Global Compact, a United Nations initiative encouraging corporations to adopt 10 established sustainability principles and report on them. Global Reporting Initiative GRI, a rapidly growing approach to sustainability reporting. AccountAbility, a not-for-profit network comprised of businesses and civil and private organisations working to promote stakeholder engagement, responsible competitiveness, collaborative governance, and setting sustainability standards such as the AA1000 set of standards and the International Organization for Standardization (ISO), standard (ISO 14000 and ISO 26000) which addresses environmental management performance of a company and also provides a framework for organisations to base reports upon, the Sustainability Integrated Guidelines for Management (SIGMA) project, Sustainability Accounting Standards Board (SASB).

2.1.2b Justification for Including Corporate Governance as a Dimension of Sustainability

For the purpose of this study sustainability disclosure is measured using environmental, social and governance ESG dimension. Governance is used in place Economic dimension in line with general trend as discussed in the above paragraphs. Also governance dimension is important as it represent enforcement mechanisms. It signals the intention to be transparent and accountable. Series of corporate scandals brought corporate governance issues to the forefront of investors' consideration.

Usman and Amran (2015) noted that efficient corporate governance framework will help in mitigating reoccurrence of global financial crises. This and the 2011 code of corporate governance which emphanised the need for corporate governance necessitated the inclusion of governance in this study as a sustainability indices. This it is hope will increase accountability and transparence to the stakeholders. According to Thiagarajan and Baul (2014:52), "Environmental, Social and Governance (ESG) metrics are commonly lumped together under the theme of sustainability.

Kocmanová, Hrebicek, and Docekalova, (2011) strengthen the argument for inclusion of governance dimension when he noted that the importance of corporate governance consists in its contributing to not only corporate prosperity but also to responsibility. Earlier on this argument, Kolk (2008) explores the extent to which current sustainability reporting of multinationals incorporates corporate governance aspects. The study noted that more than half, precisely 81% of the Fortune Global 250 companies particularly in Europe and Japan with a sustainability report incorporates corporate governance dimension. Also the study posits that sustainability and corporate governance imply accountability efforts that seem to be converging. Thus the monitoring function of corporate governance makes it an important component of sustainable development.

Commenting on inclusion of economic as an aspect of sustainability disclosure, Quick, (2008:23) noted that "financial statements include economic aspects, too. Thus, addressing the economic performance within sustainability reports could be perceived as less important". Meanwhile "the economic dimension of sustainability is never relevant for explaining any change in firm's financial performance" (Hussain, 2015:29). He strengthen his argument by adding that the dual presence of the same economic performance information in the annual financial reports of companies and sustainability report makes it less useful. Also economic (traditional) performance indicators is used in assessing corporate performance (Usman & Amran, 2015). Commenting on measurement of sustainability, Fornelli noted that One thing is clear: different stakeholders have varying views on

what is meant by "sustainability," how it is measured, and how it gets reported. Continuing he asserts that:

> Some view sustainability narrowly, as focusing mainly on environmental concerns—greenhouse gas emissions, toxic waste, energy consumption, use of finite natural resources, for example. Others expand the concept of sustainability to include corporate and social responsibility issues such as human rights, child labor, fair trade practices, and consumer product safety. Still others view it as including any issue that poses a risk to the long-term sustainability of the enterprise. There is no "one-size-fits-all" when it comes to sustainability reporting. The needs will be different across industry sectors, and could also vary among companies within a given sector. (2010:152)

The dimensions we use are internally connected and serve as a reasonable reflection of progress toward sustainable development. Our approach is also supported by recent studies (see, e.g. Mervellskemper, Streit, & Bochum, 2015; Ioannou & Serafeim, 2014; Serafeim, 2014; Ngwakwe, 2013; Aggarwal, 2013; Eccles, Serafeim, & Krzus, 2011 and others).

Also because the 2011 corporate governance code by SEC emphasized that there should be disclosure on the company's policies on corruption and the extent of the compliance with the policies and the company's code of practice. Specifically sec 32 of code of corporate governance emphasise that companies should have a code of ethics and statement of business practices, which should be implemented as part of the corporate governance practices of the company. These issues hinges on governance pillars of sustainability disclosure (Khan, Serafeim, & Yoon, 2015; Kocmanová & Dočekalová, 2013). ESG dimensions have specific meaning but are subsets of sustainability reporting. For each of the ESG issue, relevance performance indicators and measures are used in the corporate report. As noted by Hunter and Mearns (2014), the three pillars of sustainability are

intertwined and interdependent elements and must be met at the same time for sustainability to be achievable.

Highlighting on the link between individual metrics of sustainability, Dyllick and Hockerts (2002) cited in Calace (2013) opined that "the separation of the three areas makes sense at the operational level, while a strategic decision would only be possible when considering the three dimensions simultaneously." The three aspect which are interlinked together are shown below.

Fig 2:   Interlink between the three dimensions of sustainability reporting

Attempt is made in the following paragraphs to discuss these specific metrics of sustainability disclosure. Meanwhile it is important to emphasize that the three dimensions interact with each other in helping to enact organizational mission, which is translated into strategies with a long-term action plan that spans more than a year (Thiagarajan & Baul, 2014).

2.1.3   Environmental Disclosure

According to Ezeabasili (2009), environmental sustainability is the ability of the environment to continue to function properly indefinitely. Thus reporting to show that a firm is meeting its present

need without devastating the environment is environmental reporting Environmental reporting is the practice of measuring, disclosing, and reporting to internal and external stakeholders the organizational environmental performance so as to achieve the goal of sustainable development (GRI, 2011). Corporate environmental disclosure entails reporting on the impact of company activities on the natural environment such as waste management, recycling, carbon management, emission, pollution, wetland and wildlife conservation among others (Gatimbu & Wabwire, 2016). It refers to the way and manner by which a company communicates the environmental effects of its activities to particular interest groups within society and to society at large (Dibia & Onwuchekwa, 2015). CIMA (2012), defines environmental reporting as the public disclosure of information concerning an entity's environmental performance and it makes organisations appear more accountable for their activities. It involves the identification, measurement and allocation of environmental costs, and the integration of these costs into business and encompasses the way of communicating such information to companies' stakeholders (Bassey, Effiok, & Eton, 2013). Citing the work of Papang, Bassey, and Bessong (2012), they noted that environmental reporting enables companies to be aware of environmental related costs and find ways to reduce or avoid these cost. Environmental disclosure involves including costs of environmental degradation due to industrial activities in the corporate report. Latridis (2013) pointed out that of particular interest are the disclosures that relate to changes of environmental policies, environmental liabilities, environmental costs and environmental impairment. By disclosing environmental information, a firm addresses the information needs of stakeholders and provides a basis for dialogue between the firm and its stakeholders.

The purpose of environmental reporting is, on one hand, to inform stakeholders of the environmental impacts an Organization's activities have and of any initiatives that have been undertaken to mitigate the impact (Oba, Fodio, & Soje, 2012). As information needs of all stakeholders on economic consequences of company approach to the environment are diverse, attempt is made through

environmental disclosures to help users in filling their information needs for evaluating environmental behaviour of the company and its economic consequences. Deegan (2004) provided argument to show that disclosure of company environmental policies in annual reports would allow investors and other interested parties to make informed judgments about the efficiency and impact of managers' sustainability decisions and actions. For instance, investors and creditors are primarily interested in environmental risks and extent of liabilities arising from these risks. Owners on the other hand are concerned about the economic consequence of environmental behavior of the company and their impacts on return on investment. Thus informative disclosures about the environment are important for investors when evaluating a company's value and future prospects as well as opportunities and risks. Thus part of the environmental disclosures are information in monetary units (financial information) and part are information in physical units (non-financial information). No wonder Cohen et al (2012), asserted that considerable variability exists in environmental disclosure practice based on both industry and size.

Corporations are disclosing environment information in corporate annual reports and this has increased over years. However, most of the studies that document this concentrated on developed countries and very few studies focused on developing countries (Makori & Jagongo, 2013; Suttipun & Stanton, 2012; Uwuigbe, 2012). They added that corporate environmental disclosure may not apply universally to all countries considering different stages of economic development and with corporations having differing levels of awareness and attitudes towards corporate environmental disclosure. In the view of Silberhorn and Warren (2007) cited in Latridis (2013), quality of investor protection mechanisms and environmental care as well as the magnitude of environmental problems and the means of solving them would vary from country to country.

Commenting on the extent of environmental disclosure in developing economy like Nigeria, Emeakponuzo and Udih (2015), Ayoola (2011) noted that the issue of environmental disclosure is an emerging issue in developing economies like Nigeria with companies disclosing on several aspect

of environmental issues and differing in their mode of reporting which resulted in a lack of comparison. Most companies show one of environmental reporting or the other as part of the annual report, but the reports on environmental issues as shown by the annual reports are not elaborate and do not follow a particular standard or guideline (Mgbame & Onoyase, 2015). Supporting these views, Bhattacharyya (2014) asserts that the amount of voluntary environmental disclosures in Australia is typically low and the disclosures are typically self-laudatory. The low level of environmental disclosure is attributed to weak government regulations and lack of organized pressure groups and consumer awareness to influence corporate behaviour (Oti, Effiong, & Tapang, 2012). In their view, many corporations in developing countries such as Nigeria behave in a manner that suggests that they can achieve corporate goal even if environmental responsibility are trampled upon. This is because environmental disclosure still heavily relies on voluntary initiatives of the reporting entities (Uwuigbe, 2012). Commenting on the extent of environmental disclosure in developing countries, Jankovic, Peršic, and Zanini-Gavranic (2011) noted that the current level of environmental accounting in Croatian is not well developed, and high quality environmental accounting information for managerial decision-making process is therefore lacking.

However, some corporation in these developing countries are becoming conscious of global and are making appreciable efforts as regards sustainable business practices. For instance, in an empirical study Owolabi (2008) found that sixty percent of the sampled sectors provide some form of environmental disclosure in their annual report. He went on to add that with improved drive towards environmental information reporting and disclosure in annual reports at the international level, the level and content of disclosure of environmental information is also expected to increase in Nigeria. From the Nigerian context, while some studies have noted a substantial increase both in size and complexity of environmental disclosure in annual reports (Dibia & Onwuchekwa, 2015; Uwuigbe & Jimoh, 2012; Owolabi, 2008). Others observed that the level of environmental disclosure practices is very low and is still at its embryonic stage (Uwuigbe & Jimoh, 2012).

To stimulate corporate attention to the role of environmental responsibility for corporate survival, various countries have various regulation concerning environmental issues. For instance Nigerian Government has established various environmental laws among which include the Harmful Waste Act 42 of 1988, Associated Gas Re-injection Act Cap 26, LFN 1990 and its attendant regulations. The Oil in Navigable Waters Act Cap 331, LFN 1990 and its attendant regulations. Solid and Hazardous Management Regulation 1991, the National Effluent Limitation Regulation S.1.8 of 1991, the Environmental Impact Assessment (EIA) Act of 1992, the Sea Fisheries and Inland Fisheries Act, 1992, the Pollution Abatement in Industries and Facilities Generating Wastes- Regulations S.1.9, of 1999, National Environmental Standards and Regulations Enforcement Agency (NESREA) Act of 2007. Each of the 36 States in Nigeria including the Local jurisdictions within each State of the country have also enacted many other environmental laws based on hazardous contamination control like the waste disposal law, law against bush burning and periodic environmental sanitation exercises. In order to enforce compliance with these regulations, Government has therefore established environmental agencies and regulating bodies such as the Federal Environmental Protection Agency (FEPA) Act, No. 58 of 1988 now Ministry of Environment and their counterparts in the states. Some of the environmental legislation according to Sodipo, Omofuma, and Nwachi, (2017) are:enumerated-

1. National Environmental Standards Regulations and Enforcement Agency (Establishment) Act 2007 (NESREAA) and the 33 Regulations made by the Minister of Environment under section 34 of the Act This statute was created under the 1999 Constitution of the Federal Republic of Nigeria (section 20) and repealed the Federal Environmental Protection Act 1988. The NESREA, the major federal body responsible for protecting Nigeria's environment is responsible for enforcing all environmental laws, regulations, guidelines, and standards. This includes enforcing environmental conventions, treaties and protocols to which Nigeria is a signatory.
2. Environmental Impact Assessment Act (Cap E12 LFN 2004). This law sets out the general principles, procedures and methods of environmental impact assessment in various sectors.
3. Harmful Waste (Special Criminal Provisions etc) Act (Cap H1 LFN 2004). This law prohibits the carrying, depositing and dumping of harmful waste on land and in territorial waters.
4. Endangered Species (Control of International Trade and Traffic) Act (Cap E9 LFN 2004).This provides for the conservation and management of wildlife and the protection of endangered species, as required under certain international treaties.

5. National Oil Spill, Detection and Response Agency Act 2006 (NOSDRA). The objective of this law is to put in place machinery for the co-ordination and implementation of the National Oil Spill Contingency Plan for Nigeria to ensure safe, timely, effective and appropriate response to major or disastrous oil pollution.
6. National Park Services Act (Cap N65 LFN 2004).This makes provision for the conservation and protection of natural resources and plants in national parks.
7. Nigerian Minerals and Mining Act 2007.This repealed the Minerals and Mining Act No. 34 of 1999 and re-enacted the Nigerian Minerals and Mining Act 2007 for the purposes of regulating the exploration of solid minerals, among other purposes.
8. Water Resources Act (Cap W2 LFN 2004). This aims at promoting the optimum development, use and protection of water resources.
9. Hydrocarbon Oil Refineries Act: The Act is concerned with the licensing and control of refining activities.
10. Associated Gas re-injection Act: This law deals with gas flaring activities by oil and gas companies. Prohibits, without lawful permission, any oil and gas company from flaring gas in Nigeria and stipulates the penalty for breach of permit conditions.
11. Nuclear Safety and Radiation Protection Act: The Act regulates the use of radioactive substances and equipment emitting and generating ionising radiation. In particular, it enables the making of regulations for protecting the environment from the harmful effects of ionising radiation.
12. Oil In Navigable Waters Act: This is concerned with the discharge of oil from ships. It prohibits the discharge of oil from ships into territorial waters or shorelines.

The National regulatory bodies include:
1. National Environmental Standards and Regulations Enforcement Agency (NESREA)
2. National Oil Spill Detection and Response Agency.
3. Federal Ministry of Environment.
4. Directorate of Petroleum Resources (DPR).
5. Nigerian Nuclear Regulatory Authority.
6. Federal Ministry of Water Resources
7. National Oil spill Detection and Response Agency (NOSDRA)
8. National Biosafety Management Agency
9. Department of Climate Change
10. Energy Commission of Nigeria
11. Erosion, Floods and Coastal Zone Management
12. Department of Planning, Research and Statistics
13. Drought and Desertification Agency

In addition to environmental laws some countries have initiated mandatory disclosures in the environmental reporting requirements. At present environmental information disclosure is not mandatory in Nigeria as no accounting standard has been issued in Nigeria specifically for treatment of these environmental issues (Bassey, Effiok, & Eton, 2013; Owolabi, 2008). The only thing that resembles environmental disclosure regulation is corporate compliance with international financial reporting standard IAS 37 on contingency costs which creates the need for tracking and reporting

environmental liabilities that affect the Statement of Financial Position of a firm. Hence, there is the need for regular and systematic appraisal of the anticipated cost reasonably likely to have a material effect on the financial position of a firm (Emeakponuzo & Udih, 2015).

There is lack of agreement on how to define and measure environmental aspect of firm performance. Challenges of measuring environmental performance is not only that environmental issues are complex and often difficult to quantify. Also the availability and quality of environmental data is often poor (Montabon, Sroufe, & Narasimhan, 2007). Some of the metrics used in the past to measure and disclose environmental management practices and resulting performance are discussed in this paragraph. Environmental disclosures focus on capital costs and/or operating expenses of the reporting entity. It emphasizes on performance of the organizations in the following key areas of the environment: efficiency of material consumption; energetic efficiency; water management; waste management; biological diversity; emissions into the air and other relevant indicators of the influence of the organization's activity on the environment (Hřebíček, Štencl, Trenz, & Soukopová, 2012).

Environmental disclosures include climate change, renewable energy, water, pollutant releases, biodiversity, site remediation and decommissioning, land use, chemical regulations, resource use and efficiency, vehicle fuels and engine technologies (CICA, 2010). Corporate environmental performance indicators are usually divided into three main categories according to Delmas and Blass (2010): (1) environmental impact (toxicity, emissions, energy use etc.); (2) regulatory compliance (non-compliance status, violation fees, number of audits etc.) and (3) organizational processes (environmental accounting, audits, reporting, environmental management system etc. In the view of Fung, Law, and Yau (2010), environmental issues in the short term can include such things as a company's liability payments for fines incurred for pollution or non- compliance to regulation. For resource usage and efficiency, performance indicators might be energy intensity (gigajoules/cubic

metre and totoal production) and water withdrawal intensity. In a study by Lorraine (2004), environmnetal performance information was measured with fines for environmental pollution and commendations about good environmental achievements. Al-Tuwaijri, Christensen, and Hughes, (2004) measured environmental disclosure using the percentage of total waste generated recycled, toxic waste, oil and chemical spills, and environmental fines and penalties. Makori and Jagongo (2013) used amount spent on environmental protection to measure environmental disclosures. In a study by Nyirenda, Ngwakwe, and Ambe (2013), environmental disclosures was measured using water usage, energy usage and carbon emission reduction. As already stated some environmental disclosures are financial while others are non-financial. In the above study of Nyirenda, Ngwakwe, and Ambe (2013), carbon emissions reduction is measured in metric tonnes of CO_2 equivalent (mt CO_2e); energy usage is measured in Giga Joules per tonne (Gj/t); and, water usage is measured in kilo liters per tonne (Kl/t).

Kocmanova, Nemecek, and Docekalova (2012) measured environemntal disclosures using emissions to air, emissions to water, waste, hazardous waste, odour, noise, radiation, vibration, accident and consumption of power and heat. Hawkamah and Ernst & Young (2014) measured environmental disclosures using carbon emissions, water and energy consumption. Of the set of environmental metrics, the strongest market interest is shown in greenhouse gas (GHG) emissions and other climate change data, notably CO_2 emissions (Eccles, Serafeim, & Krzus, 2011).

Clarkson, Li, Richardson, and Vasvari (2008) classified prior environmental accounting research into three broad categories: studies that examine the value relevance of corporate environmental performance information (Oba, Fodio, & Soje, 2012; Jacobs, Singhal, & Subramanian, 2010; Holm & Rikhardsson, 2006; Lars & Henrik, 2005; Deegan, 2004; Lorraine, Collison, & Power, 2004; Hughes II, 2000), studies that examine factors affecting managerial decisions to disclose potential environmental liabilities that is determinants studies (Dibia & Onwuchekwa, 2015; Bhattacharyya,

2014; Osazuwa, Arinze, & Izedonmi, 2013; Meng, Zeng, Tam, & Xu, 2013; Huang & Kung, 2010; Guthrie, Cuganesan, & Ward, 2008; Gao, Heravi, & Xiao, 2005; Cormier & Magnan, 1999), and studies that explore the relation between environmental disclosures and firm performance. Another category of environmental reporting research are studies on why companies make environmental disclosures (Uzonwanne, Yekini, Yekini, & Otobo, 2014; Suttipun & Stanton, 2012; Ahmad, 2012; De Villiers, 2003). This study contributes most directly to the last category which is relation between environmental disclosures as an aspect of sustainability disclosure and firm performance and will measure environmental disclosure by combining Makori & Jagongo (2013) and Hawkamah and Ernst & Young 2014). Thus the measure is hybrid of the two authors and include: carbon emissions, amount spent on environmental protection, environmental fines and penalties, environmental awards and energy consumption.

2.1.4 Social Disclosure

Social sustainability disclosure means reporting on companies practices designed to achieve respect for human beings. Social report is a multi-disciplinary concept covering a broad range of issues in operating business. Given the multiplicity of indicators used to describe social responsibility in economic literature, it becomes difficult to correctly define the concept. Supporting this argument Servaes and Tamayo (2013) observed that a general consensus as to what activities are included under the CSR umbrella has not emerged. Effort is made in this section to bring out the meaning and as Comincioli, Poddi, and Vergalli (2012) put it, even if corporate social performance is difficult to measure, it can be transformed into measurable variables. Social sustainability can be define as a way to achieve the protection, promotion, and preservation of social values for future generations. Being socially responsible means considering the interest of the society in the actions of firms. This includes human rights, preservation of diversity, protection and promotion of health and safety, intra and intergenerational equity among many others (Widok, 2009).

Corporate social responsibility report, Social performance information, social accounting, socio-economic accounting, social responsibility accounting, corporate social performance, social disclosure and social reporting, have been used interchangeably in the literature (Alkababji,2014; Fifka & Meyer, 2013; Mahoney & Roberts, 2007; Crowther, 2000). Social reporting is the rational assessment of and disclosure on some meaningful domain of companies' activities that have social impact (Ebimobowei, 2011). It is an approach to reporting where a firm publish information on their product quality, equal opportunities and social benefits for their employees, and their contributions to the communities where they operated (Fifka & Meyer, 2013). Social reporting is 'an approach to reporting a firm's activities which stresses the need for the identification of socially relevant behavior, the determination of those to whom the company is accountable for its social performance and the development of appropriate measures and reporting techniques' (Crowther, 2000 cited in Onyali, Okafor, & Onodi 2015). According to CFA Institute (2008), corporate social reports considers the impact of a company on society as a whole based on how the company takes responsibility for the effect of its activities on a number of stakeholders—employees, the communities in which it operates. Social Responsibility means that companies take into consideration the concerns of a wide range of corporate stakeholders - shareholders, employees, suppliers, customers, government, and the local community and incorporate principles of social fairness and sustainability into the business process (Alkababji,2014). Firms that typically invest in socially responsible practices, both in ways that solve pressing social issues and improve the firms' competitive edge using the same frameworks that guide their core business choices, are discovering that CSR can be much more than a cost, a constraint or a charitable deed; it can be an enabler for competitive advantage (Beardsell, 2008).

There are potential gains and costs associated with corporate social responsibility. For example, being socially responsible by showing concern towards societal need and their long term desires like pollution control reduces such costs as litigation cost. Considering that being socially responsible

involves costs like procuring environmentally friendly equipment, and implementation of stricter quality controls, it should generate benefits as well in order to be a sustainable business practice. According to Gherghina, Vintilă, and Dobrescu (2015), compliance with social contract by ensuring that companies' activities and ethics are congruent with societal objectives will improve harmony and reduce the costs of maintenance of good relationships with the stakeholders while non-compliance will determine the rise of the business operating costs. They emphasise that firms should consider those activities which promote benefits for the society and minimize the negative effects related to the employed actions, as long as the society is not harmed by such activities. Similarly a socially-responsible firm may encounter fewer labor problems, fewer complaints from the community, and fewer environmental concerns from the government. This will result to reduction in employee turnover, absenteeism, improve productivity, increase customer loyalty and good brand image that the company will have in the society. The ability of the firm to be involved in corporate social responsibilities may make the society to view the firm in terms of good reputation and good image, which can indirectly affect the reputation and performance (Adeneye & Ahmed, 2015; Stuebs & Sun, 2011). Likewise managing environmental concerns proactively can lower the costs of complying with existing and future environmental regulations, even though it can increase the operating costs in the short run (Simionescu & Gherghina, 2014; Tsoutsoura, 2004).

Supporting the argument that being socially responsible is in the interest of a firm, Manchiraju and Rajgopal (2015) and Okwemba, Chitiavi, Egessa, Douglas, and Musiega (2014), opined that a high commitment to CSR activities is associated with attracting and retaining higher quality employees which in turn ensure long- term survival of the corporation. Ignoring social responsible practices can affect cash flow and cost of capital by increasing attrition with stakeholders. El Ghoul, Guedhami, Kwok, and Mishra (2010) cited in Gregory, Tharyan, and Whittaker (2012) opined that that firms with a high level of corporate social performance enjoy a lower cost of capital, implying that such firms are perceived as having a lower market risk (also known as systematic risk. In this perspective,

it is possible that the move to (exit from) CSR may significantly increase (reduce) intrinsic workers motivation, thereby affecting positively (negatively) their productivity (Becchetti, Di Giacomo, & Pinnacchio, 2005).

Notwithstanding these potential gains some scholars have provided argument to show that CSR is an inconsistent effort which can affect companies' shareholders' wealth. Engaging in CSR practices lead to extra-costs and these costs will affect companies' bottom line. For instance Dusuki and Dar (2005), cited in Simionescu and Gherghina (2014) posited that a shadow of doubt persists to exist on whether an active involvement in social responsibility practices actually lead to an increased performance. Additional CSR investments increase costs, hurt performance and compete with value-maximizing activities (Stuebs & Sun, 2011). This confirm the assertion that firms which incur costs from socially responsible actions like charitable contributions, promoting community development plans, maintaining plants in economically depressed locations, and establishing environmental protection procedures, put themselves at an economic disadvantage compared to other, less responsible, firms (McGuire, Sundgren, & Schneeweis, 1988).

Some form of regulations are needed to control the responsibility of a company to the social aspect, to support the sustainable development. For instance corporate social responsibility (CSR) is now mandatory in India. According to the Clause 135 of the Companies Act passed by the Indian Parliament in 2013, a firm is required to spend 2% of its average net profits on CSR activities. Similarly CSR currently is an obligation for all corporation in natural resources-related business in Indonesia. Apart from formal legislative mandate, firms encounter extensive pressure from consumers, employees, suppliers, community groups, government, non-governmental organizations (NGOs), and institutional shareholders to engage in CSR. Nevertheless, companies that understood the long term benefit of being socially responsible are integrating CSR practices into their core business strategies on a voluntary basis. Also efforts have been made particularly in the developed countries by social institutions to establish social indices for evaluating a firm's efforts in fulfilling

their social responsibility. These mechanisms considerably encourage firms and even researchers to have increase concern for social responsibility being aware the specific indicators. For instance, in U.S. Dow Jones and Company, established Dow Jones Sustainability Indexes (DJSI) in 1999 and Financial Times of UK founded the Financial Times Stock Exchange for Good Index (FTSE4Good) in 2001, MSCI's ESG etc.

However, the understanding and practice of CSR in Nigeria is still largely philanthropic. No wonder there are variation on the scope of activities included in companies CSR programs leading to multiplicity of CSR definitions. Subjective indicators are used by different firm and this may have contributed to diverse results on research involving corporate social responsibility and firm value. Some indicators used in previous research are not significantly clear as to exactly what they measure. Marfo, Chen, Xuhua, Antwi, and Yiranbon (2015) strengthen this argument when they observed that lack of consensus of measurement methodology for corporate social responsibility bring about further complications.

There have been an increase in the production of corporate social responsibility reports in many developed world economies (Bebbington, Larrinaga, & Moneva, 2008). Commenting on the of extent of social disclosure in Nigeria Ebimobowei (2011), noted that while counties in developed economies are responding to increasing need to disclose various activities that affect the society in their annual report such is not the case with Nigeria. Citing Iyoha (2010), he emphasised that no serious thoughts are given to social issues as fair business practice, community involvement etc in the annual report of Nigerian companies. Strengthening this argument, Ekineh (2009) cited in Uzonwanne, Yekini, Yekini, and Otobo (2014) noted that Nigerian public companies tend to declare little corporate social disclosure. Nevertheless, the concept of corporate social responsibility has received considerable attention in literature both in the developed and undeveloped economies.

Social factors such as human rights, worker rights, safety, labor relations, child labor, community relations/development, discrimination, product safety, diversity (employee/board), political contributions, and indigenous rights play an increasingly expanded role in the public's perception of quoted companies (CFA Institute, 2008). Investors seeking to minimize labor- related risk look at the health and safety practices for employees such as safety training, protocols, and safe work environments. Poor safety records not only bring bad publicity, but are direct costs. Companies with positive culture of work/life balance for employee and employee investment will attract talent to the company, and also translate into greater overall employee satisfaction, and ultimately result in cost savings and financial profit for the company. (Fung, Law, & Yau, 2010). Another important social criteria is impact of a firm's products or services on society. Concerns about risks include product safety and negative health effects, such as food contamination, genetically modified foods, food additives, and chemicals used in household goods or in consumer electronic products.

Social disclosures include labour, stakeholder relations, operations in emerging markets, safety, energy security, anti-corruption, human rights (CICA, 2010). For labour including employee relations, performance indicators might include percentage of employee turnover, percentage of workforce unionized, the ratio of lowest wage to minimum wage, ratio of average wage to minimum wage. Turnover of employee is an indicator of employee satisfaction and a critical cost factor for companies because replacing experienced staff is expensive. According to Hřebíček, Štencl, Trenz, and Soukopová (2012), social performance indicators include labour practices (employment; labour/management relations; health and safety; training and education; diversity and opportunity), human rights -strategy and management; non-discrimination; freedom of association and collective bargaining; child labour; forced and compulsory labour; disciplinary practices; security practices; indigenous rights. Society - community; bribery and corruption; political contributions; competition and pricing. Product responsibility - customer health and safety; information and labelling products and services; advertising and marketing; respect for privacy. In the view of Collin (2009), Social

factors such as labour standards, community relations or health and safety can negatively impact a company's reputation and brand value, which can have consequences for financial performance. Therefore, neglecting these broader social responsibilities therefore threatens both the sustainability of the companies themselves and society as a whole (Alkababji, 2014).

McWilliams and Siegel (2000) used an index of social performace to measure corporate social responsibility of firm. Fiori, di Donato, and Izzo (2008), considered three parameters of corporate social responsibily in their study. The three parameters are employment, community and environment. The measures under each of these parameters were scored for all the firms used and then, summed all the scores for each parameter to get total corporate social responsibility. Hřebíček, Štencl, Trenz, and Soukopová (2012), measured social performance indicators using labour practices (employment; labour/management relations; health and safety; training and education; diversity and opportunity), human rights -strategy and management; non-discrimination; freedom of association and collective bargaining; child labour; forced and compulsory labour; disciplinary practices; security practices; indigenous rights. Society - community; bribery and corruption; political contributions; competition and pricing. Product responsibility - customer health and safety; information and labelling products and services; advertising and marketing; respect for privacy. Kocmanova, Nemecek, and Docekalova (2012), measured social disclosures using occupational safety and health, feedback from customers and suppliers, relations with employees, financial support to public activities, impact of a product on the environment. Hawkamah and Ernst & Young (2014), measured social dislcosures using employee health and safety, community investment and charitable giving. Extant literature on Corporate Social responsibility can be summarized into: Value relevance studies (Carnevale, Mazzuca, & Venturini, 2012), Determinant studies (Hong, Li, & Minor, 2015; Ebiringa, Emeh, Chigbu, & Obi, 2013; Venazi & Fidanza, 2006; Roberts, 1992; Cowen, Ferreri, & Parker, 1987), and studies that examine relationship between CSR and firm performance (Hasan, Kobeissi, Liu, & Wang, 2016; Gherghina, Vintilă, & Dobrescu, 2015;

Adeneye & Ahmed, 2015; Xie, 2015; Vujicic, 2015; Anderson, Hyun, & Warsame, 2014). On the other hand, Tsoutsoura (2004) used event studies and relationship studies to categorise previous empirical studies involving CSR and firm performance. For the purpose of this study social disclosure will be measured using: social donation, disclosure of community social responsibility, disclosure of donation and charitable gifts, disclosure of human resources and employee relations, job creation, investment in employee, disclosure of employee health, safety and welfare.

2.1.5 Corporate Governance Sustainability Disclosure

Corporate governance comprises all measures – such as optimal incentive or control structures – which assure that investors get an adequate return for their investments (von Arx & Ziegler, 2008). Corporate governance deals with the mechanism by which stakeholders of a company exercise control over corporate managers and provide overall direction to the firm, such that stakeholders' interests are protected (Osisioma, 2013). Blair (1995) also defined corporate governance in broader context and argues that corporate governance should be regarded as the set of institutional arrangements for governing the relationships among all the stakeholders that contribute firm specific assets. Corporate governance is about the mechanisms that allow the principals (shareholders) to reward and exert control on the agents (Servaes & Tamayo, 2013). Corporate governance refers to the rules prescribing how boards of directors and corporate managers operate. It is a control mechanism used to reconcile competing interests between company management and shareholders. It is instrumental to the protection rights of different stakeholder group.

Corporate governance is a system through which companies are directed and controlled (Deakin, 2012). According to Uwuigbe, Peter, and Oyeniyi (2014), corporate governance is a mechanism that is employed to reduce the agency cost that arises as a result of the conflict of interest between managers and shareholders. It is an internal system encompassing policies, processes, and people that serve the needs of shareholders and other stakeholders by directing and controlling management

activities with good business practices, objectivity, and integrity (Man & Wong, 2013). In a more broder view, corporate governance is defind as the mechanisms of how shareholders delegate their power and authority to the board and corporate managers and how corporate managers allocate the firm's finite resources (for example, financial, material, and human) to achieve the goal of maximizing profit, to the extent allowable by governing laws and company mandates. It encompasses the controls and procedures that exist to ensure that management acts in the interest of shareholders (Kanagaretnam, Lobo, & Whalen, 2007).

Sound corporate governance is reliant on external marketplace commitment and legislation, as well as a healthy board culture that safeguards policies and processes. In the view of Gull, Saeed, and Abid, (2013), better governance promotes efficient and effective working environment and it also ensure high levels of accountability and transparency. Corporate governance is seen as a relatively new concept.in emerging markets (Hawkamah & Ernst & Young, 2014). Nevertheless majority of countries in the emerging markets have issued corporate governance codes and guidelines and are investing in better governance with the view of addressing their corporate governance shortcomings.

The quality of corporate governance and the nature of a company's culture and behaviors are recognized as having a significant impact on performance and long term sustainability (Roy, 2016; Cleverly, Phillips, & Tilley, 2010). Apart from reducing chances of management acting in its self-interest as well as takes actions that deviate from maximizing the value of the firm, corporate governance mechanisms also affect the information disclosed by the firm to its shareholders. The main objectives of corporate governance are to develop the quality of companies' board governance and increase the accountability of companies to shareholders, while maximizing firm performance (Kanthapanit, 2013; Damagum & Chima, 2013). Commenting on the need for corporate governance, Kocmanova and Simberova (2012) opined that good governance is an essential ingredient of corporate success and sustainable economic growth. Good corporate governance also create effective monitoring of the structure of a firm's board of directors and their accountability to

shareholders. Corporate governance increases stock price because the shareholder's values may respond instantaneously to news indicating better corporate governance (Nam & Nam, 2004). Corporate governance systems are developed, in part, to help reduce agency problems.

Corporate governance should be able to motivate the board and management to pursue objectives that are in the interest of the company and its shareholders and should facilitate development of effective monitoring. mechanisms and evaluation procedures to help control an organization's agents and ensure that they behave in the best interests of shareholders (Zahirul Islam, Nazrul Islam, Bhattacharjee, & Zahirul Islam, 2010; Okoye & Ofoegbu, 2006). It will help develop and stimulate better business management, facilitate effective monitoring and ensure that resources are used efficiently. In the long-term, this will make business more competitive. Corporate governance mechanisms can be broadly classified into two types: internal and external. External mechanisms are determined by outside factors, aim to govern firms in favor of the interests of stakeholders. It includes such items as legal/regulatory systems and takeover rules. On the other hand, internal mechanisms are decided by internal factors, including insider shareholding as well as board structures and characteristics. It includes the proportion of independent directors, director backgrounds, audit committees, compensation committee, remuneration committees, and ownership structures (Man & Wong, 2013).

It is important to note that due to cultural differences, the term corporate governance and its content vary from country to country. The following are some of the key governance issues that will continue to offer risks and opportunities to investors in future (Fung, Law, & Yau, 2010): Issues relating to shareholder rights include: (1) the voting system; (2) rights to nominate individuals to the board, submit proposals to the annual general meeting, and implement the shareholder approved proposals without the board and management; (3) equality in shareholder structure; (4) corporate restructuring; and (5) the opportunity to take legal or seek regulatory action to protect and enforce their ownership rights. Issues relating to the board of directors include: (1) the number of

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independent board members; (2) the qualifications of the board members and their business relationship with the company; (3) the ability to hire independent third- party consultants; (4) election of board members; (5) independent committees for financial reporting, executive compensation, nomination of independent board members, as well as committees for overseeing the management's activities in areas such as corporate governance, mergers and acquisitions, legal matters, and risk management. Issues relating to corporate management include: (1) the adoption of a code of ethics; (2) use of company's assets for personal use; (3) determination of executive compensation; and (4) management of share- repurchase programs and price stabilization efforts.

There are several well documented guidelines used in regulating firm in different part of the world. For instance the Sarbanes-Oxley Act (SOX) 2002 in USA, Securities and Exchange Commission (SEC) Code of Best Practices 2003 for Public Companies. The 2003 corporate governance code for public companies was reviewed by SEC in 2011 in an effort to improve the financial reporting process. Also a National code of corporate governance was issued by FRCN in 2016 essentially as a consolidation and refinement of different sectorial codes on corporate governance and has been issued in three parts: the Code of Corporate Governance for the Private Sector; the Code of Governance for Not-for-Profit entities; and the Code of Governance for the Public Sector. The Code of Corporate Governance for the Private Sector (Private Sector Code) is to be mandatory while that for the Not-for-Profit entities is to be operated on a "Comply or Justify non-compliance" basis in a manner similar to the United Kingdom's Corporate Governance Code. On the other hand, the Code of Governance for the Public Sector will not become immediately operative until an executive directive is secured from the Federal Government of Nigeria for that code to take effect. The Board of SEC therefore believes that this new code of corporate governance will ensure the highest standards of transparency, accountability and good corporate governance, without unduly inhibiting enterprise and innovation.

The Code should have been a dynamic document defining minimum standards of corporate governance expected particularly of public companies with quoted securities. The code specified: Responsibilities of the Board, Duties of the Board, Composition and Structure of the Board, Officers of the Board, Multiple Directorships, Family and Interlocking Directorship, Company Secretary, Board Committees, Meetings of the Board, Remuneration, Insider Trading, Tenure and Re-election of Directors, Meetings of Shareholders, Protection of Shareholder Rights, Institutional Shareholders, Sustainability Issues, Internal Audit Function, Whistle-blowing Policy, Communication Policy, Code of Ethics. Incidentally the code was suspended by October 2017 before this study was approved for final presentation.

Specifically for all public companies with quoted securities, the positions of the Chairman of the Board and Chief Executive Officer shall be separate and held by different individuals. This is to avoid over concentration of powers in one individual which may rob the Board of the required checks and balances in the discharge of its duties. The remuneration of executive directors should comprise a component that is long-term performance related and may include stock options and bonuses which should however, be disclosed in the company's annual reports. Every public company should have a minimum of one independent director on its Board. The Board may in addition to the Audit Committee required by CAMA establish a Governance/Remuneration Committee and Risk Management Committee and such other committees as the Board may deem appropriate depending on the size, needs or industry requirements of the company. To effectively perform its oversight function and monitor management's performance, the Board should meet at least once every quarter. Companies should recognise corruption as a major threat to business and to national development and therefore as a sustainability issue for businesses in Nigeria. To that effect, there should be disclosure on the company's policies on corruption and related issues and the extent of the compliance with the policies and the company's code of practice. The Board of a public company should ensure that the company's annual report includes a corporate governance report that conveys

clear information on the strength of the company's governance structures, policies and practices to stakeholders. The report should among other things include: company's sustainability policies and programmes covering issues such as corruption, community service, environmental protection, HIV/AIDs and general corporate social responsibility issues (SEC 2008 34.4 and 34.4k).

Corporate governance mechanisms include ownership structure, like percentage of institutional shareholders, foreign, external and internal shareholders. It is also concerned with formation of board of directors, like the size of board, percentage of the directors which are non-executive and leadership structure of board. Leadership structure means the difference between Chief Executive Officer's duties and authority from that of Chairman of Board (Gull, Saeed, & Abid, 2013)

Kocmanova, Nemecek, and Docekalova (2012) used codes of good practice contained in the Organisation for Economic and Corporate Development (OECD 2004) in measuring corporate governance disclosures. Collin (2009), noted that governance issues include board structure, independent board leadership, separation of Chairman and CEO, executive compensation, shareowner rights, accounting and audit quality and corporate culture. Hawkamah and Ernst & Young (2014) used ownership structure, board independence board composition, board meetings board evaluation and executive remuneration in measuring governance disclosures. In the view of Eccles, Serafeim, and Krzus (2011), of the set of governance metrics, market interest is concentrated on board composition and board activity data. Damagum and Chima (2013), used Board Size, Board Composition and directors' shareholdings in measuring corporate governance. Corporate governance was measured with audit committee, CEO duality, business complexity, leverage, executive directors' ownership, non-executive directors' ownership, financial institution ownership, non-financial institution ownership and board independence by Adeyemi and Fagbemi (2010). In a study by Akhtaruddin, Hossain, Hossain, and Yao (2009), Corporate Governance was measured using: Board Size, Independent Non-executive Directors, Ownership Structure, Family Control and Audit Committee.

For the purpose of this study, governance is measured using Board size, Board independence, Board gender diversity, Directors' shareholding, Audit committee size, Directors' remuneration, and Audit credibility. Commenting on the independence of the Board, Faisal, Tower, and Rusmin (2012) noted that the proportion of independent non-executive director is used as a proxy of better corporate governance characteristics. Furthermore, directors who are more independent to the management may be more likely to encourage the disclosure of more sustainability information.

The importance of research on corporate governance need not be over emphasized as can be seen from the considerable growth in the empirical literature across accounting, economics, finance and management, literatures. These prior studies on corporate governance has focused both on developed and developing countries but has produced inconsistent result. Most of these research studies examine whether different corporate governance structures impact or constrain executive behavior and/or have an impact on organizational performance. The issue with these extant studies is whether the indicators used to measure corporate governance actually capture the essence of this complex construct and exhibit acceptable levels of measurement error (Larcker, Richardson, & Tuna, 2007). Effort is made in this study to use standard multiple indicators to reduce the measurement error associated with arbitrary indices.

2.1.6 Firm Performance

Performance has been defined and conceptualised differently by various authors and researchers. It is a set of financial and nonfinancial indicators which offer information on the degree of achievement of objectives and results. Scholars often agree that corporate performance is a function of time and organizational context and as such they posit that there is no universal definition of the concept (Ekwueme, Egbunike, & Onyali, 2013). A firm's market value is influenced by investors' perceptions of its managers' ability to anticipate and respond to future changes in the firm's economic environment. Haryono and Iskandar (2015) opined that Corporate Financial Performance

is a reflection from the financial condition of a company analyzed by the financial tools. It reflects the working achievement in a certain period. They also defined firm value as the perception of the investor to the success of a company which is reflected in the share price of the company. Accordingly, inside directors disclose information to influence investors' perception of their ability to anticipate future changes and ensure a higher market value for the firm (Lim, Matolcsy, & Chow, 2006).

Generally, in order to measure firms' performance, the traditional focus of analysts is on the concepts of: Profitability; Liquidity; Solvency; Financial efficiency; Repayment capacity. Thus firms' current profitability, their risk, growth (which is a proxy of the potential future earning streams), solvency, liquidity and financial ratios are the major factors that impinge upon the market valuation of a firm (Fiori, di Donato, & Izzo, 2008). Extant studies have used accounting-based measures and market-based measures to reflect two dimensions of financial performance. According to Gherghina, Vintilă, and Dobrescu (2015), Haryono and Iskandar (2015), Calace (2013) and Aggarwal (2013), measures such as market value, abnormal returns, stock returns, share prices, price to book value, stock performance, market to book value, and Tobin's Q can be used in measuring firm performance, while some researchers utilizes accounting metrics such as ROS, ROA, ROE, PBT. These firms performance measure are specifically referred to as market/stock market based performance and accounting based performance measures respectively (Hussain, 2015; Gregory, Tharyan, & Whittaker, 2012; Inoue & Lee, 2011; Al-Tuwaijri, Christensen, & HughesII, 2004). In line with this claim Onyali (2014) and Tsoutsoura (2004) posited that financial performance is broken down into two subcategories: market-based performance (e.g., stock price, dividend payout and earnings per share, Price to Book Value) and accounting-based performance (e.g., return on assets and return on equity).

Andayani, Mwangi, Sadewo, and Atmini (2008) provided theoretical argument to differentiate the two measures of performance when he opined that the market based measure of performance is

different from accounting measure because the accounting measurement is retrospective and examines the historical way of work. Supporting this, Al-Tuwaijri, Christensen, and HughesII, (2004) opined that the measure may be biased if the sample includes firms from different industries with different industry-driven levels of fixed assets, and where there may be systematic differences across industries in the age of these assets. On the contrary, the market value of the company depends on the growth prospect and sustainability profits or way of work expected in the future. Differentiating between the two Gregory, Tharyan, and Whittaker (2012) noted that accounting measures are backward looking and do not sufficiently account for risk. The drawback of accounting measures also include that it is subject to bias from managerial manipulation and differences in accounting procedures. Contrariwise Lopez, Garcia, and Rodriguez (2007), posit that accounting measure is considered less noisy, since it indicates what is actually happening in the firm. Market based measures in addition to being forward looking have several advantages over accounting-based measures: they are less susceptible to differential accounting procedures and managerial manipulation and represent investors' evaluations of a firm's ability to generate future economic earnings rather than past performance (McGuire, Sundgren, & Schneeweis, 1988). However, they added that concentrating solely on investors' evaluations may not be sufficient.

Differentiating stock market based measures from accounting based measures Venkatraman and Ramanujam, (1986) cited in Wagner (2010:1554), argued that "Stock market based measures are preferable to accounting based measures, as the latter are more affected by managerial discretion in the utilization of accounting rules or by periods of heightened inflation and are based on past data, whereas stock market based measures are forward-looking in that they are based on future expected performance." Continuing he asserts that stock market based measures is superior to measures such as return on assets or on equity. Fauzi, Svensson, and Rahman (2010) in addition to the two dimensions identified a third category termed perceptual-based measure which include some subjective judgments for corporate financial performance which will be provided by respondents

using some perspectives—such as ROA, ROE and the financial position—relative to other companies. Accounting measures is the appropriate basis for measuring performance (Herremans, Akathaporn, & McInnes, 1993). Though they are often criticized because of accounting's historical orientation, the possibility of differences across companies arising from disparate accounting policies rather than from underlying performance. Differences across companies in the level of sustainability disclosures are expected to stem from, of to affect revenues, expenses and investment, all variables which are directly captured by the accounting measures selected.

If we are to understand the real impact of sustainability disclosure strategies on financial performance, the appropriate measure is integration of both stock market and accounting performance measures in the analysis. By combining stock market and accounting based measures of corporate performance, the study help to clarify the distinct competitive effect of sustainability related issues. This is in line with the claim of Becchetti, Di Giacomo, and Pinnacchio (2005) that an empirical research broadening the scope of the analysis and integrating many of these perspectives - observation periods, companies included in the sample, measures of corporate performance, gives more complete picture of the effects of social responsibility on corporate performance. Furthermore, it would be difficult to justify that sustainability practices influence corporate performance if there were no differences in the most significant performance indicators (Lopez, Garcia, & Rodriguez, 2007).

Thus the study investigates the connection between sustainability disclosures and firm performance from both an accounting and a market-based perspective. An accounting view of financial performance asseses only tangible costs and revenues and implicitly assumes factors that affect profits are fixed. In contrast, in a market-based perspective of financial performance, future cash flows and profitability can be estimated to reflect the likelihood of more sustainability regulation in the near future (Delmas & Nairn-Birch, 2011). To this effect Return on Assets and Tobin Q was used

according to Haryono & Iskandar (2015), Gherghina, Vintilă, & Dobrescu (2015), Bolton (2013), Inoue & Lee (2011) and McGuire, Sundgren, & Schneeweis (1988).

2.1.6a Accounting-Based Performance Measure – Return on Assets

Return on assets (ROA) is an accounting-based performance measure which represent the firm's short-term profitability or management efficiency, and provide direct information on how certain resource allocations lead to the firm's current profits. ROA measures profitability and the effectiveness of companies in utilising their assets to generate profit. Usman and Amran (2015), explained that ROA represents a company's profitability accruing from the total asset that the business controls. Commenting on the justification for using ROA, Inoue and Lee (2011), opined that ROA is an accounting-based measure that represents a firm's efficiency of using its assets during a given fiscal year, capturing short-term profitability of the firm. This measure is computed as the proportion of operating income before interest expense, depreciation and amortization (OBIDA) over total assets. Return on Assets is also computed as Net Profit After Tax/ Total Assets.

2.1.6b Market-Based Performance Measure –Tobin's Q

The market based approach adopts the market price method. It evaluates the value on the basis of prices quoted on the stock exchange. It is the current quoted price at which investors buy or sell a share of common stock or a bond at a given time (Olayinka & Oluwamayowa, 2014). Tobin Q is a market-based performance measure which reveal how investors evaluate the firm's capability to create future profits. Tobin's q, represents investors' perceptions of a firm's market value relative to its book value. Thus to measure the market evaluation of firm future profitability, this study uses Tobin's q. It is a firm value as perceived by the market. This perception is forward-looking, risk

adjusted, and more robust in accommodating changes in accounting practices. Tobin's Q is the ratio between a physical asset's market value and its replacement value (Wikipidia, 2015).

Tobin's q has been used widely as a performance measure (see, for example Servaes & Tamayo, 2013; Anderson, Fornell, & Mazvancheryl, 2004). It captures how much value the firm creates with its asset base. Because value is based on the present value of future expected cash flows, discounted at the required rate of return, it is already adjusted for risk. The advantage of using Tobin's q over accounting base measure is that the latter is a short-term measure, whereas Tobin's q is a long-term measure because it is based on the market value of the firm. In fact, it is possible that a firm deliberately sacrifices some current profitability to engage in CSR activities that are in the long-term interest of the firm. Tobin's Q emphasizes the potential total value of a firm and capture whether or not stakeholders value the intangible assets derived from a firm's social awareness (Su, Peng, Tan, & Cheung, 2014).

Tobin's Q which is calculated as the market value of equity, divided by the book value of total assets (Hasan, Kobeissi, Liu, & Wang, 2016; Bozec & Dia 2015). Tobin's Q, is the ratio of the market value of equity (fiscal year-end price times number of shares outstanding) plus book value of debt (total assets less book value of equity) to total assets (Albuquerque, Durnev, & Koskinen, 2013).

2.1.7 Control Variables

Control variables are included when testing the conceptual framework of this nature to minimise the chances of model misspecification. It simply help in controlling for other potential impact variables apart from the independent variables of the study. The regression results for instance might suggest that the sustainability disclosures metrics variables were significantly/insignificantly associated with the firm value for the sample firms, it is possible that the relations were actually due to an association with some omitted, but correlated variable. Some difference in financial performance and

sustainability reporting may result from firm size, age, leverage and need to be controlled for, to isolate their unique contribution. In an attempt to address this concern a regression model with several additional control variables was also estimated.

Size, age, and leverage level influence firm performance and influence management's propensity to engage in sustainability issues, it is then important to examine the interactions between these variables jointly as endogenous variables. The control variables included in the analysis of this study are: company size, age, total liabilities to total assets. They are found to be associated with firm value in prior studies (Yu & Zhao, 2015). The reason for choosing these control variables is because in previous studies, those factors have shown up more consistently (Jo and Harjoto, 2011; Lopez, Garcia, & Rodriguez, 2007; McGuire, 1988; Tsoutsoura, 2004).

2..1.7a   Company Size

This is a typical control variable in studies attempting to explain business performance (Thoradeniya, Lee, Tan, & Ferreira, 2012; Gonzalez-Benito & Gonzalez-Benito, 2005). Prior research shows that large companies heavily engaged in environmental and social disclosures. According to Frias-Aceituno, Rodríguez-Ariza, and Garcia-Sánchez (2012), larger firms present a number of corporate characteristics that differentiate them from smaller ones, for example, a more diverse range of products, the potential benefits are greater for larger companies. It is assumed that the larger the firm, the more attention is given to stakeholders for the sake of reputation. Size also spurs economies of scale and scope in managing formalized relationships with stakeholders. Most previous research has concluded that company size has a positive impact on the amount of financial and non- financial information disclosed and by extension firms performance. In a study by Isa (2014), size emerges as a significant predictor of the sustainability reporting. Firm size is taken as the natural log of annual average assets. But since one of the dependent variable is return on assets, then firm size will be taken as natural log of net sales (Berger & Udell, 1998).

2.1.7b   Firm Age

Firm age is the time period in term of number of years from which a firm is operating, starting from the day of incorporation. Berger and Udell (1998) and Sami et al. (2011) demonstrated that financial growth of firms depends upon age of firm and also capital structure varies with age factor. At start firms are expected to have more expenses as they have less experience in the market. As a result, total cost structure of new firms is higher than old firms.

2.1.7c   Leverage: Total liabilities to total assets

The debt level of a firm has the potential to impact financial performance due to costs of finance and risk of default. Previous studies have shown that financial leverage impacts on the likelihood that a company will engage in environmental disclosure which is a dimension of sustainability reporting (Dibia & Onwuchekwa 2015).

2.2   Theoretical Framework

Empirical investigation cannot be successful without theory to guide its choice of questions (King, Keohane, & Verba, 1994 cited in Leshem & Trafford, 2007). The underlying assumptions and their relationship with this study is that provision of sustainability related information is critical to a firm's ability to reduce   information asymmetry between agent and principal, discourage short-term opportunistic behaviour of managers (agency theory), strengthened relationship with stakeholders by accommodating information needs of these variety of stakeholders with sometimes conflicting demands (stakeholders theory), operate within the bounds and norms of the society to obtain acceptance (legitimacy theory) while simultaneously improving overall performance. This study evaluates these assumptions.

Previous relationship and association studies has been based on theoretical arguments. However, sustainability disclosure is a complex phenomenon that can hardly be explained by using a single theoretical approach. (Cormier, Magnan, & Van Velthoven, 2005 cited in Bona-Sánchez, Pérez-Alemán, & Santana-Martín, 2014). This conforms with assertion of Wangombe (2013), that early

studies tended to herd around specific theories, but recent times have seen advocacies for a multi-theoretical approach. The core theoretical foundations of sustainability, as a field of research and as a discipline, are still being developed, and a number of different, but mostly convergent theories have emerged as theoretical frameworks for conceptualizing sustainability (Peter & Swilling, 2014). Based on this, three main theories provide important theoretical frameworks for sustainability research and are generally used to explain the motivation for sustainability reporting practices. They are: Agency, stakeholders and legitimacy theories.

Chen and Robert (2010) cited in Buccina, Chene, and Gramlich (2013), argued that these are complementary theories and have been influential in social and environmental accounting research. In line with this argument, Dagilienė (2013) used two out of the three theories in this study - legitimacy theory and stakeholder theory to explain the influence of corporate social reporting to company's value. According to Chen and Robert (2010) cited in Bhattacharyya (2014), the three theories are generally alike because they share a similar ontological view and the references of their terms are almost identical, they are considered to be system-oriented theories, which assume that any organisation is influenced by the society in which it operates, and, in turn, the organisation also influences society. They fall within the domain of social accounting theories (Deegan & Unerman, 2006). While all the three theories argue that there are external pressures that affect the organization, the manner in which such external pressures are identified, managed or satisfied varies from one theory to the other (Wangombe, 2013). Thus organisations work within such interdependencies to reduce uncertainty and to ensure survival and growth.

This study on sustainability disclosure which has three dimension: environmental disclosure, social disclosure and corporate governance disclosure is embedded on social theories of accounting. Social theories include, stakeholder and legitimacy theories (Bona-Sánchez, Pérez-Alemán, & Santana-Martín, 2014; Bassey, Effiok, & Eton, 2013). Several studies have supported the use of legitimacy and stakeholder theories as the most widely used theory in explaining the complete theoretical

perspective in the environmental literature (Hussain, 2015; Alkababji, 2014; Buccina, Chene, & Gramlich, 2013; Wangombe, 2013; Suttipun, 2012; Suttipun & Stanton, 2012; Oba, Fodio, & Soje, 2012; Uwuigbe & Jimoh, 2012; Bebbington, Coretez & Cudia, 2011; Larrinaga, & Moneva, 2008; Owolabi, 2008).They explained the trend of environmental and social performance and corporate motivations for reporting. Stakeholder theory is closely aligned with legitimacy theory and the two theories are often used to complement each other (Deegan, 2002). Attempt is made to explain agency, stakeholder and legitimacy theories upon which this study is based. In spite of the diversity in their level of analysis and specificity, the various theories are united in their resolve to advance and sustain positive organisation – society interface (Owolabi, 2008).

Under this theoretical perspective the need to adhere to social norms and expectations (legitimacy theory), to obtain external stakeholders' approval (stakeholders theory) and reduce agency cost (agency theory) constitutes an important motivation for sustainability disclosure.

2.2.1   Agency Theory:

Agency theory provides explanation of the relationship between the managers of the firm (agent) and its stakeholders especially with regards to the provision of financial and non-financial information. Agency theory is the main theory used to predict the relationship between sustainability practices and firm performance. One of the underlying assumptions of agency theory is that due to information asymmetry, the agent may not necessarily make decisions in the best interests of the principal, leading to agency problem. An increase in information through sustainability disclosures will reduce the information asymmetry and the consequential agency problem (agency cost) and increase in economic growth of firms.

It has been considered as the most widely used theoretical basis for firm performance (Abubakar et al 2014). Supporting this view, Carter, Simkins, and Simpson (2003) noted that agency theory is the theoretical framework most often used by investigators in finance and economics to understand the

link between board characteristics and firm value. Agency theory provides a number of ways to address the problems raised by the separation of ownership and control in public limited liability companies. It centers on the principal/agent relationship and addresses how differing information is used in a contractual relationship to affect an ongoing relationship (Hahn, 2007). According to the theory, shareholders would need to establish mechanisms to monitor managers, reduce opportunism and information asymmetry, and ensure that shareholders' wealth is maximized (Latridis, 2013). If effective monitoring devices were in place, managers would be more careful and would tend to better look after shareholders' objectives.

The theory implied that as a result of separation between ownership and control, there are bound to be conflict of interest as managers may not always act in the best interest of owners. ie managers have incentives to deviate from shareholders' best interests and make decisions that maximise their own wealth as opposed to the shareholders'. This will result to decline in firm's value due to agents' behaviour – agency cost. For example the cost of monitoring agent will reduce the profit that should have gone to the principal. But through sustainability reporting practice which take into consideration the interest and need of the stakeholders the monitoring cost will reduce and this will improve the firm reputation and subsequently its bottom line.

Thus shareholders and other stakeholders group require disclosure on all the activities of the companies to reduce information asymmetry and enable the principal to have details of all the agents' activities. The provision of additional disclosures above and beyond legislative requirements reduces the conflict of interest between ownership and control as it ensure that all the activities of companies are disclosed (Lim, Matolcsy, & Chow, 2006). Through sustainability disclosure all companies value-adding processes become transparent to all stakeholders and it signal to the market that they are fulfilling their duties thereby reducing agency problem and increases firm value. Such high-quality relationships with key stakeholders not only contribute to productivity, but also reduce agency and transaction costs (Cheng, Ioannou, & Serafeim, 2014).

Corporate sustainability report reduces information asymmetry that exists between management and stakeholders, reduces risk and uncertainty perceived by investors, improves decision-making, increases market efficiency and enhances financial performance (Aggarwal, 2013). Jo & Harjoto (2012) emphasize the important role of CSR as an effective corporate-governance mechanism to resolve conflicts among various stakeholder of firms and reduce agency costs. According to Rodríguez-Melo & Mansouri (2011) cited in (Frias-Aceituno, Rodríguez-Ariza, & Garcia-Sánchez, 2012), sustainability disclosure is currently a common practice among companies, which seek to reduce agency costs, political costs and information asymmetries. The higher the information asymmetry the higher are the costs of monitoring for institutional investors further increasing frictions (Healy & Palepu, 2001, cited in Serafeim, 2014).

2.2.2 Stakeholder theory

Most researchers described stakeholder theory as the dominant and most useful theory in explaining sustainability reporting practice (Hahn & Kühnen, 2013). The basic proposition of the theory is that managers in organizations have a network of relationships with many groups that both affect and are affected by the actions of the firm, thus must shift from the conventional objective of maximizing shareholders interest only. The theory has been gaining strength recently by emphasizing that firm's decisions should take into account all stakeholders, both inside and outside the organization (Carvalhal & Tavares, 2013). The term "stakeholder" was first defined by Freeman (1984) in Andayani, Mwangi, Sadewo, & Atmini (2008) and typically comprised of shareholder and investors, employees, customers and suppliers. It was later expanded to include the governments and communities that provide the infrastructure and market and whose laws and regulations must be obeyed and to whom taxes and other obligation may be due. Stakeholder theory is concerned with how companies manage their stakeholders' relationships (Suttipun, 2012).

Another assumption of the stakeholder's theory is that the firm's success is dependent upon the successful management of all the relationships that a firm has with its stakeholders (Uwuigbe & Jimoh, 2012; Bassey, Effiok, & Eton, 2013; Onyali, Okafor, & Onodi, 2015). Stakeholder theory is premised on the notion that by being socially and environmentally responsible, companies not only concern themselves with maximizing shareholders value but also meet the interest of entire stakeholders. In other words, stakeholder theory proposes that management satisfy several groups who have some interest or "stake" in a firm and can influence its outcome. This theory provide insight into the benefit that can accrue to an organisation by responding to the expectations of all the stakeholder. It emphasises that organization must recognize the existence of all other economic agents affected by its actions and argues that management's survival depends on its ability to accommodate a variety of stakeholders with sometimes conflicting demands and values (Freeman, 1984 cited in Buccina, Chene, & Gramlich, 2013). Stakeholder theory recognizes that managers interact with multiple stakeholders of the firm whose approval provides the organization's legitimacy. It recommends a balanced satisfaction of the interest of all the above groups that can affect or is affected by the achievement of organization's objectives (Venazi & Fidanza, 2006). It can therefore be worthwhile to engage in CSR otherwise these stakeholders could withdraw the support for the firm (von Arx & Ziegler, 2008).

Ultimately, this recognition through meeting the information needs of the diverse stakeholders group is expected to create net gain for all participants. Considering the interest of company stakeholder invariably increases their willingness to support firms' activities in various capacity either as employee, customer, supplier, community, government. This support has bottom line effect. Thus the ability of a company to communicate effectively with its stakeholders is critical to its long term success. The instrumental version of stakeholder theory views corporate social activities and communication as a means (an instrument) to achieve the ultimate objective of maximizing shareholder value (Jones, 1995).

Thus through sustainability reporting which enable firms communicates on it diverse activities, stakeholders support and approval is obtained and long term success of the firm is assured. Value creation depends on a company's ability to understand and respond to the information requirement of all the stakeholders. Stakeholders theory explain information disclosure as an obligation and the right of the stakeholders – groups which are influenced by the corporate activities or which can affect the corporation. Companies require stakeholders support and approval for their survival in the long run, reporting on the diverse activities of a company through sustainability reporting is a way to gain that approval. Explicitly Stakeholder theory suggest that survival of an organization in the long run depends on how they respond to the concerns and expectations of their stakeholders and some of the response will be in the form of sustainability disclosures.

2.2.3   Legitimacy theory

The proposition of legitimacy theory is that since organisation exists within a society, they are expected to operate within the norms of the society (in such a manner that the society is not damaged) to create harmony which can translate to value creation. Legitimacy theory has been considered the main theoretical approach that helps to explain sustainability disclosures (Nasieku, Togun, & Olubunmi, 2014; Deegan, 2002 cited in Bona-Sánchez, Pérez-Alemán, & Santana-Martín, 2014; Cortez & Cudia, 2011). It is the most cited theory that offer probable explanation for the increase in environmental disclosures. Legitimacy theory offers a powerful mechanism for understanding voluntary social and environmental disclosure made by corporations (Bassey, Effiok, & Eton, 2013). Legitimacy theory is derived from the concept of corporate legitimacy which Lindblom (1993) cited in Oba, Fodio, and Soje (2012), defined as a condition or a status which exists when an entity's value system is harmonious with the value system of the larger social system of which the entity is a part. Usman and Amran (2015) hinted that legitimacy theory assumes that organizations have a social contract with the society and meeting the content of these contracts legitimizes the organization. It is a status that comes from the harmony between a corporation's

value system and that of society. Organisaions tend to accommodate themselves to the requirement of the society to achieve harmony which can translate to value creation. Legitimacy is thus achieved when the organization demonstrates that it is acting within society's bounds of norms and values. Otherwise, the legitimacy of the organization is threatened and, the theory predicts, various actors may take action to threaten the organization's continued existence (Buccina, Chene, & Gramlich, 2013).

Legitimacy theory emphasizes that organisations seek to ensure that they operate within the bounds and norms of society. The theory explains the expectation of society from a corporation and by meeting these expectations firms attain legitimacy. It also explains well the relationship between social performance and market value (Hussain, 2015). The legitimacy theory of Suchman (1995) explains that legitimacy is the general perception or assumption that the act of a company complies with the value system or social norm. Legitimacy theory suggests that no organization has an inherent right to exist but that any business operation is subject to a greater acceptance granted by society. Such legitimacy, however, is potentially threatened if society perceives that a company is not operating in an acceptable way. Legitimacy theory relies upon the concept of a social contract between the organization and society; where the activities or action of a firm is desirable and appropriate to societal norms, the firm will receive acceptance from the society and it will affect the reputation. According to legitimacy theory, it is necessary to achieve society's approval in order for the company to survive (Lopez, Garcia, & Rodriguez, 2007). It predicts that companies adopt responsibility reporting to legitimize their operations and conform to societal expectations (Deegan 2002).

Sustainability disclosure by enabling firms report on all the aspects of the activities and enhancing stakeholder engagement contribute towards gaining social legitimacy. It enables companies obtain social licence to operate and this enables them to enjoy increase patronage and revemue. In the view

of Kent and Monem (2008), companies adopt sustainability reporting to legitimize their relationship with society to avoid adverse publicity from the media. Corporate sustainable development disclosure is important in assisting the public to judge the extent of sustainable development compliance and therefore boosts the legitimacy of complying corporations (Ngwakwe, 2013).

Relating the legitimacy theory to this work implies that firms use sustainability reporting as instrument to demonstrate that they operate in acceptable way, to establish congruence between the social values associated with or implied by their activities and the norms of acceptable behaviour in the larger social system of which they are part (Uwuigbe & Jimoh, 2012). As such, in order to maintain legitimacy in the eyes of multiple stakeholders, companies provide information relating to community, employees, environment, and consumer issues, which are the result of their continuous interactions with these stakeholders (Taib, Ameer, & Haniff, 2012). By achieving organizational legitimacy firm's inflow of capital and customer base improves which leads to higher firm value. Acceptability of a company in society as a result of meeting up societal expectations postulated by legitimacy theory is directly linked to stakeholder thinking discussed under stakeholders' theory.

2.3   Empirical Review

Sustainability reporting has now been part of corporate reporting in both developed and emerging economies for well over a decade. Over this time, there have been considerable increase in academic literature on sustainability reporting in developed countries, while number of empirical studies on the responsibility/sustainability reporting in Africa is very limited and sporadic (Fifka & Meyer, 2013). Prior sustainability reporting research is classified into three broad categories: studies that explore the association between sustainability disclosures and firm performance (Garg, 2015; Khan, Serafeim, & Yoon, 2015; Hussain, 2015; Haryono & Iskandar, 2015; Yu & Zhao, 2015; Ioannou & Serafeim, 2014; Ng & Rezaee, 2014; Calace, 2013; Aggarwal, 2013 and others), studies that examine the value relevance of sustainability disclosures (Mervellskemper, Streit, & Bochum, 2015;)

and studies that examine determinants of sustainability disclosures ie research that offers insights into the factors motivating organizations in their decisions for sustainability disclosures (Bhattacharyya, 2014; Fifka & Meyer, 2013; Suttipun, 2012; Faisal, Tower, & Rusmin, 2012; Frias-Aceituno, Rodríguez-Ariza, & Garcia-Sánchez, 2012; Thoradeniya, Lee, Tan, & Ferreira, 2012; Kolk & Perego, 2010; Finch, 2005).

Literature on aggregate sustainability disclosure and performance of companies is limited, therefore theoretical and empirical references will be drawn mainly from component of sustainability - environmental, social and governance literature. This study operationalizes sustainability disclosure through different metrics, it is relevant to consider in detail literature which studies the effects of this various metrics on firm performance. The empirical literature concentrating on the first category ie association between which contribute most to the present study is presented in the paragraphs below.

2.3.1   Empirical studies on Sustainability Reporting and Firm Performance

The implications of sustainability reporting on firm value is not clear. There are evidence that the act of corporate reporting on sustainability issues has the potential to influence and transform corporate behaviour although, it is important to note, this potential is not always realized (Bebbington & Gray, 2001; Buhr, 2007; cited in ACCA 2012b). Various research trying to establish how company's sustainability performance is related with financial performance have been conducted but results are still fragmented and competing (Hussain, 2015). Citing Margolis and Walsh (2003), Eccles, Ioannou, and Sefafeim (2014) and Hussain (2015) noted that empirical examinations of the link between sustainability and corporate financial performance have resulted in contradictory findings, ranging from a positive to a negative to a U-shaped, or even to an inverse-U shaped relation.

A survey study by Ernst and Young (EY) and the Boston College Center for Corporate Citizenship (2016) on value of sustainability reporting revealed that such disclosure offers reporting companies a wide spectrum of intangible benefits, such as employee loyalty and consumer reputation. Their result

suggests that the value of sustainability disclosure also extends to the firm's position statement. Majority of their respondents reported that realizing business value is as a result of their companies' reporting efforts.

In a study of nine developed markets, including the United States (Deringer, 2005) cited in US SIF Foundation, (2013) found that, "…the links between ESG factors and financial performance are increasingly being recognized. On that basis, integrating ESG considerations into investment analysis is clearly permissible and is arguably required in all jurisdictions. In a similar note, Ioannou and Serafeim (2014) argues that higher sustainability disclosure might push companies to change managerial practices and adopt more productive and efficient configurations like attracting better human capital, avoiding conflicts and costly controversies with nearby communities, can increase firm value. Similarly, proponents of integrated reporting framework argue that separate sustainability reporting, although providing relevant information for multiple stakeholders, is unlikely to be an effective mechanism to communicate to investors a firm's performance on environmental and social issues and how they relate to financial performance (Eccles & Krzus 2010).

The above arguments indicate that there are two groups of academic assertions to address the concerns about whether investors are aware of sustainable business practices, and are able to assess its impact on firm value and whether it brings positive returns to shareholders (Carvalhal & Tavares, 2013). On one side are researchers who believe that sustainability disclosures lead to cost reductions perhaps from material substitution or less packaging (Epstein & Roy, 2001), leading firms to increase efficiency, strengthening brand and market value, and improve competitiveness. According to Mckinsey (2009) cited in Thiagarajan and Baul (2014), two-thirds of CFOs and three-quarters of investment professionals agree that environmental, social and governance activities do create value for their shareholders in normal economic times. BSR (2012), posits that the increase in number of companies preparing sustainability report is as a result of growing awareness that sustainability reporting can improve long-term financial performance.

In line with this assertion EY and Boston College Center for Corporate Citizenship (2016) and PwC (2012) noted that underlying the growth of sustainable disclosure is an increasing body of evidence that ESG factors can serve as a differentiator in competitive industries, foster investor confidence, help analyst determine firm value, enhance investment value and/or mitigate risk. Also investors increasingly invest in the shares of companies that are believed to be doing the right thing on a range of ethical, social and environmental issues (Pat Barrett, 2004). By incorporating sustainability information into wider corporate reporting, organisations, their shareholders, and other stakeholders can present or assess matters that have material impact on an organisation's long-term performance. (ACCA, Reporting pre- and post- King III: what's the difference?, 2012). Sustainability performance data provide a powerful tool for assessing an organization's current health and future prospects (GRI, 2013). According to Bebbington (2001) cited in Lopez, Garcia, and Rodriguez (2007), firms and investors recognise that investing in accordance with sustainability principles has the capacity to create long-term value.

On the other side are researchers with opposing views concerning effect of sustainability on firm performance. To this group of researchers, sustainability disclosure is another strategy of raising costs and draining available resources without offsetting benefits. They argued that by imposing significant preparation costs on firms, for instance by adopting organizational processes that for some reason generate a net cost for the company, experiencing high labor costs by providing excessive benefits to their employees can make sustainability disclosure have negative effect of firm value. Simply put the costs associated with the implementation of stronger sustainability mechanism may outweigh the benefits. Sustainability reporting, although providing relevant information for multiple stakeholders, is unlikely to be an effective mechanism to communicate to investors a firm's performance on environmental and social issues and how they relate to financial performance (Eccles & Krzus, 2010, cited in Serafeim, 2014). They noted that though sustainability data are

argued to be value relevant, factors such as the concept of materiality and credibility impede their decision usefulness from an investor perspective.

In a most recent study using data from the Nigerian brewery industry from 2010 to 2014, Nnamani, Onyekwelu, and Ugwu (2017) examined the effect of sustainability accounting and reporting on financial performance. The study used social responsibility cost and total personal cost to turnover (TPCT) ratio to measure sustainability reporting and Return on Assets and Return on Equity to represent financial performance. The study revealed that Total equity to total asset (TETA) ratio has no significant effect on the return on asset (ROA). Also total personnel cost to turnover (TPCT) ratio has no positive relationship with the return on asset (ROA).

Similarly, Usman and Amran (2015) examined the relationship between the dimensions of CSR disclosures and corporate financial performance (CFP) among Nigerian quoted companies. The study used environmental disclosure, community involvement disclosure, human resource disclosure, product disclosures to measure sustainability disclosure. The hierarchical multiple regression analysis found that disclosing environmental-related information in the corporate annual report leads to a decrease in both accounting and market based corporate financial performance. Meaning that environmental disclosure among Nigerian companies may be value destructive. The study revealed a significant positive relationship between community involvement disclosure and accounting based financial performance (Return on Assets) but insignificant negative relation-ship with market-based measures of financial performance (Share Price). Results also revealed a significant positive relationship between human resource disclosures and ROA, but neutral relationship with SP. The study showed that product disclosure was significantly but negatively associated with ROA and significantly positively associated with the Share Price.

Garg (2015) analyzed eleven (11) large India companies with five year data to test the impact of sustainability reporting on firm performance. The study document that Sustainability reporting

practices of a company impact its performance both ROA and Tobin's Q negatively in short run but impact the firm performance positively in long-run. The impact is highly insignificant.

Also to answer the vexing question of the relationship between sustainable business practices and financial performance using sustainability materiality index, sustainability immaterial index and accounting performance measures, Khan, Serafeim, and Yoon (2015) found that firms with strong ratings on material sustainability issues have better future performance than firms with inferior ratings on the same issues. In contrast, firms with strong ratings on immaterial issues do not outperform firms with poor ratings on these issues. Finally, firms with strong ratings on material issues and concurrently poor ratings on immaterial issues have the best future performance. Across all specifications, they documented that portfolios formed on the basis of the materiality index outperform portfolios formed on the basis of the total index or portfolios formed on the basis of the immaterial index. These findings are confirmed using firm-level panel regressions that account for a host of additional firm characteristics such as analyst coverage, investments in R&D, advertising and capital expenditures, and board characteristics and firm or industry fixed effects.

Aondoakaa (2015) evaluated the impact of sustainability reporting on corporate performance of selected quoted companies in Nigeria. For reason not properly explained the study proxy firm performance with four measures (ROA, ROE, Net Profit Margin (NPM), Earning Per Share (EPS)) but proxy the sustainability reporting with only one measure sustainability reporting index (SRI) for the four models analysed. Analysis shows that Sustainability Reporting is positively related to ROA. Sustainability indices are positively related to ROE and NPM. Sustainability reporting is positively related EPS but environmental index is negatively related to EPS.

In the same line of inquiry, Hussain (2015) documented that sustainability performance has a significant positive impact on the market value and accounting performance of the reporting firms. Specifically, this study shows that the different sustainability dimensions (economic, social and

environmental) are not equally relevant for the financial performance. The economic dimension is never relevant for explaining any change in firm's financial performance, but the environmental and social dimensions are both positively related.

Value relevance study by Mervellskemper, Streit, and Bochum (2015) indicated that the degree of value-relevance of a firm's ESG performance is strongly influenced by whether the firm generally issues a sustainability report or not. They identified that ESG reporting in general as a moderator of the relationship between ESG performance scores and a firm's market value. More specifically, the issuance of any kind of ESG report does not only increase investors' perception of ESG performance scores but also improves investors' ability to price a firm's ESG activities in the (positive) way desired by the firm. In fact market value and ESG performance scores have been shown to be significantly positive related for firms reporting on ESG. Furthermore their empirical results do provide evidence that the issuance of an integrated report in place of a separate ESG report can further increase investors' valuation of a firm's ESG performance in an economically and statistically significant extent. According to the results, this holds for the composite ESG performance score as well as the corporate governance performance score of a firm. These results suggest that IR is able to provide the expected benefits in terms of increasing the effectiveness of ESG reporting and better explaining how corporate ESG activities have positive financial implications for the firm. This seems to be especially true for the corporate governance suggesting that an integrated reports helps investors in a significant degree to understand the positive effects of a high corporate governance performance on firm value.

Employing Dow Jones Sustainability Index (DJSI), Yu and Zhao (2015) found a positive relation between sustainability performance and firm value, after controlling for variables that have been found to affect firm value in the existing literature. The study support the value enhancing theory regarding the role of sustainability engagement in firm valuation. This indicate that capital the market does pay premium for companies that are environmentally and socially responsible and well-

governed. The study also document that the valuation premium of sustainability is higher in countries with stronger investor protection. Furthermore, the premium is more pronounced for firms operating in an environment of higher financial transparency.

Haryono and Iskandar (2015) analyzed the relationship between the non-financial performance (in this case the economic, environmental and social responsibility) and the firm value. The CSP was measured from information disclosure index based on the GRI 3.1 reporting standard. Utilizing a Structural Equation Modeling (SEM) in the analysis of data. The results indicate that CSP has positive significant effect to the Financial Performance Measures. This positive path coefficient means that implementation of the CSR and the information disclosure about the CSR leads the increasing of the CFP that is shown by the ROA and ROE. CSP has negative significant effect to the Firm Risk. The negative path coefficient means that implementation of the CSR and the disclosure of information about it help the company to avoid or minimize the risks that affect the continuity of the company. Also CSP has negative insignificant effect on the Firm Value Performance Measures Tobin's Q and Price to Book Value PBV which means that implementation of the CSR and the information disclosure about it has no direct impact to the firm value.

In a study of the relationship between corporate sustainability reporting and profitability in Nigerian banks, Nwobu (2015) provided empirical evidence that the small positive correlation between sustainability reporting index and Profit After Tax (PAT). The study also found a small positive correlation between sustainability reporting index and shareholders fund. The study focused on banking sector of the Nigerian Stock Exchange (NSE), from 2010 to 2013.

Bhatia and Tuli (2014), assessed the extent and level of sustainability reporting in India using 14 companies producing separate sustainability report for 2010 to 2011. The study discovered that there is no significant difference in the inter industry disclosure scores. One way ANOVA showed that no statically significant variation was found in the mean disclosure scores of various industry groups.

In a study on the consequences of mandatory corporate sustainability reporting, Ioannou and Serafeim (2014) established a positive and significant relation between Tobin's Q and the predicted component of the ESG disclosure, suggesting that the effect of mandating sustainability reporting is, on average, value-enhancing rather than value-destroying for the treated firms in our sample. Increase in disclosures is associated with increase in firm valuation as reflected in Tobin's Q.

Study by Eccles, Ioannou, and Sefafeim (2014) provided analytical evidence that High Sustainability companies significantly outperform Low Sustainability companies over long-term, both in terms of stock market and accounting performance. That sustainability leaders tend to have better stock performance, lower volatility, and greater return on assets and return on equity. This finding suggests that companies can adopt environmentally and socially responsible policies without sacrificing shareholder wealth creation. In fact, High Sustainability firms generate significantly higher stock returns, suggesting that developing a corporate culture of sustainability may be a source of competitive advantage for a company in the long-run. The authors suggest this outperformance is based on superior governace structures and better constructive engagement with stakeholders.

In an empirical study based on Spain a Continental European country in which ownership concentration is prevalent, Bona-Sánchez, Pérez-Alemán, and Santana-Martín (2014) examined whether sustainability reporting has explanatory power over earnings informativeness and investigate how sustainability disclosure might affect the relation between the dominant owner's voting-cash flow wedge and earnings informativeness. The results reveal that communication via sustainability reporting has a positive effect on earnings informativeness. The study document that this positive relationship becomes stronger as the dominant owner's voting-cash flow wedge increases. The results of this study are consistent with minority shareholders and other relevant stakeholders perceiving sustainability disclosure following the GRI guidelines as the dominant owner's attempt to legitimate corporate behaviour and/or to signal corporate reputation, being this information relevant to stock market participants in their assessment of earnings credibility. This study highlight the

importance of sustainability reporting in reducing information asymmetries between dominant owners on the one side and minority shareholders and other relevant stakeholders on the other, particularly in those firms where dominant owners show a voting-cash flow wedge.

In a study motivated by lack of an integrated approach covering all dimension of sustainability, Ng and Rezaee (2014) examined the possible link between the identified sustainability measures: environment, governance, social, ethics, environment and cost of capital both debt and equity capital. The study indicate that firms that disclose business sustainability are enjoying lower cost of debt and equity, when compared to firms with similar size and in the same industry. After controlling for other factors that affect cost of debt and equity, they document that disclosures of sustainability in all the five dimensions of business sustainability lower cost of debt, but only disclosures in Economic, Ethics and Environmental dimensions lower cost of equity. It also show that debt and equity investors pay special attention to corporate business sustainability and in general, they demand lower returns for corporations with strong business sustainability disclosures. Moreover, cost of debt is less sensitive to business sustainability disclosures, when compared to cost of equity for the similar firms.

Isa (2014) assessed the extent of sustainability disclosures among Nigerian firms and the effect of firm attributes on the level of sustainability disclosures. The study provides empirical evidence that the level of sustainability disclosure is low as it only comprised of approximately two percent of the annual total disclosures. From the study also, size emerges as a significant predictor of the sustainability reporting though it varied inversely with larger firms disclosing small amount of sustainable information relative smaller ones.

In a study using Fortune Global 500 companies from 26 Countries, Calace (2013) found that issuance of a GRI sustainability reports has a positive and statistically significant effect on firms' market capitalization indicating that sustainable operating firms have economic returns in the short

run. While a full disclosure stance has a negative and statistically significant effect on market value. By interacting the level of disclosure and grade of leverage. Results show that the interaction between grade of leverage and full disclosure is positive and statistically significant, while the interaction between grade of leverage and issuance of a GRI report is negative and statistically significant. Which means that fully disclosing firms take advantage of a lower cost of debt capital, because moneylenders consider them less risky than firms with partial disclosure. In the long run, this could be a source of competitive advantage for fully disclosing firms against partially disclosing ones.

Aggarwal (2013), provided analytical evidence that corporate sustainability as a whole has no significant influence on financial performance. Further, corporate sustainability influences some of the financial performance measures positively (ROA, PBT & GTA), while others negatively (ROE and ROCE). Further investigation of the impact of each component of sustainability separately on company's financial performance provides clearer results. We find that all components except Community, i.e., Employees, Environment and Governance, have significant but varying association with financial performance. Governance and Community dimensions have positive influence, while Employees and Environment dimensions have negative influence on financial performance. The study also revealed insignificant positive association between corporate sustainability and growth of firm. They recommended that companies should understand that improving sustainability performance is as important as improving the financial performance. Companies needs to be concerned towards the needs of future generations in running the business, in order to ensure its survival in the long-run.

Siew, Balatbat, and Carmichael (2013) examined whether companies quoted on Australian Stock Exchange that claim to be more sustainable, do yield better returns. Their study reveal that the state of sustainability reporting for the majority of publicly quotedAustralian companies is poor. Companies issuing sustainability reports largely outperform those which do not in a number of

selected financial ratios, although the correlation between financial performance and ESG scores is not strong.

In a study on factors that influence sustainability disclosures in globally prominent companies, Faisal, Tower, and Rusmin (2012) provided analytical evidence that industry type is associated with sustainability disclosure index. This affirm that firms in high profile industries tend to disclose more sustainability information compared to firms in low profile industries. Also, firms with additional voluntary assurance statements provide a higher extent of sustainability disclosure compared with firms without such assurance statements. Their study documents that jurisdictional type of business system is statistically significant with firms in emerging market jurisdiction having higher sustainability disclosure index that firms in communitarian and Anglo-Saxon countries. This result implies that the emerging- style developing countries are now placing greater emphasis on sustainability disclosure to better address stakeholder holistic expectations in order to attract capital and build a more successful business image. Finding of the study fails to provide evidence that board independence contributes to increases in sustainability disclosure.

Taib, Ameer, and Haniff (2012) used a large cross-sectional sample of the UK and the US companies over the period of 5 years and discovered that that diversity-enhancing activities of the companies effect financial performance positively. This result implies that the UK and the US companies' efforts in promoting workforce diversity and active participation in diversity related issues - providing training and advancement opportunities to the workers from minorities groups; implementation of innovative work life program; better labour condition, and gender equity affects bottom line. On the other hand they found that disclosures on environmental protection, community and ethical practices do not have significant impact on the financial performance.

Frias-Aceituno, Rodríguez-Ariza, and Garcia-Sánchez, (2012) in a study of explanatory factors of integrated sustainability reporting provided empirical evidence that Size, Profitability, Sector,

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Growth, GRI Application has positive significant effect on sustainability reporting while Concentration and Growth has a negative impact.

Ameer and Othman (2012) analysed whether companies with superior sustainability practices have superior financial performance and growth than those companies which do not place emphasis on sustainability. The study confirm that companies which place emphasis on sustainability practices have higher financial performance measured by return on assets, profit before taxation, and cash flow from operations compared to those without such commitments in some activity sectors. Furthermore, their findings show that the higher financial performance of sustainable companies has increased and been sustained over the periods. This indicate here is bidirectional relationship between corporate sustainability practices and corporate financial performance.

Adams, Thornton, and Sepehri (2012) studied the impact that the pursuit of sustainability has on the financial performance of a firm using U.S. firms. The study showed that the corporate sustainability label has no statistically significant impact on the financial performance of firms. This means that sustainability efforts put forth by the publicly traded firm does not result in higher stock prices or enhanced returns to shareholders in the short run.

Khaveh, Nikhasemi, Haque, and Yousefi (2012), examined the relationship between the level of sustainability disclosure and the level of revenue, amount of paid dividend and ultimately share price among Singaporean quoted companies from 2008 to 2010. Result of the study revealed that here is significant and positive relationship between sustainability reporting and Singaporean companies' revenue. Companies with higher CSR disclosure have higher revenue.

Assessing the extent to which sustainability reporting of six oil and gas multinational companies has been in line with global best practices, Asaolu, Agboola, Ayoola, and Salawu (2011) found an arbitrary and incompatible sustainability reporting indicators among all the sampled companies and

therefore recommends the introduction of sustainability reporting framework in line with global best practices.

Further in a study linking sustainability reporting with firm performance, Cortez and Cudia (2011) documents that sustainability performance measured in environmental costs has positive and significant impact on revenue generation a proxy for financial performance as well as a negative relationship of environmental cost on liabilities by reducing accounting risks. The study, however, is not able to establish the relationship of environmental costs with profitability, firm size and shareholders' equity since result of the study reveals insignificant positive impact.

Using event study method to estimate abnormal returns for a 31 day event window for a sample of 17 quoted companies in New Zealand Stock Exchange (NZX) and 51 quoted in the Australian Stock exchange (ASX), Reddy and Gordon (2010) provided empirical evidence that sustainability reporting is statistically significant in explaining abnormal returns for the Australian companies. Only the CSR type of sustainability report was significant in explaining the abnormal return of New Zealand companies. The cross-sectional analysis results of the combined dataset for the two countries support the view that the contextual factors of industry type significantly impacts abnormal returns of the reporting companies. In this regard, this study identifies several contextual factors, such as industry and type of sustainability report, that have the potential to impact the relationship.

Wagner (2010), examined the link between economic performance measured with Tobin's q and corporate sustainability performance taking into account interaction effects with innovation and differentiation. Without considering interaction effects, the study showed that both environmental and corporate social performances which measured sustainability performance have the expected relationship with economic performance, that is, both sub-indices are significantly positively associated with Tobin's q. Including the interaction effects (in this case two each for R&D and advertising intensity, with, respectively, corporate social and corporate environmental performance) alters the results in that, corporate environmental performance only has a significant direct positive

effect whereas corporate social performance only has a fully moderated (positive) effect on economic performance by way of advertising intensity.

Lopez, Garcia, and Rodriguez (2007) examined whether there exist significant differences in performance indicators between European firms that have adopted CSR and others that have not. They found negative impact of sustainability on profitability in short term. Thus in the short-term, the firm will only be able to apply existing resources to sustainability practices, since the time frame is insufficient for obtaining additional financing. The study indicate that the effect of sustainability practices on performance indicators is negative during the first years in which they are applied. Also they document that in the long run differences in performance indicators exist between firms and that these differences are related to sustainability practices. This indicate a positive impact in long-term during which planning, the resources needed to carry out sustainability strategies can be predicted and financing obtained to achieve them.

2.3.2   Environmental Sustainability Disclosures and Firm Performance

Environmental disclosure and firm performance have received substantial interest from academic researchers for the past three decades (Makori & Jagongo, 2013) and several approaches have been used to study this relationship: regression analysis (longer-term econometric approaches); portfolio analysis; and event studies (Fisher-Vanden & Thorburn, 2011; von Arx & Ziegler, 2008). These previous research produced mixed results concerning the relationship between different variables of environmental disclosure/reporting and firm performances. This might be the reason for no definite conclusion regarding the effect of environmental performance disclosures to investors, not the direction of the effect.

Although clear explanation for these contrasting results is not obvious, Oba, Fodio, and Soje (2012) and Patten (2002) cited in Li, Clarkson, Richardson, and Vasvari (2006) attributed the failure to find a significant and consistent relation between corporate performance and environmental disclosure to

problems in the research designs of existing research that is theoretical and empirical reasons. Continuing they noted that these problems include failure to control for other factors associated with level of environmental disclosure, inadequate sample selection, and inadequate measures of environmental performance and disclosure. No wonder some document that financial rewards of engaging in environmental management practices outweigh the costs involved in the long run which means that environmental responsibility can actually improve financial performance (Fisher-Vanden & Thorburn, 2011). Others argue that environmental management investment do not results in improved firm performance as it siphon firm's available resources and raises costs. All the academic research on the environmental disclosure and firm performance is indication that establishing a relation between environmental disclosure is important from a social responsibility perspective as it tends to validate the credibility of environmental disclosure (Al-Tuwaijri, Christensen, & HughesII, 2004). The specific research findings are discussed here below:

Eze, Nweze, and Enekwe (2016) examined the effects of environmental accounting on a developing nation with emphasis on Nigerian and discovered that Environmental information in the annual report is positively related to a firm's size. That environmentally friendly organisations enjoy high level of competiveness. Their study also indicate that environmental reporting and disclosure significantly affects the reporting and disclosure uniformity. Environmental reporting affect different areas of an organisation's operation such as, manufacturing, raw material procurement, energy usage, marketing, product management, disposal and waste management.

Khlif, Guidara, and Souissi (2015), used a coding index approach to measure the extent of annual reports' social and environmental disclosure and its relationship on a sample of 168 firm-year observations over the period 2004-2009 from South Africa and Morocco. They documented a significant positive relationship between social and environmental disclosure and corporate financial performance.

Using US quoted firms drawn from five industries: oil & gas, chemical, food/beverage, pharmaceutical, and electric utilities, Plumlee, Brown, Hayes, and Marshall (2015) examined the relationship between environmental disclosure quality and firm value using both cost of equity capital and expected cash flow components. The study control for environmental performance and partition environmental disclosures by type and content in the analysis to differentiate among various proposed explanations for the sometimes-contradictory findings from prior research. They documented a positive relation between voluntary disclosure quality and firm value through both the cash flow and cost of capital components. In addition to overall disclosure quality, they consider the type (e.g., hard/soft) and content of different types of disclosure in study. Based on this they also document an inverse association between voluntary disclosure quality and a firm s cost of equity, in contrast with prior research.

In a study of 14 randomly selected quoted companies in Bombay Stock Exchange in India, Makori and Jagongo (2013) found a significant negative relationship between Environmental Costs which cover all cost incurred concerning environmental protection, emissions treatment as well as wasted material and Return on Capital Employed (ROCE) and Earnings per Share (EPS) and a significant positive relationship between Environmental Costs and Net Profit Margin and Dividend per Share.

The result of study by Nyirenda, Ngwakwe, and Ambe (2013) showed that there is no significant relationship existing between firms environmental management practices and its return on equity. Specifically carbon emission reduction, energy efficiency and efficiency in water usage does not affect firm's return on equity. Further analysis incorporating the control variables indicates a significant relationship but close scrutiny of the significance levels of individual independent variables shows that this positive significance level is caused by the presence of the control variables – shareholders' equity and the net income respectively. The environmental variables remain insignificant, thus indicating that they do not constitute a causative factor on return on equity. This lends credence to information gathered that firm's environmental management practices are driven

mostly by a desire to comply with regulations and also by a moral obligation to use environmental management practices to mitigate climate change impact.

Bassey, Effiok, and Eton (2013), in a study to investigate if companies in Niger Delta Region of Nigeria practice environmental accounting and if so how this affects the profitability of their companies documented that environmental cost significantly influences a firm's profitability. Also environmental information in the annual report is positively related to a firm's size. Their study revealed that environmentally friendly organizations who voluntary discloses environmental activities enjoy high level of competiveness.

Latridis (2013) examined the association between environmental disclosure and environmental performance and the financial attributes of companies with different environmental disclosure scores. This study investigated the association between environmental disclosure quality and corporate governance based on Malaysia, which is classified as an advanced emerging market. The study showed that environmental disclosure is positively associated with environmental performance. Specifically companies that display small amounts of hazardous waste or take on initiative to reduce toxic chemicals exhibit higher environmental disclosure scores. Company attributes, such as large size, the need for capital, profitability and capital spending, are positively associated with environmental disclosure quality. The study also document that companies with effective environmental and corporate governance structures would be expected to face less capital constraints. High quality environmental disclosers are audited by a big 4 auditor or cross-quoted on foreign stock exchanges and display significant levels of managerial and institutional ownership. High quality disclosures are value relevant and improve investor perceptions.

Study by Oti, Effiong, and Tapang (2012) revealed significant relationship between employee health and safely (EHS), waste management (WM) and community development (CD) and return on investment of the environmentally responsible firms. There is also significant relationship between employee health and safely (EHS), waste management (WM) and community development (CD) and

the level of fines, penalties and compensation (FPC). This means that investment in environmental responsibilities in form of Employee Health and Safely (EHS), Waste Management (WM) and Community Development (CD) are related to improved return on investment of the environmentally responsible firms. Additionally, with sustainable business practice, there is a decrease in the amount paid in fines and penalties to individuals and the government for environmental offences and its compensation to the community. Decrease in conflict between the firms and the environment, in which they operate, engendered the improved performance of these firms. Conclusively, money expended in settling disputes could be applied to enhance corporate liquidity and management is better able to plan and make decisions when it is not engrossed in disputes.

Similarly in a survey of companies operating in the Niger Delta Region of Nigeria, Asuquo (2012) documented that environmental friendly policies as well as firm competitiveness have significant relationship with the firms' profitability. This means that when environmentally friendly firms disclose sufficient environmental related information, they enjoy competitive advantage, high liquidity and reduced environmental cost in the long run. When firms are environmentally friendly they enjoy competitive advantage which subsequently results in high corporate performance/profitability.

Using selected quoted firms in Nigeria, Uwuigbe (2012), investigated the relationship between the financial performance of firms and the level of web-based corporate environmental disclosure among other objectives. The study provided analytical evidence that a positive association existed between the dependent variable (CED) and the independent variables that is Return on Assets, Return on Equity and Firm Size and they are all significant. The study further provided an insight to the fact that to a very great extent, the financial performance and the size of firms do plays a very significant role in or has a strong influence on the level of web-based corporate environmental disclosure among the selected firms. The study also revealed that there is no significant difference in the level of web-based corporate environmental disclosure between quotedfinancial and non-financial firms in the

Nigeria stock exchange. The implication of this study is that the larger the size of a firm, the more they can afford to invest their resources into corporate environmental technologies and management that is environmentally friendly since they tend to be more concerned with the company's corporate environmental reputation and corporate image while at the same time being visible to external stakeholders who demand higher corporate social environmental performance. In addition, larger companies are more susceptible to inquiry from stakeholder groups since they are highly visible to external groups and are more vulnerable to adverse reactions among them.

Considering that Oil spills, emissions, pollutions, etc. have been the trademark of most firms operating in Nigeria without recourse to alleviating the damaging effects of such discharges. Meanwhile there is heated concerns from stakeholders all over the world about making environmental responsibility a corporate dictate. Oba, Fodio, and Soje (2012), examined whether environmental reporting have effect on firms bottom line using time series cross-sectional data. The study showed that the two explanatory variables: quality of environmental responsibility disclosures and foreign directors has a positive and significant relationship with financial performance. This implies that an adherence to sound environmental policies, practices and information disclosure influences the bottom line of firms. Also having a reasonable mix of foreigners on the board since they go to bring in experience and competitive advantage influences the bottom line of firms.

Fisher-Vanden and Thorburn (2011) examined the valuation effect of voluntary corporate environmental initiatives on shareholders wealth. Using an event study approach they estimate the cumulative abnormal stock returns for a sample of firms announcing their participation in one of two voluntary environmental programs (VEPs): the EPA's Climate Leaders (CL) program and Ceres for the sampled firms. The study showed that when firms announce their membership in the Environmental Protection Agency's Climate Leaders, a program intended to reduce greenhouse gas emissions, the announcement is met with negative abnormal returns. There is significant losses in the market value of firms announcing that they join Climate Leaders and at their subsequent

announcement of a greenhouse gas emissions reductions goal. In contrast, firms announcing an endorsement of the Ceres Principles experience insignificant stock returns, possibly because the Ceres program involves less specific commitments to environmental investments. The price decline is larger in firms with poor corporate governance structures, and for high market-to-book (i.e., high growth) firms suggesting that climate investments are interpreted by investors to be more costly for high growth firms. Overall, corporate commitments to reduce greenhouse gas emissions appear to conflict with firm value-maximization. Thus, it seems that investors are interpreting membership in Climate Leaders and subsequent pledges to reduce greenhouse gas emissions as imposing significant costs on the firm, leading to a decline in shareholder wealth.

The study of Clarkson, Fang, Li, and Richardson (2010) which was concerned with providing insights on the fundamental issue of whether environmental disclosures incrementally affect firm valuation, cost of equity capital and/or stakeholder sentiment more generally given knowledge of environmental performance. Using a sample of firms from the five most polluting industries in the U.S., and explicitly controlling for environmental performance using toxics release inventory data, and for firms' general disclosure propensity based on whether firms issued management guidance during the study period. The study revealed that that environmental disclosure provides incremental information for investor to assess firm value. Further analysis indicates that environmental disclosure can predict average three-year ahead operating cash flow and return on assets. Alternatively, the study did not find evidence that environmental disclosure affects the cost of equity capital after including Toxics Release Inventory TRI-based environmental performance proxy and a firm's general disclosure propensity in our analyses. However, TRI-based environmental performance proxy has a significant positive impact on the cost of equity capital and a significant negative impact on firm value, consistent with TRI capturing the impact of environmental risk on a firm's cost of capital and the impact of unbooked future environmental liabilities on firm value. Overall, results are consistent with investors using actual toxics release data to assess a firm's environmental risk and

future environmental liabilities. Voluntary environmental disclosure appears to provide incremental information beyond that contained in the actual toxic emissions data for investors to assess future firm performance.

The additional analysis indicated that voluntary environmental disclosure is significant and positively associated with the Janis-Fadner coefficient a variable for measuring stakeholder sentiment. This finding is consistent with firms using voluntary environmental disclosure to manage non-investor stakeholder perceptions about a firm's environmental performance. The above results led to the conclusion that: incremental to information provided by current Toxics Release Inventory TRI emissions, voluntary environmental disclosure provides valuation relevant information beyond the TRI, consistent with the signalling conjecture of Clarkson, Li, Richardson and Vasvari (2008) and environmental disclosure appears to enhance stakeholder perception about a firm's environmental performance. Both results pointed to incremental informativeness and help to explain why firms prepare voluntary environmental sustainability reports. The null result for the cost of equity capital as an unresolved topic for further research.

Freedman and Patten (2004) analysed the market reaction to the unexpected proposal by President George Bush in June of 1989 for revisions in the Clean Air Act to identify whether Toxics Release Inventory TRI information and 10-K report environmental disclosures had an impact using a sample of US firms. The study found that companies with higher levels of toxic air releases (adjusted for firm size) as reported in the 1987 TRI report suffer more negative market reactions than firms with better performance records. This indicate that, at least with respect to this announcement, the TRI information did appear to influence market reactions. The study documents that firms with lower levels of environmental disclosure in their 1988 10-K reports suffered more negative market reactions to Bush's proposal than firms with higher levels of disclosure.

Considering limited evidence of a lagged market reaction to bad environmental news in the UK context, Lorraine, Colliso, and Power (2004) provided descriptive statistics on whether the favourable or adverse environmental news influenced company share prices for the firms in the sample. The results indicated that there is a stock market response to such news especially for details on fines after news is published. A cross-sectional analysis indicated that the share price response is mainly a function of the relative fine imposed on the firm. Other explanatory variables such as environmental performance news or sector membership were unsuccessful in explaining variations in the market responses.

Al-Tuwaijri, Christensen, and Hughes II (2004), investigated the relations among economic performance, environmental performance, and environmental disclosure after explicitly considering that these three corporate functions are jointly determined. They found that allowing for the potential endogeneity associated with specifying the three corporate functions—economic performance, environmental performance, and environmental disclosure, that good environmental performance is significantly associated with good economic performance,. The significantly positive relation observed between environmental performance and economic performance suggests that managers should change their strategic outlook regarding a firm's environmental performance, from fixating on the dead weight costs of ex post regulatory compliance, to focusing on the ex-ante opportunity costs represented by environmental pollution. The study also showed that good environmental performers disclose (within the context of our definition of environmental disclosure) more pollution-related environmental information than do poor performers.

2.3.3 Social Sustainability Disclosures and Firm Performance

The global concern for CSR as a phenomenon has raised a fundamental issue of whether CSR enhance shareholder value, or is it an agency cost enjoyed by a firm's managers at the expense of stockholders? A substantial number of studies have examined this research issues from different

perspectives, yet the evidence continues to be conflicting (Hong, Li, & Minor, 2015). Extant studies on corporate social responsibility and corporate financial performance can be divided into three: some studies have found supporting evidence of CSR as a potential agency cost, others have also found a positive relationship between CSR activities and firm financial performance. Still yet others found insignificant relationship between CSR and firm performance. The reason is not far from lack of a particular framework and method for studying social responsibility. Most often, differences arises from observation periods, companies included in the sample, measures of corporate performance and methodological approaches adopted for the empirical analysis, failure to control for the company economic activity (Simionescu & Gherghina, 2014; Becchetti, Di Giacomo, & Pinnacchio, 2005). Following the same line of argument, Tsoutsoura (2004) specifically noted that in many cases subjective indicators are used in studies involving social responsibility and firm performance making it unclear what these indicators measure. Below are some of the extant studies.

In a more recent study, Hasan, Kobeissi, Liu, and Wang (2016) sheded light on how, that is, the underlying mechanisms through which CSR leads to greater shareholder value creation, by investigating on the mediating role of total factor productivity (TFP) in the CSP-CFP relationship. TFP captured the productive efficiency determined by how a firm utilizes inputs to produce output. By using a comprehensive longitudinal dataset of all publicly traded U.S. manufacturing firms from 1992 to 2009, the study documented a significant positive effect of corporate social performance on Tobin's Q. It showed significant and positive relationship between CSP and TFP. More importantly, the mediation analysis reveals that TFP significantly mediates the CSP-CFP relationship. The study suggested organizational risk moderates the treatment effect of CSP on TFP. To be specific, analysis revealed that the effect of CSR engagement to enhance firm productive efficiency is stronger for firms with higher levels of organizational risk. Thus CSP can affect productivity and help in development of intangible assets in multiple ways: enable firms to forge strong relationships with key stakeholders, facilitate the development of productive innovations, organizational legitimacy,

better access to resources, and human capital, all of which help firms to efficiently utilize the assets, obtain competitive advantages over rivals and create shareholder value.

In a study of the relationship between corporate social responsibility and firm value using a sample of U.S. companies quoted on the New York Stock Exchange (NYSE) and NASDAQ Stock Market, Gherghina, Vintilă, and Dobrescu (2015), provided analytical evidence that corporate social responsibility positively influences firm value. This evidence is consistent with the instrumental stakeholder theory view, since the companies involved in corporate social responsibility undertakings use in a more effective way their resources in order to better satisfy stakeholders' needs. CSR activities can add value to the firm if they are wisely managed and implemented, as well as sufficiently disclosed and reported. Furthermore, the image on the market for a company with high social involvement and good disclosure of corporate social responsibility undertakings is reflected in the rise of its number of customers and sales. It has been demonstrated in the study that the annual growth of sales leads to an increase in firm value. The study highlighted that firm size measured by the annual average number of employees has a negative effect on firm value. Thus having many employees is leading to an increase in the labour cost and from a certain level restrict the usage of resources available to use for the achievement of an increase in firm value.

In a study to examine the relationship between corporate social responsibility and company performance using 500 UK firms, Adeneye and Ahmed (2015) documented that there is a significant positive relationship between MBV and corporate social responsibility. There is positive insignificant relationship between size and corporate social responsibility. There is a significant positive relationship between MBV and corporate social responsibility. Also there is significant positive relationship between CSR, ROCE, SIZE and MBV.

Xie (2015) examined the relationship between Corporate Social Responsibility and Firm Performance using KLD scores as a proxy for CSR and financial statement variables to measure firm

performance. The study documented that all the independent variables expect for ROA ratio and R & D level are statistically significant which provides strong evidences that those independent variables are related with CSR levels. Specifically, while Firms' leverage levels, book-to-market ratio, tangibility, and ROA ratio have negative significant effect on CSR; Tobin's Q and firm size have positive significant effects on CSR. Since these independent variables that have negative significant effect of CSR are financial statement variables, the study implied that that if a firm put more time into business activities, it may need to sacrifice the time put on social responsibility. Another reasonable implication of the study is that a firm target on maxing profit will somehow neglect social responsibilities.

Vujicic (2015) focused on examining the interactions between corporate social responsibility and financial performance in the form of stock returns for a sample of US firms over at two year period. The work used a set of disaggregated social responsibility indicators for environment, community and employment, and compares the results to that of an overall corporate social responsibility score. The study provided evidence that firms with higher social responsibility scores tend to achieve lower stock returns, in both the case of an aggregate rating, and individually examined indicators. In particular, it was found that the community indicator has a significant negative impact on return more often that the other two factors. Furthermore, neither the addition of the firm characteristic control factors, nor industry effects were able to explain the decreased returns resulting from the higher CSR scores. Therefore the paper concluded that expenditure on corporate social responsibility in business strategies is in fact destructive to the profits of the firm and shareholder value.

Marfo, Chen, Xuhua, Antwi, and Yiranbon (2015) analyzed the relationship between corporate social responsibility (CSR) and Company's profitability. The study indicated that, the negative relationship exists between companies' performance standards with profit after tax (PAT) and corporate social responsibility investments (CSRI) by the companies. This suggested that, the more the profit earned

by the companies in Ghana, the less they contribute resources into corporate social responsibility programmes.

Given a recent legislative mandate forcing corporations to spend at least 2% of their net income on CSR activities in India, Manchiraju and Rajgopal (2015) investigated whether corporate social responsibility (CSR) create shareholder value using firms quoted on their National Stock Exchange (NSE). The study showed that the law caused a significant drop in the stock price of firms forced to spend money on CSR, consistent with the idea that firms voluntarily choose CSR levels to maximize firm value. Firms with greater agency costs and political connections benefit from mandatory CSR. It was discovered that find that compared to firms unaffected by the mandatory rule, firms affected by the mandatory CSR rule experience a greater decline in Tobin's q ratio in the years when the likelihood of the passage of mandatory CSR rule increased. Overall, our evidence suggested that mandatory CSR activities can impose social burdens on business activities at the expense of shareholders.

According to study by Chen and Lee (2015), higher involvement in CSR is correlated with higher firm value, and higher firm value then gives rise to better involvement in CSR. The study showed that CSR holds a two-way influence toward firm value, meaning that the effect CSR has on a firm is correlated with the firm's value. A firm with relatively low value can benefit immensely from emphasizing social responsibility, whereas when a firm makes an effort to enhance its value, it will not necessarily enhance engagement in CSR at the same time, owing to a crowding out effect.

Examining the link between Corporate Social Responsibility disclosures and firm value in Vietnam, Nguyen, et al (2015) discovered that social responsibility disclosures are associated with following year's firm value. Implying that this year's Corporate Social Responsibility disclosures might have affected firm value next year. Specifically, the relationship between environmental information provision and following year's firm value was positive, while that between employee disclosures and

firm value was negative. The results showed a positive sign for Vietnamese firms that take on environmental responsibilities.

Simionescu and Gherghina (2014) analyzed companies quoted on the Bucharest Stock Exchange in Romania to provide evidence on the impact of corporate social responsibility on corporate performance. The study considered control variables that cover firm's characteristics including size, indebtedness, as well as the company's tenure and show that there is significant positive relationship between CSR and EPS with cross-section. By estimating fixed-effects panel data regression models, the positive relationship between CSR and EPS was reinforced. By employing panel data regression models without cross-section effects, there is a negative relationship between CSR and ROS.

In a study on the effect of corporate social responsibility on organisation performance of banking industry in Kenya, Okwemba, Chitiavi, Egessa, Douglas, and Musiega (2014) introduced customers retention as measure of organisation performance, two intervening variables among other independent variables. The study revealed that there is a significant positive relationship between organization performance and philanthropic activities. There is an insignificant positive relationship between organization performance and environmental activities. Ethical activities has significant positive relationship with organization performance. The intervening variables: government policy and priority both has significant impact on customer retention.

Anderson, Hyun, and Warsame (2014) examined the interrelations between Corporate Social Responsibility (CSR, Earnings Management (EM), and Firm Performance (FP) while taking into consideration Corporate Governance (CG) and Management Compensation (MC) in the contexts of pre- and post-SOX periods 1992 to 2001 and 2002-2009.The study employed rigorous panel vector auto regressive (PVAR) procedures to assess the complex linkages between all these variables and to investigate causal directions between all pairs of the considered variables. The study provided evidence that CSR had a positive influence on EM in the pre-SOX, suggesting that managers

invested in CSR activities from an opportunistic perspective during this period. However, during the post-SOX era, CSR has no impact on EM which is suggestive that CSR was likely to be more opportunistic in the pre-SOX era and more aligned with corporate objectives in the post-SOX era. There is no relation between CSR and FP pre-SOX, but there are bi-directional relations between them during the post-SOX period: a positive influence of CSR on FP and a negative influence of FP on CSR, suggesting more effective and less opportunistic use of CSR during post-SOX. FP positively leads EM in both pre- and post-SOX periods, consistent with managers using EM to meet expectations.

In a study on the impact of Corporate Social Responsibility on bank profitability, Folajin, Ibitoye, and Dunsin (2014) using ordinary least square (OLS) model of regression documented that Corporate Social Responsibility spending has short term inverse effect on Net Profit but in the long run it will provide better returns.

In a study by Mukhtaruddin, Relasari, Soebyakto, Irham, and Abukosim (2014), on the influence of the earning management on the firm's value by looking into corporate social responsibility as an intervening variable. The result showed that earning management has a positive but insignificant influence on corporate social responsibility disclosure, corporate social responsibility disclosure has a positive and significant influence on firm's value, and earning management has a negative and insignificant influence on firm's value.

Examining the impact of Corporate Social Responsibility on Shareholders wealth and Firms Financial Performance based on selected Pakistan companies. Mujahid and Abdullah (2014) provided empirical evidence that there is significant positive relationship between Corporate Social Responsibility and firm's financial performance and shareholders wealth. All the Corporate Social Responsibility firms that are included in the sample outperform the Non Corporate Social Responsibility firms in terms of their financial Performance.

Contrary to the above evidence and using the same Pakistan companies, Siddiq and Javed (2014) analysed the impact of CSR on organisational performance and documented that CSR has no significant effect on financial performance of firms. Specifically, the study showed that CSR has insignificant positive impact on both financial Performance indicators. PSR influences the performance indicators negatively yet it is not significant.

In an empirical investigation of corporate social responsibility and profitability of Nigerian banks, Odetayo, Adeyemi, and Sajuyigbe (2014) posited that there is a significant relationship between expenditure on corporate social responsibility and profitability. This study established that corporate organizations need support of society in order for them to grow and prosper.

Su, Peng, Tan, and Cheung (2014) explored how different levels of market development and market information diffusion moderate the positive signal effect of CSR on financial performance. The study revealed that there is a positive relationship between CSR practices and financial performance. This positive relationship is stronger in the less developed capital market than in the more developed one. The financial benefits of CSR practices are also more salient in the low information diffusion market than in the high one.

Bolton (2013), examined the effect that Corporate Social Responsibility has on bank financial performance, specifically. Using data from (KLD) database, the study reveal that there is a positive relationship between CSR and financial performance, measured with both operating performance and firm value. Decomposition of the results showed that the superior performance and firm value is being driven by the bank's CSR activities that are related to the core operating activities, and not to activities that could be liken to green-washing. This suggested that banks with the strongest CSR environments ultimately have the best operating and stock market performance and that banks can only improve financial performance by focusing on those activities that are directly related to their operations. The study revealed that there is no general relationship between CSR and bank risk-

taking. While there is a negative relationship between bank risk and CSR activities related to core operations (measured by KLD-Business), there is a positive relationship between bank risk-taking and CSR activities that are not related to core operations (measured by KLD-Discretionary). The implication is that the types of CSR investments that banks made mattered more than the amount of CSR investments. Banks with the strongest core CSR environments have the least risk. He concluded that investing in better CSR environments can increase bank value and can reduce bank risk, so long as those investments are aimed at improving the bank's fundamental CSR activities.

Albuquerque, Durnev, and Koskinen (2013) provided empirical evidence on how CSR policies affect the risks firms are facing and the stock market implications of those policies. Their study indicated that CSR leads to lower systematic risk and higher valuations. Specifically the level of systematic risk is statistically significantly lower for firms with higher aggregate CSR scores. The effect of CSR score on Tobin's Q is positive and highly significant. Community, diversity, employee, environment and human attributes of CSR, when entered separately are negatively and statistically significantly linked to firm beta. Size dummy has no significant effect on firm systematic risk. Leverage, Cash, ME, Dividend yield, and Diversification are positively related to systematic risk. R&D is associated with lower systematic risk. The other controls, including Advertising expenditures and Operating leverage, are not significant across specifications. CSR is more strongly related to Tobin's Q with differentiated goods. The effect of CSR on firm beta is stronger in industries with greater.

Servaes and Tamayo (2013) examined whether and under what conditions CSR can add value to the firm. More specifically, they examined whether CSR activities are more value enhancing if they are conducted by firms with more consumer awareness. The study showed that corporate social responsibility (CSR) and firm value are positively related for firms with high customer awareness, as proxied by advertising expenditures. For firms with low customer awareness, the relation is either negative or insignificant. In addition, they found that the effect of awareness on the CSR–value relation is reversed for firms with a poor prior reputation as corporate citizens. This evidence is

consistent with the view that CSR activities can add value to the firm but only under certain conditions. That in certain circumstances CSR enhances the value of the firm, but in others, it could destroy value, suggesting that some firms adhere to the shareholder model, and others may consider broader objectives. The study highlighted the complexity of the mechanism through which CSR affects firm value by empirically establishing one condition under which such a relation can be uncovered by validating the claim that understanding the link between CSR and value requires models of stakeholder behavior that explain how CSR activities enhance/destroy value.

According to a study by Abogun, Fagbemi, and Uwuigbe (2013), on the the impact of corporate social responsibility expenditure on firm performance and firm value of Nigerian banks, the study documented a positive relation between CSR and firm performance and firm value. Specifically the study showed that there is also a positive significant relationship between CSR and DPS. Also there is a significant relationship between CSR and EPS. The result from correlation showed that there exists positive relationship between CSR expenditure and firm performance as well as firm value.

Abdulrahman (2013), examined the influence of corporate social responsibility on profit after tax of some selected deposit money banks in Nigeria. The study indicated that there is significant influence of corporate social responsibility on profit after tax of banks in Nigeria.

Using a panel dataset, Comincioli, Poddi, and Vergalli (2012) verified whether certain performance indicators can be affected by a firm's social responsible behaviour. They build a CSR index in order to solve the problem of multiplicity CSR definitions. The study showed that the economic performance measured by MVA has significant negative relation with CSR, MVA decreases when CSR increases. There is significant positive relation between MVA and GDP. This indicated that CSR firms, which are more virtuous, have better long-run performance: even if they have initial costs due to the CSR certificationm, they achieve higher sales volumes and profits as a result of the reputaion effect, a reduction in long-run costs and increased social responsible demand.

Mulyadi and Anwar (2012) examined impact of CSR toward firm value and profitability. Using double linear regression model and usage of GRI as measurement of CSR activity. The study documented that there is no significant relationship between CSR and profitability. There is also no significant relationship between CSR and firm value. Specifically their study discover that CSR has insignificant positive impact to ROA. CSR has insignificant negative impact to ROE. Growth rate, and size has significant positive effect on ROA. Leverage has negative significant impact on ROA. Only leverage that has positive significant correlation with ROE. There is insignificant negative relationship between CSR to NPM and firm value. NPM is significantly affected by size, leverage and growth rate. There is no variable that is significantly affected firm value

Similarly, Stuebs and Sun (2011) empirically examined the association between CSR and corporate reputation using sample of highly reputable firms from Fortune's 2006 America's Most Admired Companies. The study showed that there is a significant and positive relation between corporate social responsibility (KLD) and the reputation measures (Rep-Score and REPU). Also Reputation score (Rep-Score) is positively associated with assets and the market-to-book ratio at significant levels. The study demonstrated that in addition to improving financial performance, CSR improves reputation. A firm can do well (improved financial performance) by doing good (improved CSR and reputation).

Wang (2011) empirically explored how the fulfillment of corporate social responsibility would impact on corporate stock performance. Corporate social responsibility index (CSRI), including three dimensions: economic, social, and environmental dimensions described by seven measurable variables, three CSR portfolios based on the CSRI - high, medium, and low, were constructed to examine short-run and long-run stock returns relative to those of benchmark portfolios. The study revealed that more socially responsible firms could perform better than less socially responsible firms in stock market. The study indicated that the high CSR portfolio on average has a higher excess

return relative to the market and the growth portfolio, respectively. It is possible that socially responsible firms may have better corporate image perceived by investors, thus leading to better stock performance. The study also indicated that the value portfolio has the highest stock returns over the other style portfolios in both the short-run and the long-run. The implication is that the implementation of corporate social responsibility does not necessarily result in additional operating costs and/or expenses. On the contrary, a socially responsible firm may be welcome by investors due to better corporate image, thus having a positive impact on stock returns.

Green and Peloza (2011) used a qualitative method to explore how corporate social responsibility create value for consumers. The study showed that consumers do indeed scrutinize purchases more carefully. CSR provides consumers three forms of value: Emotional value, Social value and Functional value. These value forms are not consistently positive, nor are they independent of one another. This research suggested that not all CSR is considered and evaluated in the same manner. Therefore, managers should scrutinize their CSR value propositions for consumers and ensure they maximize the value – particularly in product related forms that offer functional value for consumers.

According to a study on the effect of corporate social responsibility (CSR) on corporate financial performance using two different regions, namely the USA and Europe, von Arx and Ziegler (2008) provided empirical evidence through two-stage econometric that corporate environmental and social activities matter for the explanation of stock performance in both regions. However, this impact is obviously not linear for an increasing intensity of these measures. Compared with Europe, the positive effect furthermore appears to be more robust for the USA because the ordinal CSR variable has a positive impact. In contrast, the industry environmental and social performance has neither a robust positive nor a robust negative influence on the average monthly stock returns for any region.

Mahoney and Roberts (2007) investigated the relation of Corporate Social Performance to Financial Performance and institutional ownership of Canadian firms. The study revealed that there is no

significant relationship between a composite measure of firms' corporate social performance and financial performance. However, there is significant relationships between individual measures of firms' corporate social performance regarding environmental and international activities and financial performance. The study also indicated a significant relationship between firms' composite CSP measure and the number of institutions investing in firms' stock.

In an empirical research using panel data from Domini Social Index developed by Kinder, Lydenberger Domini KLD, Becchetti, Di Giacomo, and Pinnacchio (2005) examined the effect of corporate social responsibility on corporate performance. The study disentangled the effects of corporate social from business cycle effects (year dummies) and idiosyncratic characteristics (e.g. management quality) of each firm and showed that corporate social responsibility is a move from the shareholders wealth to a multi-stakeholders welfare target. That is, social responsibility seems consistent with the shift in focus from shareholders wealth maximization to a multi-stakeholders welfare approach. Thus socially responsible firms productivity is equal or, in some cases, significantly higher than in the control sample while, at the same time, return on equity is significantly lower. The implication is that social responsibility implies, on the one side, decisions leading to higher cost of labour and of intermediate output, but may, on the other side, enhance involvement, motivation and identification of the workforce with company goals with positive effects on productivity.

Tsoutsoura (2004), addressed the issue of whether corporate social performance is linked to financial performance. The study provided empirical evidence that CSR based on KDL Scores and Domini 400 Social Index are positively and significantly correlated with all three measures of financial performance: Return on assets (ROA), Return on equity (ROE), and Return on sales. This study supported the view that socially responsible corporate performance can be associated with a series of bottom-line benefits.

In studying the relationship between corporate social responsibility and firm financial performance, McGuire, Sundgren, and Schneeweis (1988) measured performance in terms of accounting based measure and stock-market-based measures and also in terms of risk. From the study the accounting-based measures of performance are significantly correlated with corporate social responsibility ie ROA and total assets show positive significant relationships with corporate social responsibility. There is insignificant correlation between social responsibility and stock-market-based measures of performance. Thus accounting-based measures, particularly ROA, proved to be better predictors of corporate social responsibility than market measures. The study suggested that firms low in social responsibility also experienced lower ROA and stock-market returns than do firms high in social responsibility. Although performance tended to predict corporate social responsibility better than risk, measures of risk also explained a significant portion of the variability in social responsibility across firms. Lack of social responsibility may expose a firm to significant additional risk from lawsuits and fines and may limit its strategic options.

2.3.4   Governance Sustainability Disclosures and Firm Performance

Conclusive evidence on the relationship between governacnce system and firm performance is lacking as previous investigations have not produced consistent result. While some researchers report a positive relationship between governance and firm performance (Haryono & Paminto, 2015; Narwal & Jindal, 2015; Reguera-Alvarado et al. 2015; Garba & Abubakar, 2014; Aggarwal, 2013; Gull et al. 2013; others report negative relationship (Gonzalez, & Hagendorff, 2016; Haryono & Paminto, 2015; Garba & Abubakar, 2014; Fagbemi, 2010) and yet others no relationship (Akinyomi & Olutoye, 2015; Fagbemi, 2010). These mixed results are partially attributable to the difficulty in generating reliable and valid measures for the complex construct that is termed corporate governance (Larcker, Richardson, & Tuna, 2007).

Ruparelia and Njuguna (2016) examined the relationship between board remuneration and financial performance in the Kenyan financial services industry. The results disclosed significant variations in the level of board remuneration across the companies and a significant positive relationship between board remuneration and DY, but not ROA, ROE, and EPS. When disaggregated to financial market segments, the results confirmed a statistically significant relationship between board remuneration and with dividend yield in the banking sector. The same was not reported for ROA, ROE, and EPS. In the insurance segment, there was a statistical significance between board remuneration and ROA only, while in the investment sector, there was no significant relationship between board remuneration and financial performance measures.

Fuzi, Halim, and Julizaerma (2016), carried out a study in a few countries by examining board independence and firm performance. The results showed a mixed association between proportions of independent directors and firm performance. Although the companies comprised the highest number of independent directors, it would not assure to enhance firm performance.

In a study of whether boardroom gender diversity really affect firm risk, a naïve analysis by Sila, Gonzalez, and Hagendorff (2016) showed a negative relationship between boardroom gender diversity and equity risk across firms. A more sophisticated identification strategies using Two-Stage Least Squares with Fixed Effects and Dynamic Panel GMM reveals that the negative relationship between gender diversity and equity risk is driven by between-firm heterogeneous factors that influence both boardroom female representation and the firm's risk measures.

Haryono and Paminto (2015) examined the effect of the corporate governance to the firm value, either direct, or indirect through the financial performance and the firm risk using a Structural Equation Modeling (SEM). They found that corporate governance has positive significant effect to the financial performance and negative significant effect to the firm risk, but it has no direct significant effect to the firm value. The corporate governance has significant effect to the firm value

through the financial performance. Meanwhile, the corporate governance has no significant effect to the firm value through the firm risk. In addition, the financial performance has positive significant effect to the firm value, while the firm risk has no significant effect to the firm value.

In a study on the effect of organizational governance on the profitability, Akinyomi and Olutoye (2015) reported that there is no statistically significant relationship between board composition and profitability. Also there is no statistically significant relationship between board size and profitability. The study also showed an insignificant negative relationship between directors' interest and profitability.

Narwal and Jindal (2015) examined the impact of corporate governance on the profitability of Indian Textile Industry. The study showed a strong positive association between director's remuneration and profitability. Audit committee members has significantly negative impact on the profitability. Board size has also insignificant negative impact the profitability. Non-executive directors and board meetings has insignificant positive influence on the profitability.

In a study of the relation between board gender diversity and economic results in Spain the second country in the world to legally require gender quotas in boardrooms and historically characterized by a minimal female participation in the workforce, Reguera-Alvarado, de Fuentes, and Laffarga (2015) showed that in the period analyzed the increase of the number of women on boards was over 98 %. Also that the increase in the number of women on the boards is positively related to higher economic results.

Uwuigbe, Peter, and Oyeniyi (2014) investigated the effect of corporate governance mechanisms on earnings managgement of quoted firms in Nigeria. They showed that board size and independence had significant negative impact on earnings management but CEO duality has significant positive relationship with earnings management.

In a study on the effect of corporate governance on the performance of commercial banks, Obeten and Ocheni (2014) used profitability as dependent variable, and on reasons best known to them used capital adequacy, asset base, policy shift, investment ratio, liquidity ratio and inflation rate as independent variables to measure corporate governance. The study provided evidence that there is significant negative relation between capital adequacy, liquidity ratio, inflation and profitability. Also there is significant positive relationship between asset base, policy shift, investment and profitability.

Garba and Abubakar (2014) investigated the relationship between board diversity and financial performance of insurance companies in Nigeria, with specific reference to how gender diversity, board composition and foreign directorship among others affect financial performance of insurance companies quoted on the Nigerian Stock Exchange. The study revealed that gender diversity and foreign directors have a positive influence on insurance companies' performance. But the findings indicate a negative and significant relationship between board composition and performance of insurance companies in Nigeria.

Müller (2014) investigated the impact of 5 corporate governance characteristics related to board remuneration on the contemporaneous and next year's performance (measured as ROA/ROE) using a sample of large groups quoted on the London Stock Exchange between 2010 and 2011. The empirical analysis revealed significant relationship between non-executive directors' basic fee, fees paid in shares and additional remuneration for board committee membership (as corporate board compensation characteristics) and both contemporaneous and subsequent financial firm performance.

Dincer and Dincer (2013) found that size and proportion of auditors are seen to have a significant negative influence on performance. Whereas the proportion of independent directors have a positive effect. The study also indicated that the ratio of auditors to board members is significantly associated with performance. Concerning disclosure practices and a governance mechanism, the

study report that low concern for shareholders through untimely release of annual reports is associated with both lower profitability and firm value. Number of auditors' comments is also negatively correlated with both measures of firm performance. Also the private-foreign banks with foreign shareholders significantly underperform the other groups.

In an attempt to empirically find out whether corporate governance and corporate profitability are related using Indian context, Aggarwal (2013) reported that governance rating of company has a significant impact on ROS, but not on other three profitability measures and thus conclude that corporate governance has positive but not significant impact on corporate profitability.

Gull, Saeed, and Abid (2013) provided epirical evidence that there is a positive relationship between corporate governance mechanism and firm performance. Specifically there is positive association between board size and all performance related variables, while non-executive director's percentage and Chief Executive Officer Duality have negative association with firm performance. Also except CD all other variables were found to have a positive significant relationship with firm performance as measured by ROE.

Uwuigbe, (2013), examined the effect of corporate governance on share price of quoted firms in Nigeria. The study showed that there is an insignificant negative relationship between the number of shareholders on the board and share price. Also, a significant positive relationship between the composition of the audit committee and share price exist. There is insignificant negative relationship between the control variable, Earnings per Share and Share Price.

Danoshana and Ravivathani (2013) found that there is a significant relationship between the corporate governance mechanism and firm performance. Specifically, board size, meeting frequency and audit committee size have significant positive impact on ROA and ROE variables for measuring firm's financial performance. However, meeting frequency have significant negative impact on ROA and ROE.

Miyienda, Oirere, and Miyogo (2013) examined the relationship between directors' remuneration and company performance for 57 firms quoted on the Nairobi Securities Exchange for a period from 2006 through 2010. The study demonstrated the existence of a strong positive link between directors' remuneration and Earning after Tax (EAT) as measures of firm performance. Further it concluded that among Kenyan quoted companies, directors' remuneration has a weak relationship with Return on Equity (ROE), and Tobin's Q.

In a study of the relationship between a weighted index of corporate governance characteristics and firm performance and value of Saudi-quoted firms, Fallatah and Dickins (2012) documented a significantly positive association between corporate governance characteristics and firm and value, measured as Tobin's Q and the market value of firm equity, but not between corporate governance and firm performance, measured as return on assets.

Tornyeva and Wereko (2012) provided empirical evidence that generally corporate governance has positive impact on profitability. The factors of board size, board and management skill, CEO tenure, size and independence of audit committee, foreign and institutional ownership, dividend policy and annual general meeting, all have positive correlation with the performance of companies.

Similarly Duke, Kankpang, and Okonkwo (2012) documented that corporate governance code, board size, internal audit, separation of board chair from CEO and the number of non-executive directors were positively associated with organizational efficiency using output per staff, cost per service provided and cost per client served as the proxies for measurement. This finding confirms that a set of company-specific corporate governance guidelines facilitates internal financial controls in a way that enhances cost-savings and superior organizational performance.

In the same line of enquiry, Bubbico, Giorgino, and Monda (2012) investigated how corporate governance impacts on the value of quotedfinancial companies in Italy. The study showed that there

is positive and statistically significant relationship between corporate governance and market-value of financial institutions.

Fauzi and Locke (2012) investigated the role of board structure and the effect of ownership structures on firm performance in New Zealand's quoted firms from the period 2007-2011. Result showed a significant negative association between the number of non-executive directors and firm performance. It means the greater in the number of non-executive directors on the board, the lower the firm performance. The negative association may be due to high block holders' own, which makes nonexecutive directors become powerless in board discussion. The study also showed that board of directors, board committees and managerial ownership have a significant positive impact on firm firm performance.

Khatab, Masood, Zaman, Saleem, and Saeed (2011) examined the relationship between corporate governance and firm's performance of twenty firms quotedat Karachi Stock Exchange Pakistan and find that firms having good corporate governance measures perform well as compared to the firms having no or less corporate governance practices.

Okougbo (2011), in a study on the corporate governance and firm performance evidence from companies in Nigeria, reported that Board size, audit committee independence, ownership concentration have a significant relationship with return on equity and profit margin. CEO duality has no impact on firm performance. The study also showed that return on assets exhibits an insignificant relationship with the independent variables all through.

Using cross-cutting sectorial data derived from Nigerian firms, Duke and Kankpang (2011), Linking corporate governance with organizational performance found that ROA is positively related to existence of code of corporate governance, board size, audit committee, duality of CEO but negatively related to reliability of financial reporting. The also study showed that Profit margin has

positive relationship with board size, audit committee and code of corporate governance and a negative relationship with duality of CEO and reliability of financial reporting.

In a study on audit quality, corporate governance and firm characteristics in Nigeria, Adeyemi and Fagbemi (2010) provided empirical evidence that board independence, financial institution ownership, non-financial institution ownership has insignificant positive relationship. CEO duality has insignificant negative relationship. The study also showed that ownership by non-executive director has the possibility of increasing the quality of auditing.

Using a cross-sectional analysis of 428 quoted firms on the Bursa Malaysia for the financial year ending 2008, Yatim (2010) examined the association between directors' remuneration, firm performance, and corporate governance structures. The results showed that directors' remuneration is positively and significantly related to firm performance, CEO tenure, board size, and the existence of remuneration committee. The study also found that directors' remuneration is negatively and significantly related to board independence. Consistent with prior research, the study found a positive and significant association between directors' remuneration and firm size and a firm's growth opportunity.

Uadiale (2010) examined the impact of board structure on corporate financial performance in Nigeria. Four board characteristics of board composition, board size, board ownership and CEO duality were used to proxy board structure while corporate financial performance was measured by return on equity (ROE) and return on capital employed (ROCE). The Ordinary Least Squares (OLS) regression results showed that there is strong positive association between board size and corporate financial performance, there is a positive association between outside directors sitting on the board and corporate financial performance. However, a negative association was observed between directors' stockholding and firm financial performance measures. In addition, the study revealed a negative association between ROE and CEO duality, while a strong positive association was observed between ROCE and CEO duality.

Akhtaruddin, Hossain, Hossain, and Yao (2009) provided empirical evidence on corporate governance and voluntary disclosure in corporate annual reports of Malaysian firms. The study showed that board size, independent non-executive Directors and ownership structure has positive significant relationship with voluntary disclosure. Family control has negative insignificant relationship with voluntary disclosure. Also audit committee has insignificant positive relationship with voluntary disclosure.

Ammann, Oesch, and Schmid (2009) investigated the effect of firm-level corporate governance on firm value using a previously unused dataset by Governance Metrics International (GMI) which covers 64 individual corporate governance attributes on over 2,300 firms from 22 developed countries. The study found a strong and positive relation between firm-level corporate governance and firm valuation. Moreover, they showed that governance attributes documenting a company's behavior also have a significantly positive effect on firm value.

Gupta, Kennedy, and Weaver (2009) examined whether there is an association between publicly available governance scores and various measures of firm value. The study did not find consistently strong association between the composite corporate governance scores and the various measures of firm value. Specifically after controlling for firm size, profitability and cross-listing status, neither Tobin's Q nor the market-to-book ratio are related to the composite governance scores. These indicate that within Canadian capital markets, the report on business corporate governance rankings are not associated with firm value of the firm, accounting measures of firm performance and market reaction to these annual disclosures.

In a study of the link between firm performance, board structure and top executive pay, Fernandes (2008) used a panel of firms from the Portuguese Stock Market and discovered that there is no significant relationship between the board remuneration and company performance.

Campbell and Mínguez-Vera (2008) investigated the link between the gender diversity of the board and firm financial performance in Spain using panel data analysis and found that gender diversity as measured by the percentage of women on the board and by the Blau and Shannon indices has a positive but insignificant effect on firm value.

Li, Moshirian, Nguyen, and Tan (2007) examined whether there is relationship between managerial ownership and firm performance for a sample of Chinese firms from 1992-2000. Their study indicated that managerial ownership has a significant positive effect on the firm's operating and financial performance. Firms with higher CEO and top management shareholdings experience a less significant decline in operating and net profitability.

In an exploratory inquiry into the dimensions of corporate governance and whether they are useful in understanding managerial behavior and corporate performance Larcker, Richardson, and Tuna (2007) showed that the resulting corporate governance indices are related to future operating performance and excess stock returns. However, these indices have a very modest and mixed association with abnormal accruals and almost no relation with accounting restatements. Also the study found that firms with a greater proportion of block-holders, a compensation mix that is weighted toward accounting performance, lead directors, smaller boards, and fewer busy Directors exhibit superior future operating performance.

Garg (2007) examined whether tboard size and independence really matter in terms of influencing firm's performance. The analysis showed that there is an inverse association between board size and board indepence on firm performance. The impact of board independence on firm performance is more when the board independence is between 50 and 60 per cent. Smaller boards are more efficient than the larger ones, the board size limit of six suggested as the ideal.

Rose (2005) provided empirical evidence on whether increased managerial ownership is associated with superior firm financial performance measured by Tobin's q. The results revealed that

managerial owenership is not associated with financial performance. Instead, using three stage least squares analysis shows that increased firm performance results in a higher managerial ownership stake.

Similarly, Abdullah (2004) studed the relationship between board independence and CEO duality and firm's performance relying on financial ratios, namely ROA, ROE, EPS and profit margin. The findings, generally, suggested that neither board independence, leadership structure nor the joint effects of these two showed any relations with firm performance.

Carter, Simkins, and Simpson (2003) investigated the relationship between percentage of women, African Americans, Asians, Hispanics on the board of directors and firm value for a sample of Fortune 1000 firms. They found a significant positive relationships between the fraction of women or minorities on the board and firm value. They also found that the proportion of women and minorities on boards increases with firm size and board size, but decreases as the number of insiders increases.

Studying the relationship between managerial ownership and firm market value using selected Japanese firms from 1987 to 1995, Chen, Guo, and Mande (2003) using ordinary least sqaure regression analysis discovered a negative relation between Q and managerial ownership. By controlling for fixed effect, they show that market value increases monotonically with managerial ownership.

Black, Jang, and Kim (2003) provided evidence on whether corporate governance is an important factor in explaining the market value of Korean public companies. They found a strong positive correlation between the overall corporate governance index and firm value. Each sub index is an individually significant or marginally significant predictor of higher Tobin's q and other performance variables.

Cho (1998) examined the relation between ownership structure, investment and corporate value. Ordinary least squares regression results revealed that ownership structure affects investmenta and therefore corporate value.

Loderer and Martin (1997), examined whether managers' financial interests has effect on firm performance using simultenous equation framework. They found no evidence that larger stockholdings lead to better performance.

Yermack (1996) provided empirical evidence that companies achieve the highest market value when boards are small. Several measures of operating efficiency and profitability are negatively related over time to board size.

Similarly Mehran (1995), examined executive compensation structure, ownership, and firm performance of 153 randomly selected manufacturing companies and discovered that firm performance is positively related to the percentage of equity held by managers and to the percentage of their compensation that is equity-based.

2.4   Summary of Empirical Review and Gap in Literature

The review of prior research in various national and international journals indicates that sustainability reporting is at its initial stages of development. Nevertheless it is gaining importance as a reporting framework. In general, 1 most of the studies revealed differences in the extent and style of sustainability reporting across countries. Apart from the extent of reporting and media used, there are differences in reporting standard and guidelines applied.

Prior empirical research examining associations between sustainability reporting and financial performance either as a specific study or multidimensional constructs produced mixed results: a positive and statistically significant relation (Khan, Serafeim, & Yoon, 2015; Yu & Zhao, 2015; Ioannou & Serafeim, 2014; Aggarwal, 2013; Siew, Balatbat, & Carmichael, 2013; Taib, Ameer, &

Haniff, 2012) no relationship or mixed results (Hussain, 2015; Haryono & Iskandar, 2015; Coretez & Cudia, 2011); a negative relationship (Garg, 2015; Calace, 2013; Lopez, Garcia, & Rodriguez (2007).

Based on the literature reviewed, most of the studies on sustainability reporting are made in developed economy with very few from developing countries. There is no single empirical evidence on the association between sustainability reporting (using multidimensional constructs) and economic performance of firms that considers Governance as an important sphere of sustainability from Nigeria context. Extant studies proxy sustainability disclosure with such measures as: social responsibility cost (Total equity to Total Asset), employees' benefit cost (total personal cost to turnover), environmental disclosure, community involvement disclosure, human resource disclosure, product/customer disclosure, Materiality sustainability index, Immaterial sustainability index, Sustainability Reporting Index (SRI) = Economics + Environment + Social.

Also the dependent variables used in most of the extant Nigerian studies do not reflect both accounting and market measures of financial performance. Meanwhile most of the previous researchers adopted different regression analysis between a proxy of value created for shareholders (i.e. dependent variable) and a proxy of the sustainability metrics (i.e. independent variable).

The review highlights inconsistencies concerning the data sources used and measurement approaches adopted for calculating sustainability index. Therefore, attempting to draw general conclusions from the literature on the effect of sustainability reporting on firm performance is fraught with problems.

Table 2.4.1: Summary of empirical review on sustainability metrics disclosure and firm performance

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Nnamani, Onyekwelu, and Ugwu (2017), Effect of sustainability accounting and reporting on financial performance of firms in Nigeria brewery sector.	Nigeria 2010-2014	ordinary linear regression	Y: financial Performance(ROA & ROE X: social responsibility cost (Total equity to Total Asset), employees' benefit cost (total personal cost to turnover)	Social responsibility measured by Total equity to total asset (TETA) ratio has no significant effect on the return on asset (ROA). total personnel cost to turnover (TPCT) ratio has no positive relationship with the return on asset (ROA).

Usman and Amran (2015), Corporate social responsibility practice and corporate financial performance: evidence from Nigeria companiess.	Nigeria 2010-2012.	Content Analysis and hierarchical multiple regression analysis	Y: ROA and Share Price (SP) X: environmental disclosure, community involvement disclosure, human resource disclosure, product/customer disclosure. Controlled by firm size	ENVDIS has significant negative effect on both measures of CFP. There is a significant positive relationship between COMINV and ROA but insignificant negative relation-ship with SP. Results also revealed a positive relationship between HRDISC and ROA, but neutral relationship exists between HRDISC and SP. The study showed that PRCDISC was significantly but negatively associated with ROA and significantly positively associated with the SP.
Garg (2015), Impact of Sustainability Reporting on Firm Performance of Companies in India	India 2008-2012	Paired t-test and Regression Analysis	Y: Firm Performance (Return on Assets and Tobin's Q) X: Sustainability reporting score based on GRI guidelines.	Sustainability reporting practices of a company impact its performance both ROA and Tobin's Q negatively in short run but impact the firm performance positively in long-run. The impact is highly Insignificant
Khan, Serafeim, and Yoon (2015), Corporate Sustainability: First Evidence on Materiality	U.S. 2003-2012	Calendar-time portfolio stock return regressions and firm-level panel regressions	Y: Accounting based performance measure(return-on-sales or ROS). X: Materiality sustainability index, Immaterial sustainability index.	Firms with good ratings on *material* sustainability issues significantly outperform firms with poor ratings on these issues. In contrast, firms with good ratings on *immaterial* sustainability issues do not significantly outperform firms with poor ratings on the same issues
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Aondoakaa (2015), Impact of sustainability reporting on corporate performance of selected quoted companies in Nigeria	Nigeria 2002 - 2012	multiple regression analysis.	Y: Finanacial Performance measured by ROA, ROE, Net Profit Margin (NPM), Earning Per Share (EPS). X: Sustainability Reporting Index (SRI) = ECN + ENV + SOC	Sustainability Reporting indices are positively related to ROA except the environmental index. All the sustainability indices are positively related to ROE. Environmental and social index are positively related to NPM while economic index is negative. Sustainability Reporting is positively

				related EPS but environmental index is negatively related to EPS
Hussain (2015) Impact of Sustainability Performance on Financial Performance: An Empirical Study of Global Fortune (N100) Firms	US 2007 - 2011	fixed effect regression models	Y: Tobin's Q as a measure of market value, ROA and ROE as measures of accounting performance, and Debt to Equity ratio as a measure of capital structure. X: EC_SUST Economic Sustainability Performance Measure EN_SUST Environmental Sustainability Performance Measure SO_SUST Social Sustainability Performance Measure. control variables are firm size, capital intensity, and sales growth.	EC_SUST have no significant relationship with both market performance and accounting performance of reporting firms. EN_SUST and SO_SUST have significant and positive relationship with both market performance and accounting performance of reporting firms. There is no relation between all the sustainability disclosures and changes in capital structure. No control variable other than SALE_GROW is significant
Mervellskemper, Streit, and Bochum (2015). Investors' perception of ESG performance: Is integrated reporting keeping its promise?	42 country-industry groups 2009 – 2014.	Ordinary least squares (OLS) regression technique.	Y: Market value of equity X: Environmental (ENV), Social (SOC) and Corporate Governance (CGV) Performance Score. Control for cross-country differences by including country fixed effects.	CGV performance score is positively related to market value while ENV and SOC performance scores have a negative impact. All ESG performance scores are insignificant which leads to the conclusion that they cannot be considered as value-relevant.
Yu and Zhao (2015), Sustainability and firm valuation: an international investigation	Firms from countries in the Dow Jones Sustainability Index (DJSI) including: Australia, Germany France. US, UK, China, South Africa etc 1999 – 2011	ordinary least square regressions	Y: Firm Value measured by Tobin's Q. X: Sustainability indices using Dow Jones Sustainability Index (DJSI). controlled by size, listing status, total liabilities to total assets, capital expenditures to total assets, country- and industry-fixed effects.	There is a significantly positive association between sustainability performance and firm value
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Haryono and Iskandar (2015), Corporate Social Performance and Firm Value	Indonesia 2011-2014	Structural Equation Model (SEM)	Y: Financial Performance Measures (ROA and ROE), Firm Risk and Firm Value Performance Measures (Tobin's Q and Price to Book Value PBV). X: Corporate Social Performance (CSP) sum of Economic Performance, Environmental Performance, Social Performance.	CSP has positive significant effect to the Financial Performance Measures ROA and ROE. CSP has negative significant effect to the Firm Risk. CSP has negative insignificant effect on the Firm Value Performance Measures Tobin's Q and Price to Book Value PBV.

Nwobu, O. (2015) The Relationship between Corporate Sustainability Reporting and Profitability and Shareholders Fund in Nigerian Banks	Nigeria 2010 -2013	correlation coefficient	Y: Profitability measured with Profit after tax and Shareholders Fund X: Sustainability Reporting measured by economic, environmental, social and governance disclosure index.	Small positive correlation of 0.28 between sustainability reporting index and Profit After Tax (PAT). The study also found a small positive correlation of 0.18 between sustainability reporting index and shareholders fund.
Bhatia and Tuli (2014), Sustainable Disclosure Practices: A Study of Sensex Companies in India.	India 2009-2010	one way ANOVA	X: Index of Sustainability disclosures	there is no significant difference in the inter industry disclosure scores. One way ANOVA showed that there is no statically significant variation was found in the mean disclosure scores of various industry groups.
Ioannou and Serafeim (2014), The consequences of mandatory corporate sustainability reporting: Evidence from four countries	China, Denmark, Malaysia, and South Africa 2005-2012.	instrumental variables regression	Y: Firm Value -Tobin's Q X: Environmental Disclosure, Social Disclosure, Governance Disclosure Index.	All the three instrumented subcomponents has a positive and significant effect on firm value. The results are robust across several specifications.
Eccles, Ioannou, and Sefafeim, the impact of corporate sustainability on organizational processes and performance, (2014)	US 1993 -2010	Quasi experimental design. Logit regression	Y: stock returns (valuated and equal weighted portfolios) X: High Sustainability, Low Sustainability in terms of policies related to the environment, employees, community, products, and customers. Controlled by Market, Size, Book-to-market, and Momentum factors.	*High Sustainability* companies significantly outperform their counterparts over the long-term, both in terms of stock market as well as accounting performance.
Ng and Rezaee (2014) Sustainability Disclosures and Cost of Capital	US Not Available	Regression Analysis	Y: cost of capital both debt and equity component. X: five dimensions of corporate sustainability reporting - economic, governance, social, ethics and environmental indicators. Controlled by Leverage, profitability, Interest coverage.	cost of debt and cost of equity are lower for firms that disclose sustainability performance information; the effect of business sustainability performance information is stronger for cost of equity than for cost of debt; sustainability disclosures pertaining to the economic, ethics and environment performance unambiguously lower both cost of debt and equity; and disclosures regarding social and governance performance only lower cost of debt, but not cost of equity.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Isa (2014), Sustainability Reporting among Nigeria Food and Beverages Firms	Nigeria 2013	Regression analysis	Y: Sustainability disclosures categorized into environmental, social, labour practice, human right, economic and product responsibilities. X: firm attributes measured by Size and Profitability	Size emerges as a significant predictor of the sustainability reporting. Profitability has insignificant negative effect on sustainability reporting.

Calace (2013) Corporate sustainability effectiveness: Social and environmental reports grade of disclosure and economic performance	Fortune Global 500 companies 26 Countries from 6 world area covering North America, South America, Europe, Asia, Far East, Oceania 2010 -2012	Longitudnal study weighted least square (WLS) regression	Y: Market capitalization, X: level of disclosure in GRI reporting represented by GRI1 GRI referenced sustainability report and GRI2 full-disclosed GRI report. Controlled by Size, and Industry	GRI1 sustainability reports has a positive and statistically significant effect on firms' market capitalization. While GRI2 has a negative and statistically significant effect on market value. Interacting GRI1 and GRI2 with Leverage a control variable GRI1 has negative slope while GRI2 has positive slope.
Aggarwal (2013), Impact of sustainability performance of company on its financial performance: A study of quotedIndian companies	Indian 2010 -2012	Multiple regression	Y: Accounting-based performance measures ROA, ROE, ROCE, PBT, Growth in Total Assets – GTA. X: Overall Sustainability Rating (OSR), Community Performance Rating (COM), Employees Performance Rating (EMP), Environmental Performance Rating (ENV) and Governance Performance Rating (GOV) have been used as proxies for sustainability performance of company. Controlled by Firm Size.	OSR has positive but insignificant impact on Firms financial performance. COM has insignificant positive relationship with firm's performance, EMP has significant negative relationship. ENV has significant negative relationship. GOV has significant positive relationship with firm's performance.
Siew, Balatbat, and Carmichael (2013), The relationship between sustainability practices and financial performance of construction companies	Australia 2008 -2010	Euclidean distances shortest path problems in operations research	Y: Financial performance measured via profitability financial ratios and equity valuation. Ten financial performance indicators were used. X: sustainability practices represented by ESG scores using a checklist of 68 items within Nine domain including climate change, environmental management, environmental efficiency, other environmental matters, health and safety, human capital, conduct, stakeholder engagement and governance	The state of reporting for the majority of publicly quotedAustralian companies is poor. Companies issuing non-financial reports largely outperform those which do not in a number of selected financial ratios, although the correlation between financial performance and ESG scores is not strong.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Ekwueme, Egbunike and Onyali, (2013). Benefits of triple bottom line disclosures on corporate performance: an exploratory study of corporate stakeholders.	Nigeria	Survey	Y: market share, employee motivation, product consumption and labour turnover. X: triple bottom line disclosures	There is a positive connection between sustainability reporting and corporate performance through increased market share and market capitalization
Faisal, Tower, and Rusmin (2012).	24 Diverse Countries.	ANOVA and Ordinary	Y: Sustainability Disclosure Index (SDI). X: Industry Type	Industry Type is associated with SDI. Voluntary Assurance

Legitimising Corporate Sustainability Reporting Throughout the World	Anglo-Saxon (4), Communitarian (16), Emerging Market (4) 2009	Least Squares (OLS) regression	(IT) Presence of Assurance (PA) Business System (BS) Board Independence (Board). Controlled by Size (Size) ROA (ROA) Leverage (LEV)	Statements has a significant and statistically positive relationship with SDI. Business System is associated with SDI. Board independence is not a significant predictor for SDI. The control variables of size, ROA, and leverage are also not statistically significant for SDI.
Taib, Ameer, and Haniff (2012) Relationship between corporate sustainability practices and financial performance: Evidence from the GRI reporting companies	UK and US Global Companies 2005 - 2009	multiple regression analysis	Y: Return on Assets (ROA) X: Community Indices (CI), Diversity Indices (DI), Environment Indices EI, Ethics Indices ETI,	DI has a positive significant impact on ROA while CI, ETI, and EI do not have significant impact on the ROA
Frias-Aceituno, Rodríguez-Ariza, and Garcia-Sánchez, (2012) Explanatory Factors of Integrated Sustainability Reporting	2000 companies from 20 countries 2008 - 2010	Tobit Regression	Y: Level of Integrated Sustainability Reporting X: Size, Profitability, Business Sector, Industry Concentration, Growth Opportunities, GRI_Application. Controlled by Country and Year	Size, Profitability, Sector, Growth, GRI_Application has positive significant effect While Concentration and Growth has a negative impact
Ameer and Othman (2012), Sustainability Practices and Corporate Financial Performance: A Study Based on the Top Global Corporations	100 sustainable global companies from North America, Europe, Korea, and emerging markets 2006 –2010	Regression analysis	X: Sustainability indices focusing on: community, environment, diversity, and the ethical standards dimension. Y: company performance, focusing on sales (revenue) growth (SG), return on assets (ROA), profit before tax (PBT), and cash flows from operating activities (CFO)	Companies disclosing sustainability related information have significantly higher sales growth, ROA, PBT, CFO compared to control sample companies in the same sector. The higher financial performance of sustainable companies has increased and been sustained over the periods 2006–2008, 2006–2009, and 2006–2010, respectively
Khaveh, Nikhasemi, Haque, and Yousefi (2012), Voluntary sustainability disclosure, revenue, and shareholders wealth-a perspective from Singaporean companies.	Singapore 2008 -2010	bivariate linear regression	Y: selected five environmental indicators and five social indicators to calculate the sustainability index. X: Share price	There is a positive and significant relationship between sustainability reporting index and Singaporean companies' revenue.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Asaolu, Agboola, Ayoola, and Salawu, (2011), sustainability reporting in the Nigerian oil and gas sector	Six major oil and gas multinationals operating in Nigeria.	Content Analysis	No Dependent and independent variable identified	multinationals operating in the Nigerian Oil and Gas sector have not been adhering to international best practices on the issue of sustainability reporting,

Cortez and Cudia (2011) Sustainability and Firm Performance A case study of japanese electronics companies	Japan 2001 -2009	Panel regression analyses	Y: Revenue, Profit, Assets, accounting risk (Liabilities), Equity. X: Environmental investments and maintenance costs	Environmental sustainability performance measured in environmental costs has positive and significant impact revenue generation. Environmental cost has significant negative relationship on accounting risk in terms of liabilities. Environmental costs have insignificant positive impact on profitability, assets and shareholder wealth.
Reddy and Gordon (2010), the effect of sustainability reporting on financial performance: an empirical study using quoted companies	New Zealand and Australian Stock exchange SR is 31 days While normal returns was 250 trading days	event study and Cross-sectional dummy regression analysis	Y: Sustainability reporting measured with D1 = Environmental Report Type D2 = Sustainable Report Type D3 = Corporate Responsibility Report Type X: Stock return	There is a statistically significant relationship between sustainability reporting and market returns for Australian companies but not for New Zealand companies. Only the CSR type of sustainability report was significant in explaining the abnormal return of New Zealand companies. D1 and D2 were insignificant. Cross-sectional analysis results of the combined dataset for the two countries support the view that the contextual factors of industry type significantly impacts abnormal returns of the reporting companies.
Wagner (2010), The role of corporate sustainability performance for economic performance: A firm-level analysis of moderation effects	US 1992 – 2003	Regression analysis	Y: Economic performance measured with Tobin's Q. X: corporate sustainability index measured with environmental and social activities based on KLD data. Controlled by firm age, firm size, R&D expenditure and sales growth, advertising intensity, Industry membership.	Without interaction both sub-indices of corporate sustainability are significantly positively associated with Tobin's q. Including the interaction effects (in this case two each for R&D and advertising intensity, with, respectively, corporate social and corporate environmental performance), corporate environmental performance only has a significant direct positive effect whereas corporate social performance only has a fully moderated (positive) effect on economic performance.
Lopez, Garcia, and Rodriguez (2007), Sustainable Development and Corporate Performance: A Study Based on the Dow Jones Sustainability Index	firms belonging to the Dow Jones Sustainabilit y Index DJSI in Europe 1998 –2004	Regression analysis	X: Sustainability indices using Dow Jones Sustainability Index (DJSI). Y: Firm performance measured with accounting ratios: growth of profit before tax (PBT) and the business evolution, measured by the growth in revenue (REV). Control variables for size, sector of activity and risk	In the short term the relation between sustainability indices and performance is negative, though the value is not significant. The relations between the other variables considered and PBT are not significant. In the long term, there is a direct relation between sustainability indices and performance.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
ENVIRONMENT				

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Khlif, Guidara, and Souissi (2015) Corporate social and environmental disclosure and corporate performance	South Africa and Morocco 2004-2009	Panel Data Multiple regression	Y: financial performance measured by Tobin's Q. K: Nine categories of environmental and social disclosure using a coding index approach including: expenditures and risks, acts and regulations, pollution abatement, sustainable development, land remediation and contamination (including spills), environmental management, employment and employees, health and safety conditions and civil society. Controlled by leverage, industry sector, ownership dispersion and lagged ROA	Corporate performance is not significantly related to leverage ratio, lagged ROA has a significant positive effect on performance. Social and environmental information, findings show that such variable has a non-significant positive impact on performance. Ownership dispersion has no significant effect on Tobin's Q, while polluting sectors tend to reduce corporate performance.
Plumlee, Brown, Hayes, and Marshall, (2015). Voluntary environmental disclosure quality and firm value: Further evidence. Journal of Accounting and Public Policy.	US 2000-2005	Multiple Regression	Y: *Firm value measured by* future expected *cash flows FECF and* Cost of equity, X: environmental disclosure index consistent with the Global Reporting Initiative disclosure framework. Controlled by two proxies: positive and negative environmental performance measure.	There is a significant positive association between some aspects of voluntary environmental disclosure quality and future expected cash flows. There is both a negative and positive association between some aspects of voluntary environmental disclosure quality and a firm's cost of equity capital.
Makori and Jagongo (2013) Environmental Accounting and Firm Profitability: An Empirical Analysis of Selected Firms Quotedin Bombay Stock Exchange, India	India 2007	multiple regression analysis	Y: Return on Capital Employed; Net Profit Margin; Dividend per Share; and Earnings per Share. X: Environmental Cost measured by amount spent on environmental protection	Environmental Cost has a positive relationship with the Net Profit Margin (NPM) and Dividend Per Share (DPS) and a negative relationship with Return on Capital Employed (ROCE) and Earnings Per Share (EPS).
Nyirenda, Ngwakwe, and Ambe (2013) Environmental Management Practices and Firm Performance in a South African Mining Firm	South Africa 2003 -2011	ordinary least square technique	Y: return on equity (roe). X: carbon emission reduction (ce), energy usage (eu) and water usage (wu). Controlled by net income and shareholders' equity	No significant relationship between Carbon Emission Reduction CE, Energy Usage EU Water Usage WU and Return on Equity. There is significant relationship between the control variables - shareholders' equity, net income and Return on Equity.
Bassey, Effiok, and Eton (2013), The Impact of Environmental Accounting and Reporting on Organizational Performance of Selected Oil and Gas Companies in Niger Delta Region of Nigeria	Nigeria Survey	Pearson's product moment correlation analysis	Y: Firm performance X: environmental cost, firm's size.	environmental cost significantly influences a firm's profitability; disclosure of environmental information in the annual report is positively related to a firm's size
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Latridis (2013),	Malaysia,	ordinary least	Y: Environmental disclosure	Environmental disclosure is

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Environmental disclosure quality: Evidence on environmental performance, corporate governance and value relevance	2005 - 2011	squares (OLS) regression analysis	score EDS which is the GRI-based environmental disclosure score and proxies for environmental disclosure quality. X: hazardous waste HW, Toxic chemicals or substances (TCS) percentage of independent directors on the board (IDB), the percentage of independent directors on the audit committee (IDAC) presence of an audit committee (AC), audited by a big 4 auditor (BIGAU), managerial ownership (MO) institutional ownership (IO), change in company management (MC), cross-quoted(CL). Controlled by leverage (GEAR), Tobin's Q (TQ), stock price volatility (SVOL), return on assets (ROA), market to book value of equity (MBV), size (lnA), capital spending (CAPSP), Janis –Fadner coefficient (JF),	positively associated with environmental performance. Companies that display smaller amounts of hazardous waste (HW) and take on initiatives to reduce, reuse, substitute or phase out toxic chemicals or substances (TCS) exhibit higher environmental disclosure scores (EDS). Company attributes, such as large size, the need for capital, profitability and capital spending, are positively associated with environmental disclosure quality. High quality environmental disclosers display effective corporate governance and would tend to face less difficulties in accessing capital markets. Environmental disclosure score (EDS) is positively associated with the percentage of independent directors sitting on the board of directors (IDB), the percentage of independent directors sitting on the audit committee of the board (IDAC) and the presence of an audit committee (AC).
Oti, Effiong, and Tapang (2012), Environmental Costs and Its Implication on the Returns on Investment: An Evaluation of Selected Manufacturing Companies in Nigeria	Nigeria 2001- 2010	multiple regression	Y: Return On Investment (ROI), Fines, Penalties and Compensations (FPC) X: Environmental responsibility, namely: Employee Health and safely (EHS), Waste Management (WM), and Community Development (CD),	Significant relationship between employee health and safely (EHS), waste management (WM) and community development (CD) and return on investment of the environmentally responsible firms. There is also significant relationship between employee health and safely (EHS), waste management (WM) and community development (CD) and the level of fines, penalties and compensation (FPC)
Asuquo (2012), Environmental friendly policies and their financial effects on corporate performance of selected oil and gas companies in Niger Delta region of Nigeria	Nigeria Survey	ordinary least square regression	Y: Firms' performance/profitability (PROFT). X: Cost of Environmental Friendly Policies (ENVFRIENPO), Firms' Competitiveness (FIRMCOMP).	Firms' performance has significant positive relationship with environmental friendly policies and firms' competitiveness.
Uwuigbe (2012), Web-based corporate environmental reporting in Nigeria: A study of quoted companies.	Nigeria 2007-2011	Content Analysis and linear regression model	Y: Corporate environmental disclosure based on Environment, Energy Research & development Employee health and safety. X: Return on equity ROE, Return on asset ROA, firms' size.	Significant positive association existed between the dependent variable (CED) and the independent variables that is (ROTA, ROE and SIZE).
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Oba, Fodio, and Soje (2012), The Value	Nigeria	ordinary least square and	Y: Return on capital employed. X: Environmental	There is a positive and significant relationship between

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Relevance of Environmental Responsibility Information Disclosure in Nigeria	2005 – 2009.	logistic regression	Disclosure Score from index of twelve (12) established environmental checklist, foreign directors on the board.	the explanatory variables: quality of environmental responsibility disclosures; foreign directors on the board and financial performance.
Fisher-Vanden and Thorburn (2011), Voluntary Corporate Environmental Initiatives and Shareholder Wealth	U.S. 1993 - 2008	Regression analysis	Y: Abnormal stock returns (difference between the actual stock return and the return predicted by the benchmark model) X: environmental performance measures based on KLD STATS: number of environmental strengths and the number of environmental concerns. Corporate environmental initiatives: EPA's Climate Leaders program and Ceres. Controlled by size, the market-to-book ratio, degree of industry competition, firm's headquarters	Significant losses in the market value of firms announcing that they join Climate Leaders and at their subsequent announcement of a greenhouse gas emissions reductions goal. Firms announcing an endorsement of the Ceres Principles experience insignificant stock returns. Stock price decline is larger in firms with poor corporate governance structures, and for high market-to-book (i.e., high growth) firms. The program announcements further have no statistically significant average valuation effects on portfolios of industry rival firms.
Clarkson, Fang, Li, and Richardson (2010), The Relevance Of Environmental Disclosures For Investors and Other Stakeholder Groups: Are Such Disclosures Incrementally Informative?	US 2003&2006	Regression analyses	Y: cost of capital, firm value, stakeholder sentiment measured with the Janis-Fadner coefficient. X: environmental disclosure index based on the Global Reporting Initiative framework Controlled by a measure of environmental performance Toxics Release Inventory (TRI) emissions.	There is a significant and positive relationship between firm valuation and our environmental disclosure measure. Firm's cost of equity capital has a strong positive association with the level of its relative toxic emissions (TRI) but unrelated to the level of its voluntary environmental disclosure. Environmental disclosure have a positive and significant impact on stakeholder sentiment.
Freedman and Patten (2004), Evidence on the pernicious effect of financial report environmental disclosure	U.S. 3-day period centered on the press release date	Ordinary least square regression	Y: Firm specific market reaction to the Clean Air Act amendment proposal measured with cumulative abnormal return CAR. X: Environmental information variables: Toxics Release Inventory TRI pollution performance information, extent of environmental disclosure DISC, litigation-related environmental disclosures LIT. Controlled by firm size, industry classification.	The log TRI variable is negatively associated with the dependent variable cumulative abnormal return CAR and is statistically significant. DISC variable is positively and significantly related to CAR. The litigation disclosure variable is not statistically significant. The control variables are not statistically significant.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Lorraine, Collison, and Power (2004), An analysis of the stock	UK	Descriptive statistics, Analysis of	Y: share prices measured by raw daily share returns data. X: externally produced	There is a stock market response to such news especially for details on fines—typically up

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
market impact of environmental performance information	1993-2000	Variance	environmental information: fines for environmental pollution, environmental awards. Controlling for size of the fine, and the sector to which the firm belongs.	to1week after news is published. Across-sectional analysis indicates that the share price response is mainly a function of the relative fine imposed on the firm. There was no significant price change on the official announcement date although there may have been some information leakage to the market before the event date. Other explanatory variables such as environmental performance news or sector membership were unsuccessful in explaining variations in the market responses.
Al-Tuwaijri, Christensen, and HughesII (2004), The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach	US 1994.	two-stage least squares (2SLS) and three-stage least squares (3SLS) simultaneous equations	Y: economic performance ECONPERF measured by an industry-adjusted stock return, ENVPERF, ENVDISCL. X: Past environmental disclosure, Environmental exposure, ENVCON=Environmental concern, Environmental Report, EPA Program, Environmental Committee, Unexpected earnings UE, GROWTH, Profit Margin MARGIN, VISIBLTY, SIZE.	Positive relation between economic performance, ECONPERF, and environmental performance, ENVPERF. UE and GROWTH are significantly positively associated with economic performance, MARGIN is positively associated with ECON- PERF, and that our proxy for environmental exposure (ENVEXP) is insignificant. Economic performance is not a significant determinant of environmental performance. firm's predisclosure environment (PREDISC) is positively related to ENVPERF. ENVPERF is significantly and positively associated with ENVDISCL.
SOCIAL				
Hasan, Kobeissi, Liu, and Wang (2016), Corporate Social Responsibility and Firm Financial Performance: The Mediating Role of Productivity.	U.S. 1992 -2009	regression analysis,	Y: Financial performance measured by Tobin's Q. X: Index of Corporate Social Performance evaluated in six major qualitative issue areas: environment, community relation, human rights, employee relations, diversity dimension, product quality and safety based on Compustat and KLD database. Mediation analysis of Total Factor Productivity TFP is moderated by firm discretionary cash and organizational risk. Controlled by firm size, Leverage, assets tangibility, Sales growth industry competition	Result reveals a significant positive effect of CSP on Tobin's Q. it reveal a significantly positive relationship between CSP and TFP. Mediation analysis reveals a significant direct effect of CSP on TFP; as well as a significant *partial* mediation effect of TFP on CSP-CFP relationship. There is a significant and positive moderating effect of discretionary cash on the relationship between CSP and TFP. Organizational risk moderates the treatment effect of CSP on TFP.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Gherghina, Vintilă, and Dobrescu (2015), An Empirical	US 2008 -2011	multivariate panel data	Y: Tobin Q. X: Three dimensions of Corporate Social Responsibility Index	There is positive relationship between Corporate Social Responsibility Index (CSRI) and

Research on the Relationship Between Corporate Social Responsibility Ratings and U.S. Quoted companies' Value		regression	(CSRI): Citizenship (the community and the environment), Governance (ethics and transparency), and Workplace practices. Control Variables: Size, Leverage, Growth and Listing Age.	firm value. There is a negative influence of firm size, as annual average number of employees, on firm value. There is a negative relationship between leverage ratio, as total debt to total assets, age of listing and firm value. Sales growth, as the relative increase of sales from the previous year, positively influences firm value.
Adeneye and Ahmed (2015), Corporate Social Responsibility And Company Performance	UK Not available	bivariate and multivariate analysis	Y: CSR index. X: Company performance measured using market to book value (MBV), company size (Size), and return on capital employed (ROCE).	There is a significant positive relationship between MBV and corporate social responsibility. There is positive insignificant relationship between size and corporate social responsibility. There is a significant positive relationship between MBV and corporate social responsibility. There is significant positive relationship between CSR, ROCE, SIZE and MBV
Xie (2015), Corporate Social Responsibility and Firm Performance: OLS and Granger Causality Analysis	U.S. 1998 - 2013	OLS regressions analysis	Y: Corporate Social Responsibility Index evaluated across six different categories: environment, community relation, human rights, employee relations, diversity dimension, product quality and safety on based on KLD rating. X: Different firm characteristics: Tobin's Q, Firms' leverage, Book-to-market ratio, Tangibility, ROA, firm size, R&D. Controlled by industry dummy variable.	All the independent variables expect for ROA ratio and R & D level are statistically significant which proofs strong evidences that those independent variables are related with CSR levels. While Firms' leverage levels, book-to-market ratio, tangibility, and ROA ratio have negative significant effect on CSR; Tobin's Q and firm size have positive significant effects on CSR.
Vujicic (2015) Corporate social responsibility and stock returns: examining US stock performance	U.S. 2002 - 2004	cross-sectional regressions	Y: Return Variables. X: Morgan Stanley Capital International - MSCI formerly KLD Social Scores on: Community, Employee Relations, Environment. Control for firm size, market momentum correlation, firm's beta value, price-to-book value, and the previous year's return.	KLD CSR score has an extremely statistically significant negative impact on the returns. On the relationship between returns and the independent ratings, only the community indicator is significantly negative. With the control variables, the overall CSR rating still has a negative and statistically significant relationship on the stock returns. There is very little impact of the various CSR indicators on returns in individual sectors.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Marfo, Chen, Xuhua, Antwi, and Yiranbon (2015), Corporate Social Responsibility:	Ghana 2005 - 2014	Ordinary Least Square Regression	Y: Profitability proxied by Profit after Tax. X: Corporate Social Responsibility of the selected	Results indicate that, the negative relationship exists between companies' performance standards with

Driving Dynamics on Firm's Profitability in Ghana			organization.	profit after tax (PAT) and corporate social responsibility investments (CSRI) by the companies.
Manchiraju and Rajgopal (2015), Does corporate social responsibility (CSR) create shareholder value? Exogenous shock-based evidence from the Indian Companies Act 2013	India 2008 -2013	Regression discontinuity design	Y: Cumulative abnormal return, Tobin's Q X: CSR spending related to community welfare, education, environment, and health care, rural development, women empowerment, children health, Donations, Disaster relief, Sports, Support for physically challenged classified according to: Spender, Nonspender, Unaffected. Controlled by Size, Book to market value of equity, Leverage, sales growth, ROA, Capital expenditure, cash, business group, multinational corporation, govt owned, Board Independence, Big 4 Auditor, Advertisement expenses, political connectedness, polluting industry.	Average three-day cumulative abnormal return (CAR) around key events leading to the passage of the Mandatory CSR regulation is negative for firms affected by the regulation. The negative returns are more pronounced for the subgroup of affected firms that currently do not spend on CSR, compared to those that do spend on CSR.
Chen and Lee (2015), Quantile Causality between Corporate Social Responsibility and Corporate Performance	TEJ Taiwan*** 2010 - 2011	Non-parametric Granger Causality Test	Y: Firm Value measured by Tobin's Q. X: CSR Index	Higher involvement in CSR is correlated with higher firm value, and higher firm value then gives rise to better involvement in CSR.
Nguyen, et al. (2015), Association between Corporate Social Responsibility Disclosures and Firm Value – Empirical Evidence from Vietnam	Vietnam 2010 -2013	Content Analysis and Panel Least Squares Regression Analysis	Y: Firm Value measured by Tobin's Q. X: CSR measured by: community disclosures, environment disclosures, employees disclosures, customers and suppliers disclosures. Controlled by Firm size, Financial Leverage, liquidity, revenue growth.	Tests indicated that social responsibility disclosures are associated with following year's firm value. Specifically, the relationship between environmental disclosure and following year's firm value was positive, while that between employee disclosures and firm value was negative. The results show a positive sign for Vietnamese firms that take on environmental responsibilities.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Simionescu and Gherghina (2014), Corporate Social Responsibility and	Romania 2008 -2011	Reression analysis	Y: accounting-based performance measures: ROA, ROE, and ROS. Market-based performance measures: PER,	There is significant positive relationship between CSR and EPS with cross-section. By estimating fixed-effects panel

Corporate Performance: Empirical evidence from a panel of the Bucharest Stock Exchanges quoted companies.			EPS, and PBV. X: CSR index Controlled by size, indebtedness, as well as the company's tenure. Both the CSR and control variables was considered as explanatory variable.	data regression models, the positive relationship between CSR and EPS was reinforced. By employing panel data regression models without cross-section effects, there is a negative relationship between CSR and ROS.
Okwemba, Chitiavi, Egessa, Douglas, and Musiega (2014), Effect of Corporate Social Responsibility on Organisation Performance; Banking Industry Kenya, Kakamega County	Kenya. Survey	Multiple regression analysis	Y: Organisation Performance: Customer retention. X: Philanthropic CSR activities, Ethical CSR, Environmental focused CSR. Controlled by size of the firm, priority of the firm and Government Policy.	There was a significant positive relationship between organization profitability and philanthropic activities. Insignificant positive relationship between organization profitability and environmental activities. Significant positive relationship between organization profitability and ethical activities. Intervening variables government policy and priority both has significant impact on customer retention.
Folajin, Ibitoye, and Dunsin (2014), Corporate Social Responsibility and Organizational Profitability: An Empirical Investigation of UBA Nig.	Nigeria 2006 -2012	ordinary least square (OLS) model of regression	Y: Bank profitability measured by the net profit (NP). X: Corporate social responsibility.	CSR has insignificant negative relationship with profitability.
Anderson, Hyun, and Warsame (2014), Corporate Social Responsibility, Earnings Management, and Firm Performance: Evidence from Panel VAR Estimation	U.S. 1992-2009 Pre-SOX sample period (1992-2001. Post SOX sample period (2002-2009).	panel vector autoregressive (PVAR) approach	Y: Earnings Management (discretionary accruals), Firm Performance (Tobin's Q) X: Corporate Social Responsibility, CSR ratings from ESG STATS4 by MSCI ESG., Corporate Governance and Management Compensation (equity-based to total pay).	CSR has a significantly positive influence on EM in the pre-SOX. There is no statistically significant relationship between CSR and EM in the post-SOX period. MC is positively associated with EM in the pre-SOX era but not in the post-SOX era. The coefficient on the directional relation from CSR to FP is statistically Insignificant during the pre-SOX period, while this relationship between CSR and FP is statistically significant and positive after SOX. Influence of firm performance on earnings management are positive and statistically significant in pre-SOX and post-SOX period). The impact of FP on MC is positive and significant. The relation from MC to CG is negative and statistically significant. there is negative bi-directional relationships between FP and CG
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**
Mukhtaruddin, Relasari, Soebyakto, Irham, and Abukosim (2014), Earning	Indonesia 2010 - 2012	Regression and Path analysis	Y: Firm Value measured by Tobin's Q. X: Earnings Management measured using modified model of Jones.	Earnings management has insignificant negative effects on CSR disclosure. CSR disclosure variable has positive significant

			Intervening variable CSR based on the ISO 26000 Guidance Standard on Social Responsibility which consists of 33 items in 7 key themes: Environment, Labour practice, Human rights, Organizational governance, Fair operating practice, Consumer issues, Social development.	effect on firm's value. Earnings management variables has insignificant negative effect on firm's value.
management, corporate social responsibility disclosures and firm's value: Empirical study on manufacturing quoted on IDX period 2010-2012				
Mujahid and Abdullah (2014), Impact of Corporate Social Responsibility on Firms Financial Performance and Shareholders wealth	Pakistan 2011	Mixed Method	Y: Accounting measures: ROA and ROE. Shareholders wealth measures like EPS and stock price. X: CSR	There is a significant positive impact of CSR on Firms Financial performance. All the Corporate Social Responsibility firms that are included in the sample outperform the Non Corporate Social Responsibility firms in terms of their financial Performance. There is a significant positive impact of CSR on shareholders wealth.
Siddiq and Javed (2014), Impact of CSR on Organizational Performance	Pakistan 2013	Regression	Y: Organizational performance measured by Turnover and ROA. X: CSR measured by Perceived CSR (PCSR) and Perceived Stakeholder Relationship (PSR)	PCSR has insignificant positive impact on both financial Performance indicators. PSR influences the performance indicators negatively yet it is not significant.
Odetayo, Adeyemi, and Sajuyigbe (2014), Impact of Corporate Social Responsibility on Profitability of Nigeria Banks	Nigeria 2003 – 2012	Regression analysis	Y: profit After Tax. X: expenditure on corporate social responsibility	Increase in expenditure on corporate social responsibility of all the banks have significant positive impact on their profitability. there is significant relationship between corporate social responsibility and profitability of individual bank
Su, Peng, Tan, and Cheung (2014), The Signaling Effect of Corporate Social Responsibility in Emerging Economies	Ten Asian emerging economics (China, Hong Kong, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand). 2001, 2002 and 2004	multilevel regressions	Y: Financial Performance measured by Tobin's Q. X: CSR, measured by the CSR score in the Credit Lyonnais Securities Asia (CLSA) reports. Controlled by GDP per capita, FDI, Firm size, slack, family businesses, cross-listing.	Family businesses and firms that have more resources have better financial performance. CSR practices are positively related to the Tobin's Q. CSR practices have a higher signal effect in less developed capital markets than in the more developed ones. firms in lower information diffusion markets enjoy more financial benefits from CSR practices than those in higher information diffusion markets.
Authors and Date of publication	**Market & Period studied**	**Statistical tool**	**Variables**	**Outcome**

Bolton (2013), Corporate Social Responsibility and Bank Performance	U.S. 1998 -2010	Ordinary Least Squares (OLS) and two-stage least squares (2SLS)	Y: Firm performance is measured with two variables: Return on Assets (ROA) and Tobin's Q. X: KLD-All net sum of all Strengths and Concerns from all categories within the database, KLD-Business deemed essential to a bank's core operations, KLD-Discretionary not directly related to a bank's core operations. Controlled by size, leverage, cash management, earnings management	CSR is positively and significantly related to bank performance. There is a negative relationship between bank risk and CSR activities related to core operations (measured by KLD-Business. there is a positive relationship between bank risk-taking and CSR activities that are not related to core operations (measured by KLD-Discretionary)
Albuquerque, Durnev, and Koskinen (2013), Corporate Social Responsibility and Firm Risk: Theory and Empirical Evidence	U.S. 2003 - 2011	Regression analysis	Y: firm systematic risk: using a three factor model of returns, Tobin's Q. X: CSR from MSCI's ESG database formerly known as KLD Research & Analytics on six different attributes: community, diversity, employee relations, environment, product, and human rights. Controlled variables that are known to affect systematic risk: Operating leverage; R&D expenditures; Advertising expenditures; financial leverage (Leverage); CAPEX; Cash; Sales growth; market equity-to-book (ME); Size; Dividend yield; Earnings variability; log of firm age (Age); and, Diversification.	The level of systematic risk is statistically significantly lower for firms with higher aggregate CSR scores. The effect of CSR score on Tobin's Q is positive and highly significant. Advertising expenditures and Operating leverage, are not significant across specifications. CSR is more strongly related to Tobin's Q with differentiated goods. The effect of CSR on firm beta is stronger in industries with greater product differentiation.
Servaes and Tamayo (2013), The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness	U.S. 1991 –2005	Regression Analysis	Y: Firm Value Measured with Tobin's Q, which is the market value of the firm, divided by the replacement value of its assets. X: CSR activities, using the KLD Stats database. CSR (Conservative) CSR (with industry) CSR (with Industry and product). Controlled with Size, Advertising intensity, R&D intensity, time-invariant unobservable firm characteristics.	There is a positive relation between the CSR measure and firm value. This finding holds for all measures of CSR and appears to suggest that CSR itself is value creating. However, in models estimated with firm fixed, evidence of a direct relation between CSR and value disappears, suggesting that this finding is spurious and that controlling for unobservable firm characteristics is important in these specifications. In fact, the coefficient on CSR is negative in all specifications, although not statistically significant CSR activities have a negligible or negative impact on firm value for firms with low advertising intensity. There is a positive impact for firms with high advertising intensity.
Authors and Date of publication	**Market &**	**Statistical tool**	**Variables**	**Outcome**

	Period studied			
Abogun, Fagbemi, and Uwuigbe (2013), The impact of corporate social responsibility expenditure on firm performance and firm value of Nigerian banks	Nigeria 2007 - 2012	Pearson Product Moment Correlation Coefficient and Regression Analysis	Y: Firm Performance: ROA, ROE. Firm Value: EPS, DPS. X: Cost of CSR Investment.	The result of the correlation analysis shows that CSR expenditure has a significant relationship with firm performance. There is also a positive significant relationship between CSR and DPS, there is a significant relationship between CSR and EPS. The result from correlation showed that there exists positive relationship between CSR expenditure and firm performance as well as firm value.
Abdulrahman (2013), The influence of corporate social responsibility on profit after tax of some selected deposit money banks in Nigeria.	Nigeria 2006 -2011	regression and correlational analysis	Y: Profit After Tax. X: CSR expenditure	There is significant influence of corporate social responsibility on profit after tax of banks in Nigeria.
Comincioli, Poddi, and Vergalli (2012), Does corporate social responsibility affect the performance of firms?	US, EU, Asia Counties from which the CSR firms used in Dow Jones Sustainability Index are drawn. 1999 - 2004	Linear Regression	Y: Both Accounting, market and Mixed measures of performance. ROE and ROCE; Market Capitalization; Market Value Added X: CSR indices that intersect two of the three main international social institution. Controlled by: Size, Industrial Sector, Age of Capital, Intangible Assets (R&D), Leverage, Risk, GDP, Intensity of work	The result show that economic performance measured by MVA has significant negative relation with CSR, MVA decreases when CSR increases. There is significant positive relation between MVA and GDP.
Mulyadi and Anwar (2012), Impact of Corporate Social ResponsibilityTowards Firm Value and Profitability	Indonesia 2007 -2009	Double linear regression	Y: Accounting based performance: Return on Asset (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). Market based performance: Tobin's Q. X: CSR based on Global Reporting Initiative (GRI). Controlled by Sales Growth, Leverage, Size.	CSR has insignificant positive impact to ROA. CSR has insignificant negative impact to ROE. Growth rate, and size has significant positive effect on ROA. Leverage has negative significant impact on ROA. Only leverage that has positive significant correlation with ROE. There is insignificant negative relationship between CSR to NPM and firm value. NPM is significantly affected by size, leverage and growth rate. There is no variable that is significantly affected firm value.

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Stuebs and Sun (2011), Corporate Social Responsibility and Firm Reputation	U.S. 2005 - 2006	Pearson Correlations and logistic Regression Analysis	Y: two reputation measures Rep-Score: reputation score assigned to firm on the 2006 Most Admired Company list. and REPU: a reputation indicator variable equal to 1 for reputation firm's on Fortune's 2006 Most Admired Company list; otherwise 0. X: CSR index score based on KLD attributes. Control variables are: firm size (assets), return on equity (ROE), leverage (LEV), and the market-to-book ratio (MTB).	There is a significant and positive relation between corporate social responsibility (*KLD*) and the reputation measures (*Rep-Score* and *REPU*). Also Reputation score (*Rep-Score*) is positively associated with assets and the market-to-book ratio at significant levels.
Wang (2011), Corporate Social Responsibility and Stock Performance - Evidence from Taiwan	Taiwan 2001 -2009	Descriptive statistics and Pair-wise *t* statistic	Y: two measures of stock returns are adopted, *i.e.*, quarterly return, *QR*, and cumulative return. X: corporate social responsibility index (CSRI) was constructed on the ground of three dimensions: economic, social, and environmental, described by seven measurable variables .Three portfolios according to the CSRI: high CSR HCSR, medium CSR MCSR, and low CSR LCSR.	There are no significant excess returns of the three CSR style portfolios relative to the benchmark portfolios. High CSR portfolios out- perform the market and the growth portfolio in the long- run in term of cumulative returns. stock performance of both the MCSR and LCSR portfolios is in-significant in both the short-run and the long-run
Green and Peloza (2011), How does corporate social responsibility create value for consumers?	North America. 2009	Qualitative Method: Analysis of interview transcript. iterative process, post-interview discussion, Integration and coding of the transcripts, categorization of distinct themes.	Y: different forms of consumer value X: different types of CSR.	Consumers do indeed scrutinize purchases more carefully. CSR provides consumers three forms of value: Emotional value, Social value and Functional value. These value forms are not consistently positive, nor are they independent of one another.
von Arx and Ziegler (2008), The effect of CSR on stock performance: New evidence for the USA and Europe.	USA and Europe 1996 -2006	cross-sectional regressions	Y: corporate financial performance: stock performance which is measured by the average monthly stock returns between 2003 and 2006 X: CSR: environmental and social activities of a firm compared with other firms in the same industry	The two-stage econometric analysis shows that corporate environmental and social activities matter for the explanation of stock performance in both regions. Positive coefficients between stock performance and the different corporate activities variables as well as the negative coefficients between the average stock returns and the industry environmental and social performance variables.

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Mahoney and Roberts (2007) Corporate social performance, financial performance and institutional ownership in Canadian firms	Canada 1996 –1999	Regression Analysis	Y: Return on assets (ROA) and return on equity (ROE) were used to measure a firm's Financial Performance. Institutional ownership. X: CSP, CSID rating system developed by *Michael Jantzi Research Associates* MJRA across eight dimensions of social performance. Controlled by Size of the firm, debt level, industry.	There is no significant relationship between the composite CSP measure and either ROA or ROE. Both the environment and international dimensions of the CSP measure were significantly related to ROA. There is a significant and positive relationship between the composite measure of CSP and the number of institutions owning its shares. The relationship between CSP and the percentage of shares owned by institutional owners are insignificant.
Becchetti, Di Giacomo, and Pinnacchio (2005) Corporate Social Responsibility and corporate performance: evidence from a panel of US quoted companies	U.S. 1990 - 2003	Regression analysis	Y: return on equity, return on investment, return on capital employed, total sales per employee. X: corporate social responsibility proxied by Domini Social Index into eight big domains: i) community; ii) corporate governance; iii) diversity; iv) employee relations; v) environment; vi) human rights; vii) product quality; viii) controversial business issues. For each of them the Domini index identifies strengths and weaknesses. Controlled by size, industry, business cycle	Total sales per employee are significantly higher with Domini index. Returns on equity are significantly lower with Domini index. There is significantly negative impact (both in terms of productivity and return on equity) of exit from the Domini index. Domini affiliation is associated with a reduction of return on investment, return on equity and return on capital employed.
Tsoutsoura (2004), Corporate Social Responsibility and Financial Performance	U. S. 1996 - 2000	Regressions	Y: Return on assets (ROA), Return on equity (ROE), and Return on sales (ROS). X: CSR, both the KLD rating and the Domini 400 Social Index were used. Control Variables: risk, size, industry, leverage, R&D and Industry.	CSR based on KDL Scores and Domini 400 Social Index are positively and significantly correlated with all three measures of financial performance (ROA, ROE, ROS).
McGuire, Sundgren, and Schneeweis (1988), Corporate Social Responsibility and Firm Financial Performance	U.S. 1983 -1985	Correlational Analysis Regression Analyses	Y: Accounting-based performance measures: ROA, Average assets, Sales growth, Operating income growth, Assets growth. Accounting based measure of Risk: Debt/assets, operating leverage, standard deviation of operating income Market based performance: Alpha, Total return. Market base measure of risk: beta, a measure of systematic risk, and the standard deviation of total return. X: corporate social responsibility index.	Accounting-based measures, particularly ROA, proved to be better predictors of corporate social responsibility than market measures. Operating income growth has a negative significant correlation with corporate social responsibility There is insignificant correlation between social responsibility and stock-market-based measures of performance. The accounting- and stock-market-based risk measures tend to be negatively associated with social responsibility.

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
GOVERNANACE				
Haryono and Paminto (2015), Corporate governance and firm value: The mediating effect of financial performance and firm risk.	Indonesia 2009 -2014	Structural Equation Model (SEM)	Y: firm value measured with Tobin's Q and Price to Book Value (PBV). Financial performance measured by Return on Assets (ROA) and Net Profit Margin (NPM). Firm risk measured with systematic risk and idiosyncratic risk (unsystematic risk X: corporate governance index based on OECD principles of corporate governance.	Corporate governance has positive significant effect to the financial performance and negative significant effect to the firm risk. It has no direct significant effect to the firm value. Corporate governance has significant effect to the firm value through the financial performance. Corporate governance has no significant effect to the firm value through the firm risk.
Akinyomi and Olutoye (2015), Corporate Governance and Profitability of Nigerian Banks	Nigeria 2008 -2012	Regression analysis	Y: Bank Profitability measured by ROE. X: Corporate Governance characteristics: Board size, Board composition, Directors' interest	There is no statistically significant relationship between board composition and profitability. There is no statistically significant relationship between board size and profitability. There is insignificant negative relationship between directors' interest and profitability.
Narwal and Jindal (2015), The Impact of Corporate Governance on the Profitability: An Empirical Study of Indian Textile Industry	India 2009-10 to 2013-14.	Ordinary Least Square Regression	Y: PAT which is measure the profitability. X: board size, audit committee, director's remuneration, board meetings, non-executive directors.	Director's remuneration (DR) has significant positive impact on the profitability of the companies. Audit committee members (ACM) has significantly negative impact on the profitability. Board size has also insignificant negative impact the profitability. Non-executive directors and board meetings has insignificant positive influence on the profitability.
Uwuigbe, Peter, and Oyeniyi (2014) The effect of corporate governance mechanisms on earnings managgement of quoted firms in Nigeria	Nigeria 2007 -2011	Ordinary Least Square Regression	Y: Modified Jones model X: Board size, Board independence, CEO Duality controlled by Firm Size.	Board size and Board independence had significant negative impact on earnings management but CEO duality has significant positive relationship with earnings management.
Obeten and Ocheni (2014), Empirical study of the impact of corporate governance on the performance of financial institutions in Nigeria.	Nigeria 1980 - 2007	ordinary least squares (OLS) regression analysis	Y: Profitability X: Capital adequacy, Asset base, Policy shift, investment, liquidity ratio, Inflation.	There is significant negative relation between capital adequacy, liquidity ratio, inflation and profitability. There is significant positive relationship between asset base, policy shift, investment and profitability.

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Dincer and Dincer (2013), Corporate Governance and Market Value: Evidence from Turkish Banks	Turkey 2003 - 2009	ANOVA and multiple regression	Y: Firm Performance measured by share prices and ROA. X: ownership structure, board structure, Size and proportion of auditors, Proportion of independent directors	Size and proportion of auditors have a significant negative influence on performance. Proportion of independent directors appears to have a positive effect. Board size have negative on both profitability. Ownership have effect on performance.
Aggarwal (2013), Corporate governance and corporate profitability: Are they related? - A study in Indian context.	Turkey 2003 -2009	ANOVA, t-tests and regression analysis	Y: Performance Indicators. ROA and share price. X: Corporate Governance indicators. Ownership structure, Board structure and Disclosure practices.	Size and proportion of auditors are seen to have a significant negative influence on performance. The proportion of independent directors have a positive effect. Ratio of auditors to board members is significantly associated with performance. The private-foreign banks with foreign shareholders significantly underperform the other groups.
Gull, Saeed, and Abid (2013), Corporate governance and performance: An empirical evidence from textile sector of Pakistan	India 2010 - 2013	multiple regression analysis	Y: Corporate profitability. Return on Assets (ROA), Return on Equity (ROE), Return on Sales (ROS) and Return on Capital Employed (ROCE). X: Governance ratings based on three parameters -Board, Leadership Ethics and Transparency & Reporting from 'CSRHub database'. Controlled by size of firm, for sustainability performance of firm, i.e. Environmental, Employee and Community-related performance.	There is positive correlation between corporate governance and corporate profitability. Governance rating of company has a significant impact on ROS, but not on other three profitability measures.
Danoshana and Ravivathani (2013), The impact of the corporate governance on firm performance: A study on financial institutions in Sri Lanka	Nigeria 2007 - 2009	Regression analysis	Y: Share Price. X: ownership structure and the audit committee. Controlled by Earning per share.	There is an insignificant negative relationship between the number of shareholders on the board and share price. There is significant positive relationship between the composition of the audit committee and share price. There is insignificant negative relationship between the control variable, Earnings per Share and Share Price.

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Uwuigbe, (2013), Corporate Governance and Share Price: Evidence from quoted firms in Nigeria	Pakistan 2007 - 2011	Regression analysis.	Y: market based performance measures (Tobin's Q, Market to Book Value) and accounting based performance measure (ROE, ROA). X: corporate governance mechanisms: board size, Non-executive directors, CEO Duality. Controlled by Firm Age, firm size	There is positive association between board size and firm performance, while non-executive director's percentage and Chief Executive Officer duality have negative association with firm performance. BS and FA have a positive significant impact on ROA, on the other hand, CD and NED's are having a strong negative association with return on assets and FS is not affected by ROA. Except CD all other variables were found to have a positive significant relationship with firm performance as measured by ROE.
Fallatah and Dickins (2012), Corporate governance and firm performance and value in Saudi Arabia	Sri Lanka 2008 -2012	Regression analysis	Y: Firm performance measured by Return on equity, Return on assets. X: Corporate governance measured by Board size, Meeting frequency and audit Committee.	Board Size has significant positive impact on ROA and ROE. Significant negative relationship exists between Meeting Frequency and ROA and ROE. Audit Committee Size has significant positive impact on ROA and ROE.
Tornyeva and Wereko (2012), Corporate Governance and Firm Performance: Evidence from the Insurance Sector of Ghana	Saudi Arabia 2006 -2009	Regression Analysis	Y: Firm performance and value measured by return on assets and Tobin's Q respectively. X: corporate governance index, comprising nine governance characteristics. board size, separation of COB and CEO, independent directors, audit committee, nominating and remuneration committee, board meetings, board member stock ownership requirements, executive stock ownership restrictions, insider ownership. Controlled by industry related fixed effects and year-specific fixed effects	Corporate governance characteristics are positively related to firm value measured by Tobin's Q but not to firm performance measured as ROA. The control variable intended to control the size is significantly positive suggesting that larger firms outperform their smaller counterparts. Leverage is significantly negative, suggesting that less-leveraged firms outperform more-leveraged counterparts.
Duke, Kankpang, and Okonkwo (2012), Corporate governance as a driver of organizational efficiency in courier service firms: Empirical findings from Nigeria	Ghana 2005 -2009		Y: Firm performance measured by ROE and ROA. X: Corporate governance characteristics: board size, board skill, management skill, longer serving CEOs, size of audit committee, audit committee independence, foreign ownership, institutional ownership, dividend policy and annual general meeting. Controlled by size, age and asset tangibility.	The results show that generally corporate governance has positive impact on profitability. The factors of board size, board and management skill, CEO tenure, size and independence of audit committee, foreign and institutional ownership, dividend policy and annual general meeting, all have positive correlation with firm performance.

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Bubbico, Giorgino, and Monda (2012), The impact of corporate governance on the market value of financial institutions: empirical evidence from Italy	Nigeria 2005 -2010	ordinary least square (OLS) regression	Y: Organizational efficiency is measured by output per staff (OPS), cost per service provided (CPS) and cost per client served (CPC) X: code of corporate governance (CODCORGOV), CEO dual status (CEO), internal audit (INTERNALAUD), board size (BSIZE) and number of non–executive/independent directors (NONEXEDIR)	Board size, internal audit, CEO dual status, code of corporate governance and number of non-executive directors have significant positive relationship with output per staff. All the corporate governance variables have significant positive relation with cost per service provided. All the corporate governance variables have significant positive relation with cost per client served.
Khatab, Masood, Zaman, Saleem, and Saeed (2011), Corporate Governance and Firm Performance: A Case study of Karachi Stock Market	Italy 2010	cross-sectional data regression	Y: Market value measured by Tobin's Q. X: Corporate Governance Index which include 76 variables selected on the basis of the Italian Corporate Governance Code of Best Practices. Controlled by ownership concentration, return on assets, annual sales growth rate, market capitalization, Age, capital structure.	There is a positive and statistically significant correlation between Tobin's Q and corporate governance. There is a positive and statistically significant correlation between Tobin's Q and ownership concentration, and return on assets. There is a negative and statistically significant between Tobin's Q and capital structure and Age.
Okougbo (2011), Corporate Governance And Firm Performance: Empirical Evidence From Selected Quoted companies In Nigeria	Pakistan 2005 -2009	multiple regression analysis	Y: Firm Performance proxied by Tobin's Q, ROA and ROE with their control variables i.e., size, Leverage and Growth. X: Corporate governance rating.	Leverage and growth has positive and significant impact on Tobin's Q and ROA. Growth has a negative and significant impact on ROE.
Duke and Kankpang (2011), Linking corporate governance with organizational performance: New insights and evidence from Nigeria,	Nigeria 2003 -2008	Generalised Least Square (GLS) Regression	Y: firm performance surrogated by return on assets (ROA); return on equity (ROE), profit margin (PM).X: Corporate governance mechanisms- CEO duality, board size audit committee independence, and ownership concentration. Controlled by company size and leverage.	Board size, audit committee independence, ownership concentration have a significant relationship with return on equity and profit margin. CEO duality has no impact on firm performance.
Adeyemi and Fagbemi (2010) Audit Quality, Corporate Governance and Firm Characteristics in Nigeria	Nigeria Not available	ordinary least square (OLS) regression	Y: Corporate Performance. Measured by profit margin and return on assets. X: Corporate governance. Measured by reliability of financial reporting, existence of code of corporate governance, audit committee, board size, duality of CEO.	ROA is positively related to existence of code of corporate governance, board size, audit committee, duality of CEO but negatively related to reliability of financial reporting. Profit margin has positive relationship with board size, audit committee and code of corporate governance and a negative relationship with duality of CEO and reliability of financial reporting.

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Akhtaruddin, Hossain, Hossain, and Yao (2009) Corporate Governance and Voluntary Disclosure in Corporate Annual Reports of Malaysian Quoted firms	Nigeria 2007	logistic regression	X: Board independence, Financial institution ownership, Non-financial institution ownership, CEO duality, Non-executive directors' ownership, Executive directors' ownership, Y: audit quality measured by size of audit firm big and non-big.	BODINDEP, FINOWN, NFINOWN has insignificant positive relationship, CEOSHIP has insignificant negative relationship, NEDOWN and EDOWN has significant positive relationship with Audit Quality.
Ammann, Oesch, and Schmid (2009), Corporate Governance and Firm Value: International Evidence	Bursa Malaysia 2002	Ordinary Least Squares (OLS) regression	X: Board Size, Independent Non-executive Directors, Ownership Structure, Family Control, Audit Committee. Controlled by firm size, leverage, profitability, and nature of audit firms. Y: Voluntary Disclosure Index.	BSZE, PIND, POSO has positive significant relationship with Voluntary Disclosure, FC has negative insignificant relationship with voluntary disclosure, PAC has insignificant positive relationship with voluntary disclosure. TNE aspect of Firm Size and PRFT has significant positive relationship with Voluntary Disclosure, whereas TA and TCE another aspect of firm size has insignificant positive relationship with voluntary disclosure. NAF and LEV has insignificant positive relationship with voluntary disclosures.
Gupta, Kennedy, and Weaver (2009), Corporate governance and firm value: Evidence from Canadian capital markets	22 developed countries including: Australia, Canada, Denmark, France, Germany, UK and others 2003 -2007	Fixed effects regressions	Y: Performance measure Tobin's Q. X: 64 different Governance attributes classified by GMI in six categories, namely board accountability, financial disclosure and internal control, shareholder rights, remuneration, market for control, and corporate behavior. Controlled by firm size, past growth in sales, leverage	There is a strong and positive relation between firm-level corporate governance and firm valuation. Governance attributes documenting a company's behavior also have a significantly positive effect on firm value.
Larcker, Richardson, and Tuna (2007), Corporate Governance, Accounting Outcomes, and Organizational Performance	Canada 2002 - 2005	Regression Analysis	Y: firm value along three dimensions: relative market valuation measured by Tobin's Q and market-to-book ratio. Operating performance measured by ROA and market reaction measured by the 11-day and 2-day reaction around the publication date of the governance scores. X: composite and sub-category governance scores under four sub-categories: board composition; board and CEO compensation; shareholder rights; and board governance disclosure. Controlled by firm size (as measured by sales), profitability (return on assets), and cross-listing status.	After controlling for firm size, profitability and cross-listing status, neither Tobin's Q nor the market-to-book ratio are related to the composite governance scores. There is a significant positive association between the composite corporate governance score and the firm's return on assets. When the composite score is divided into the four components, the Shareholder Rights score is significantly associated with return on assets.

Authors and Date of publication	Market & Period studied	Statistical tool	Variables	Outcome
Carter, Simkins, and Simpson (2003), Corporate governance, board diversity and firm value.	U.S 2001-2003	principal component analysis (PCA), Exploratory recursive partitioning analyses, Regression analysis	Y: Abnormal Accruals, Earnings Restatements, future operating performance, Future Stock Returns. X: corporate governance in seven general categories: characteristics of the board of directors, stock ownership by executives and board members, stock ownership by institutions, stock ownership by activist holders, debt and preferred stock holdings, compensation mix variables and anti-takeover devices	Governance indices are related to future operating performance and excess stock returns. However, these indices have a very modest and mixed association with abnormal accruals and almost no relation with accounting restatements. There is statistical significance and explanatory power for the governance factors both before and after including various control variables.
Black, Jang, and Kim (2003), Does Corporate Governance Affect Firm Value? Evidence from Korea	Fortune 1000 firms 1997	two-stage least squares analysis	Y: Firm Value measured by Tobin's Q. X: measures of board of director diversity. Controlled by firm size, industry, and other corporate governance measures.	There is a positive significant relationship between board diversity and firm value. A positive relationships exists between the presence of a female director and firm size, board size. The coefficient estimates for CEO/board chair duality are negative and significant.
	Korea 2001	OLS, 2SLS and 3SLS regression analysis	Y: Firm performance measured by Tobin's Q, market-to-book ratio and market-to-sales ratio. X: corporate governance index composed of six sub-indices: shareholder rights, board of directors in general, outside directors, audit committee and internal auditor, disclosure to investors, and ownership parity. Controlled by firm age, debt/equity ratio, industry effects, sales growth.	Each individual sub index is statistically significant at the 1% or 5% level. The strongest results are for ownership parity, disclosure to investors, and shareholder rights, in that order.

CHAPTER THREE

METHODOLOGY

3.1   Research Design

Research design are strategies of enquiry. The *ex post facto* research design was chosen to evaluate the effect of sustainability disclosures on performance of non financial companies quotedin the Nigerian Stock Exchange. The justification for the ex post facto research design is because the research is conducted by analysising past events of already existing conditions (sustainability disclosures and performance). Hence the researcher have no control and cannot manipulate these variables.

3.2   Population of the study

The target population of this study consist of all the quoted non financial companies on the Nigerian Stock Exchange from 2006 to 2015. Only Nigerian companies were chosen for the study due to the fact that sustainability reporting at this developmental stage is voluntary and is influenced by national law, accounting traditions among other national differences (Deegan & Unerman, 2006). Thus the population of the study is the one hundred and twenty (122) non-financial companies quoted on the floor of the Nigerian Stock Exchange (NSE) as at 31st December, 2015. The current delisting of some companies did not take retrospective effect on the study.

3.3 Sample of the study

From the target population of the study, ninety-three (93) companies were systematically selected for a period of ten years from 2006 to 2015. The sample size represents 76% of the population. The sample size for this study were calculated using the estimation by Taro Yamane (1967) formulae as:

$$n = \frac{N}{1+N\,(e)^2} \qquad\qquad\qquad (3.1)$$

Where:

n= Sample size

N=Population size

e= Standard error (at 5%)

Thus,

$$n = \frac{122}{1+\ 122(0.05)^2}$$

$$n = \frac{122}{1+\ 122(0.0025)}$$

$$n = \frac{122}{1+\ 0.305}$$

$$n = \frac{122}{1.305}$$

$$n = 93$$

It is important to state here that we do not have 930 equal observations based on the sample as firms with incomplete data for a particular period were eliminated from the study. The data thus is cross sectional and unequal time series and is the justification for using pooled regression model. Firms under the Finanacial Services Sector: banks, insurance companies, and finance firms with several specific reporting requirements which are subject to different accounting standards and market regulations are not part of the population.

3.4 Sources of Data

There are multiple sources of data available for empirical analysis such as government agency, International agency like World Bank, private organisation and internet. This study used secondary

data that are disclosed in the annual report and website of the firms selected for the study covering a period of ten years from 2006 to 2015. On the other hand, data for corporate performance and company characteristics (dependent and control variables) were gathered from MachameRATIOS, a database maintained by TalkData Associates (www.machameRATIOS.com). TalkData now has a significant database of secondary data of Nigerian Quoted companies. This is similar to Thomson Reuters Asset4 database used by Ferrero-Ferrero, Fernández-Izquierdo, & Muñoz-Torres, 2016, Kinder, Lydenberger and Domini (KLD) database used by Hasan, Kobeissi, Liu, & Wang (2016). The database provides transparent, objective, auditable, comparable and systematic data, offering a comprehensive platform for establishing benchmarks for the assessment of corporate performance. The database is widely used by scholars to conduct large sample studies on Nigerian firms.

The data for the study is pooled in nature and involves pooling of observations on cross-section of units over several time periods that are not identically distributed and provides results that are simply not detectable in pure cross-sections or pure time-series studies. An observation in pooled data involves at least two dimensions; a cross-sectional dimension (number of units), indicated by subscript i and a time series dimension (time period), indicated by subscript t.

3.5 Method of Data Collection:

Sustainability disclosures involve a mix of quantitative, amount, intensity frequency and qualitative information. the study used content analysis in line with Nwobu, 2015; Hussain, 2015; Usman & Amran, 2015; Nguyen, et al. 2015; Behram 2015; Asaolu, Agboola, Ayoola, & Salawu, 2011; Reddy Gordon 2010 in extracting data from the annual report of the sampled firms. Michelon and Parbonetti (2012) cited in Hussain, (2015), emphasized that manual content analysis has been widely used to quantify sustainability disclosure. Content analysis has been defined as a method that can transform text descriptions into quantitative data in a systematic and objective manner (Berelson, 1952 cited in Behram 2015). The study adopted a conceptual content analysis based on detecting the presence or absence of information covering a number of different subject area and

specific amount consideration of sustainability measures disclosed in the annual reports of quoted firms in Nigeria. The binary value of "1" and "0" was assigned to qualitative information to convert them to quantities for the purpose of making logical inferences. This is in line with the study by Behram (2015).

We measure environmental disclosure with: environmental compliance policy, environmental sensitive products, environmental conservation/protection disclosure, environmental donations, and energy consuming assets. The measure is hybrid of the two authors Makori & Jagongo (2013) and Hawkamah & Ernst & Young (2014). Social disclosures was measured in line with Hawkamah and Ernst & Young, (2014) and Hřebíček, Štencl, Trenz, & Soukopová (2012) as social donation, disclosure of community social responsibility, disclosure of charitable/philanthropic gifts, disclosure of human resources and employee relations, job creation, investment in employee, disclosure of employee health, safely and welfare. We measure corporate governance in line with the measure developed by Hawkamah and Ernst & Young (2014) and Akhtaruddin, Hossain, Hossain, & Yao (2009) as board size, board independence, board gender diversity, board ownership, board audit committee size, board remuneration, and auditor's credibility. Principal Component Analysis was used to generate the composite index for environmental, social and corporate governance sustainability. We controlled for firm performance and partition sustainability disclosures by firm size, firm age and leverage. Doing so allows us to have more robust result.

3.6   Reliability and Validity of Data

The reliability (dependability) and validity (appropriateness) of data from annual report is guaranteed as financial statement follows a specified reporting rules before publication, audited by auditors appointed by shareholders, approved and submitted to various regulatory and oversight bodies. Firms that are quoted on the stock market are usually subjected to a set of standards and requirements established by the regulatory authorities (Behram, 2015). The fact that the financial statements are approved by the Securities and Exchange Commission (SEC), the Nigerian Stock Exchange (NSE) and the Central Bank of Nigeria (CBN) provides assurance to a large extent as to

the reliability of the data (Michael & Oluseye, 2014). It cannot be manipulated as the data for the study originated from the financial statement.

3.7 Model Specification

In an attempt to adequately and empirically analyze the effect of sustainability disclosures on performance of quotednon financial firms in Nigeria, the study formulated four different model from prior empirical work and perceived theoretical relationship among the variables to help in testing the hypotheses of the study.

Dependent Variable: Firm Performance measured by: Accounting based measure of firm performance -**Return on Assets** and Market based measure of firm performance – **Tobin's Q.** These complementary measures of performance allow us to comprehensively examine the relationship between sustainability disclosures and performance of firms during this period of increasing public concern for corporate scandals, economic recessions, environmental disasters issues as well as heightened investor scrutiny. Tobin's q incorporate how robust the market interprets a firm to be in the face of future sustainability legislation (reflects intangible measures of performance, like investor confidence), whereas ROA only acknowledges a firm's sustainability measures indirectly via the efficiency of its use in producing earnings (demonstrates how efficiently a firm generates profit per unit of production) (Busch & Hoffmann, 2011 cited in Delmas & Nairn-Birch, 2011).

Independent Variables:
Environmental Sustainability Indicators
Social Sustainability Indicators
Governance Sustainability Indicators
Sustainability Disclosure Indices (SDI)

Control Variables
Company size

Company age

Leverage

Assuming a linear relationship between the variables, the functional and econometric form of the models based on prior empirical work and perceived theoretical relationship among the variables are expressed as:

Model 1: Environmental Sustainability disclosures and Firm Performance

FinPerf = F (ENCOMPO, ENSPROD, ENVCONSD, ENVDO, ENGYCON, Controls) ….. (1)

$$ROA_{it} = \alpha_0 + \beta_1 ENCOMPO_{it} + \beta_2 ENSPROD_{it} + \beta_3 ENVCONSD_{it} + \beta_4 ENVDO_{it} + \beta_5 ENGYCON_{it} + \beta_6 FSIZE_{it} + \beta_7 FAGE_{it} + \beta_8 TLBTA_{it} + \varepsilon_{it} \quad (1a)$$

$$TOBIN_{it} = \alpha_0 + \beta_1 ENCOMPO_{it} + \beta_2 ENSPROD_{it} + \beta_3 ENVCONSD_{it} + \beta_4 EVRDO_{it} + \beta_5 ENGYCON_{it} + \beta_6 FSIZE_{it} + \beta_7 FAGE_{it} + \beta_8 TLBTA_{it} + \varepsilon_{it} \quad (1b)$$

$$ROA_{it} = \alpha_0 + \beta_1 ENVI + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 TLBTA_{it} + \varepsilon_{it} \quad (1c)$$

$$TOBINSQ_{it} = \alpha_0 + \beta_1 ENVI + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 TLBTA_{it} + \varepsilon_{it} \quad (1d)$$

Model 2: Social Sustainability and Performance

FinPerf = F (SOCDON, DISOCR, DISCGFT, HREMPR, JOBCR, INVTEMP, EHSWDIS, Controls)……….. (2)

$$ROA_{it} = \alpha_0 + \beta_1 SOCDON_{it} + \beta_2 DISOCR_{it} + \beta_3 DISCGFT_{it} + \beta_4 HREMPR_{it} + \beta_5 JOBCR_{it} + \beta_6 INVTEMP_{it} + \beta_7 EHSDIS_{it} + \beta_8 FSIZE_{it} + \beta_9 FAGE_{it} + \beta_{10} TLBTA_{it} + \varepsilon_{it} \quad (2a)$$

$$TOBIN_{it} = \alpha_0 + \beta_1 SOCDON_{it} + \beta_2 DISOCR_{it} + \beta_3 DISCGFT_{it} + \beta_4 HREMPL_{it} + \beta_5 JOBCR_{it} + \beta_6 INVTEMP_{it} + \beta_7 EHSDIS_{it} + \beta_8 FSIZE_{it} + \beta_9 FAGE_{it} + \beta_{10} TLBTA_{it} + \varepsilon_{it} \quad (2b)$$

$$ROA_{it} = \alpha_0 + \beta_1 SOCI + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 TLBTA_{it} + \varepsilon_{it} \quad (2c)$$

$$TOBINSQ_{it} = \alpha_0 + \beta_1 SOCI + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 TLBTA_{it} + \varepsilon_{it} \quad (2d)$$

Model 3: Corporate Governance Sustainability and Performance

FinPerf = F (BSIZE, BOIND, BOGD, DHOLD, ACSIZ, DCOST, AUDCRED, Controls) ……. (3)

$$ROA_{it} = \alpha_0 + \beta_1 BSIZE_{it} + \beta_2 BOIND_{it} + \beta_3 BOGD_{it} + \beta_4 DHOLD_{it} + \beta_5 ACSIZ_{it} + \beta_6 DCOST_{it} + \beta_7 AUDCRED_{it} + \beta_8 FSIZE_{it} + \beta_9 FAGE_{it} + \beta_{10} TLBTA_{it} + \varepsilon_{it} \quad (3a)$$

$$TOBIN_{it} = \alpha_0 + \beta_1 BSIZE_{it} + \beta_2 BOIND_{it} + \beta_3 BOGD_{it} + \beta_4 DHOLD_{it} + \beta_5 ACSIZ_{it} + \beta_6 DCOST_{it} + \beta_7 AUDCRED_{it} + \beta_8 FSIZE_{it} + \beta_9 FAGE_{it} + \beta_{10} TLBTA_{it} + \varepsilon_{it} \quad (3b)$$

$$ROA_{it} = \alpha_0 + \beta_1 GOVI + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 TLBTA_{it} + \varepsilon_{it} \quad (3c)$$

$$TOBINSQ_{it} = \alpha_0 + \beta_1 GOVI + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 TLBTA_{it} + \varepsilon_{it} \quad (3d)$$

Model 4: Aggregate Sustainability (ESG) and Performance

FinPerf = F (SDI, Controls) …………………………… (4)

$$ROA_{it} = \alpha_0 + \beta_1 SDI_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 TLBTA_{it} + \varepsilon_{it} \quad \text{(4a)}$$

$$TOBINSQ_{it} = \alpha_0 + \beta_1 SDI_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 TLBTA_{it} + \varepsilon_{it} \quad \text{(4b)}$$

3.8 Variables and measurement

Table 3.9.1 Variables and measurement

Variable	Code	Measurement	Apriori Sign
Dependent Variables			
Return on Asset	ROA	Profit after Tax/Total Asset	
Firm Value	TOBINS Q	(Market Value of Equity +Total Debt)/Total Asset (Bozec and Dia, 2015). It reflects the market's expectations of future earnings and thus a good proxy for firm value (Campbell & Mínguez-Vera, 2008)	
Independent Variables			
Environmental Sustainability Indicators			
Environmental Compliance Policy	ENCOMPO	Measured as dummy "1" for Disclosure of Environmental Compliance Policy and "0" otherwise.	+ve
Environmental Sensitive Products,	ENSPROD	Measured as dummy "1" for products with Emission and "0" otherwise	+ve
Environmental Conservative Disclosure	ENVCONSD	Measured as dummy "1" for Environmental Conservation disclosure and "0" otherwise.	+ve
Environmental Donation	ENVDO	Environmental Donation, Measured as dummy "1" for Report of Environmental related donations and "0" otherwise.	-ve
Energy consuming Assets,	ENGYCON	Measured as log of Plant and Machinery Assets Based on the view that major energy-consuming activities in Nigeria's industrial sector are extraction, refining, processing, delivery, lighting, and use of electrical appliances. These activities have widely varying amounts of greenhouse gases associated with them (Oyedepo 2012; Edeoja & Edeoja, 2015) and thus justifies the use of log of plant and machinery assets to represent energy consumed by a firm.	-ve
Environment Sustainability Principal Component	ENVI	Individual environmental sustainability disclosures were used to generate principal component analysis (PCA)	+ve
SOCIAL SUSTAINABLITY VARIABLES:			
Social Donations	SOCDON	Measured as Total Financial Social Donation/ Total Assets	-ve

Disclosure of Community Social Responsibility	DISOCR	Measured as dummy "1" for Reporting of Community Social Responsibility and "0" otherwise.	+ve
Disclosure of Charitable Gifts	DISCGFT	Measured as Dummy "1" for Reporting of Donation and Gifts and "0" otherwise.	+ve
Disclosure of Human Resources and Employee Relations Policies	HREMPR	Measured as dummy "1" for Reporting Human Resources and Employee Relations Policies and "0" otherwise	+ve
Job Creation	JOBCR	Measured as log of Number of Employee	-ve
Investment in Employees	INVEMP	Measured as log of Employee Cost	+ve
Disclosure of Employee Health, Safety and Welfare	EHSWDIS	Measured as dummy "1" for Reporting Health, Safety and Welfare and "0" otherwise.	+ve
Social Sustainability Principal Component	SOCI	Individual social sustainability disclosures were used to generate principal component analysis (PCA)	-ve

GOVERNANCE SUSTAINABLITY VARIABLES:

Board Size	BSIZE	Measured as Number of Board Members	+ve
Board Independence	BODIND	Proportion of non-executive directors to total directors	+ve
Board Gender Diversity	BOGD	Proportion of Female to Numbers of Directors	+ve
Board Ownership/ Directors Shareholding	DHOLD	Measured as Directors Shares/Outstanding Shares	+ve
Board Remuneration	DCOST	Measured as Directors cost/Total Asset	-ve
Audit Committee Size	ACSIZ	Measured as Number of Audit Committee Members	+ve
Auditors Credibility	AUDCRED	Measured as Dummy Variable of "1" if a firm is audited by one of the Big 4 otherwise "0"	-ve
Governance Sustainability Principal Component	GOVI	Individual corporate governance sustainability disclosures were used to generate principal component analysis (PCA)	+ve

AGGREGATE SUSTAINABILITY DISCLOSURES

Sustainability (ESG) Indices	SDI	Aggregate of Environment Sustainability Principal Component Index (ENVI), Social Substainablity Principal Component Index (SOCI), Corporate Governance Sustainability Principal Component Index (GOVI)	+ve

CONTROL VARIABLES:

Firm size	FSIZE	Measured as log of total Assets	+ve
Firm age	FAGE	Measured as Number of years quoted on the Nigerian Stock Exchange	-ve
Leverage	TLBTA	Measured as Total Liabilities divided by total assets	-ve

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3.9 Method of Data Analysis

To identify the possible environmental, social and corporate governance specific characteristics and exogenous factors that would affect firm's performance we conducted descriptive and inferential statistics.

Pooled ordinary least squares regression was used for analysis of the variables specified in the models because the data used for the work is pooled data. Ordinary Least Squares regression is the most common method used to fit a line to data (Brooks, 2008) and the use of pooled regression would avoid the problem aggregation bias and endogeneity problems. Pooled data consists of both time series and cross sectional component and the observation are not identically distributed (unequal or unbalanced data). An observation in pooled data involves at least two dimensions; a cross-sectional dimension (number of units), indicated by subscript i and a time series dimension (time period), indicated by subscript t. Multiple regression seeks to explain movements in a variable (dependent) by reference to movements in one or more other variables (independent). All hypotheses shall be tested at 0.05 significance level. All analyses, both descriptive and inferential statistics was done with the aid of Microsoft Excel and STATA 13.0 statistical software.

However, as a tool of analysis regression assumptions of normality of data, constant variance (homoscedasticity), collinearity and independence of residuals must be confirmed to ensure that inferences from the result will be valid. Hence checking the validity of these assumptions, the behaviour of data and adequacy of the model is an important step that must be observed. Thus we conducted the classical regression tests of normality, correlation analysis and some post estimation test of multicolinearity and the test for heteroscadasticity to confirm the assumptions. Details of the results are presented in the next chapter.

The estimation results would be evaluated based on the ssignificant contribution from each variable in the regression model (t-test) and overall statistical significance of the model (F-test). The goodness of fit of the model would be tested using the coefficient of determination (R^2).

<div align="center">

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

</div>

4.1   Data Presentation

The data used in this study comprises of specific company's sustainability disclosures which were agrregted for the purpose of analysis and are contained in Appendix II. It is important to emphasise here that this study evaluates the effect of sustainability disclosures on firm performance taking into account environmental, social and governance sustainability attributes by employing samples from quoted non financial companies in Nigeria between the periods of 2006–2015. In this study, environmental sustainability is measured by the variables of: Environmental Compliance Policy (ENCOMPO), Environmental Sensitive Products (ENSPROD), Environmental Conservative Disclosure (ENCONSD), Environmental Donations (ENVDO) and Energy consuming Assets (ENGYCON). Also, Social Sustainability is measured with the variables of: Social Donations (SOCDON), Disclosure of Community Social Responsibility (DISOCR), Disclosure of Charitable/Philanthropic Gifts (DISCGFT), Disclosure of Human Resources and Employee Relations (HREMPR), Job Creation (JOBCR), Investment in employee (INVEMP), and Disclosure of Employee Health, Safety and Welfare (EHSWDIS). Board Size (BSIZE), Board Independence (BOIND), Board Gender Diversity (BOGD), Board Ownership/Directors Share Holding (DHOLD), Audit Committee Size (ACSIZE), Board Remuneration/Directors Cost (DCOST) and Auditors Credibility (AUDCRED) were the variables used to capture Corporate Governance Sustainability. Firm Size (FSIZE), Firm Age (FAGE) and Leverage (TLBTA) were used as Control variables. Control variables help in controlling for other potential impact variables apart from the independent variables of the study. The result of analysis were presented using both descritptive and inferential statistics

4.1.1   Descriptive Statistics

The descriptive statistics for this study is divided into the environmental, social and governance dimension.

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Table 4.1: Descriptive Statistics for Environmental Sustainability Disclosures

</div>

```
 stats |    encompo    ensprod    ensonsd      envdo    engycon       ENVS
-------+------------------------------------------------------------------
  mean |   .5880361   .1444695   .0677201   .1275395   6.432077    1.31e-09
   p50 |          1          0          0          0       6.48   -.2848658
   min |          0          0          0          0       3.92   -2.295757
   max |          1          1          1          1       8.96    5.468668
    sd |   .4924666   .3517638   .2514069   .3337648   .8811275     1.32549
     N |        886        886        886        886        886         886
-------+------------------------------------------------------------------
```

Source: Extract from STATA Output

Table 4.1 shows the mean (average), maximum, minimum, standard deviation, and median for each of the environmental variables. The statistics showed that on the average, there is a fair level of

compliance to environmental policy among quoted companies in Nigeria. This is an indication from the mean value of (encompo) 58% which may be likely related to the fact that government policies on environmental sustainability are not mandatory, hence strict adherence is not in force. For the variable of environmental sensitive products, the statistics show that only a few firms in our sample of study produces environmental sensitive products hence we expect the volume of emission to be relatively low compared to countries where companies whose environmental sensitive products is in large quantities. This is supported by the mean value of environmental sensitive products (ensprod) 14%. Furthermore the statistics from the variable of environmental conservative disclosure (envconsd) 6% indicates a very low level of environmental conservation disclosure in Nigeria. Again this may align with the fact that there are no formal guidelines that require quoted companies in Nigeria to disclose environmental issues. As seen from the mean value of the variable of environmental donations (engycon=13%) from the descriptive statistics result, it reveals that reports of environmental related donations have been performed by only thirteen percent of quoted companies under consideration.

Table 4.2: Descriptive Statistics for Social Sustainability Disclosures

```
 stats |   socdon    disocr    discgft    hrempr     jobcr    invtemp     ehsdis       SOCI
-------+-----------------------------------------------------------------------------------
  mean |  .053544  .4288939  .9232506  .9875847  2.536321  .0296479   .986456  -8.69e-10
   p50 |    .0009         0         1         1      2.52      .022         1   .1977686
   min |        0         0         0         0       .66      -.02         0  -12.90239
   max |   9.7867         1         1         1      4.28      .288         1   .8771055
    sd | .3452238  .4951976  .2663438  .1107929  .5724079  .0326933  .1156533   1.439911
     N |      886       886       886       886       886       886       886        886
-------------------------------------------------------------------------------------------
```

Source: Extract from STATA Output

The statistics from table 4,2 reveals that on the average, and among the companies under review, quoted companies in Nigeria contributed only 5% of its ratio of total financial social donation to firm total asset into the pool of social donations (socdon) while the maximum donation rose to 78% during the period under review. Interestingly the result reveals that some companies did not make any donations. The variable of disclosure of community social responsibility (disocr) reveals that on the average 42% of the sampled firms disclosed its activities relating to corporate community social responsibility. This implies that 68% percent of these business entities do not follow best practice which may be seen as a failure on the path of corporate managers. Disclosure of donations and charity gifts is seen to be encouraged by almost all the firms under review. This is obtained from the mean value of (discgft) 92% and indicates that less than 10% of the sampled companies do not disclose such items in its financial statement. This result is pretty true since most organization employ this strategy as a medium of advertising a good public image (Adeneye & Ahmed, 2015; Stuebs & Sun, 2011). In disclosing information on human resources and employee relations the variable of (hrempr) 98% indicates that on the average only about 2% of the companies in this study do not disclose information concerning activities on human resources and employee relations in its reports. Meanwhile, the variable of Job Creation (jobcr) revealed a

minimum value of 0.66 with a maximum value of 4.28. However, the average value revealed by this variable stood at 2.52. The variable of investment in employee (invemp) showed an average value of 0.02 which is an indication that most of the companies in this study have a low input towards investing in its employees. Although some companies showed a 22% involvement to its employees' needs. This is obtained from the maximum value of the variable of investment in employee (invemp). From the descriptive statistics, information on employee health, safety and welfare is revealed to be disclosed by almost all the firm under consideration during the period of study. This is obtained from the variable statistic of (ehswdis) 98% noting that quoted companies in Nigeria are now beginning to show awareness towards the benefits of such disclosure in its annual reports.

Table 4.3: Descriptive Statistics for Corporate Governance Sustainability

stats	bsize	boind	bogd	dhold	acsiz	dcost	big4a	GOVI
mean	8.866817	.6423363	.0747856	16.50044	5.465011	2.703342	.5970655	-1.07e-09
p50	9	.67	.08	3.72	6	.2975	1	.19503
min	3	0	0	0	4	0	0	-7.989573
max	17	1.13	.4	123.58	7	495.342	1	2.80061
sd	2.431963	.164372	.0858043	23.1074	.8781178	30.36445	.4907648	1.27332
N	886	886	886	878	886	886	886	878

Source: Extract from STATA Output

The descriptive statistics show that the largest board in the sample during the period under review had seventeen (17) members, while on the average most of the companies had a board size of nine members which indicates that most of sampled companies have moderate Board

Size of 9. The variable of board independence reveals that 64% of the sampled firms had more independent directors than dependent directors in their board. This again is a good fit as this could mean that quoted firms in Nigeria do want to meet up with global best practice and consequently benefit from the inherent advantages. The statistics show that the ratio of female to male directors in the board is 7%. The statistics also show that some companies do not have any female representation in its board. This is relatively not a welcome development as this result does not align with global best practice need for twenty-first century firms to take competitive advantage of a diverse workplace (Sila, Gonzalez, & Hagendorff, 2016) ensuring that men and women have the same opportunities and be given the same possibilities to take leadership positions. It is indicative of the fact that there is less awareness of the importance of female participation in the board among quoted firms in Nigeria. This situation is below the European Commission's proposed law to improve the gender balance in Europe's company boardrooms, aiming for at least 40% female representation (European Commission, 2012). Also in the US, there is also a US-wide campaign that asks firms to pledge 20% female participation on board (Sila et al 2016). The maximum director shareholding (dhold) stood at 123.58 units, while its minimum holding lowered to 0 connoting that among the sampled companies and during the period of study some independent directors had no share of the companies they are directing. However the statistics showed that on the average most of the independent directors had its company's share to the tone of 16.5units.

The variable of Audit committee size (acsiz) indicated that 50% of the entire sampled companies had an audit committee size of 6 members with a least size of 4 members. The variable of board remuneration (dcost) showed a large variance between its averages (2.70) and its highest board remuneration of 495.34. This may be factored into the reasoning that all the companies are not the same in terms of size, profitability, and a host of other factors. In accounting for the variable of audit credibility (audcred), the statistics revealed that about 60% of the sampled firms employed the big audit firms. Therefore, just about 40% did not employ the services of big four audit firm during the period under review.

Table 4.4: Descriptive Statistics for Performance and Control Variables

stats	retoa	tobin	fsize	fage	tlbta
mean	3.08296	2.460158	6.894616	23.04402	74.07687
p50	4.06	1.37	6.87	25	59.54
min	-188.95	.05	4.84	1	-253.15
max	232.62	75.65	9.05	65	1797.72
sd	19.03013	4.924098	.7785661	13.23816	135.6332
N	885	885	886	886	883

Source: Extract from STATA Output

The descriptive statistics showed that on the average both performance indicators of return on asset (retoa) and tobin q (tobin) experienced positive values. This indicates that on the average firms' manager/agent ability to convert company's assets into profits both for stakeholder and shareholders is positive among quoted companies and during the period of analysis. The statistics showed that the variable of firm size (fsize) revealed a mean value of 6.89, a minimum value of 4.84 and a maximum value of 9.05. The value of its standard deviation is 0.77 which shows that all the studied firms are not the same in size, indicative of the fact that the data set consists of a mixture of large, medium and small firms. The average age (fage) of the sampled firms is 25yrs, while the oldest firm in the sample is 65yrs.

4.1.2 Normality Test

This section present the normality test result of all the variables of interest. It is one of the most important assumptions of regression analysis that must be confirmed. The skewness/kurtosis statistic test determine if the data series were normally distributed by evaluating the disparity of the skewness as well as the kurtosis of the series compared with those from the normal distribution. Normality is needed for tests of significance and construction of confidence interval estimates of the parameters and whether the sample data have the skewness (asymmetry) and kurtosis (tendency) matching a normal distribution. If the residual is normally distributed, then the histogram must be well shaped. In that case, a series would be normally distributed if the probability of the statistic is less than 5% which is 0.05. However, if the data set is not normal, then these tests could have a high chance of false positives.

Table 4.5: Normality Test

```
                 Skewness/Kurtosis tests for Normality
                                               ------- joint ------
    Variable |    Obs    Pr(Skewness)   Pr(Kurtosis)  adj chi2(2)    Prob>chi2
-------------+-------------------------------------------------------------------
      retoa |    885     0.0000         0.0000           .           0.0000
      tobin |    885     0.0000         0.0000           .           0.0000
    encompo |    886     0.0000            .             .              .
    ensprod |    886     0.0000         0.0000           .           0.0000
    enconsd |    886     0.0000         0.0000           .           0.0000
      evrdo |    886     0.0000         0.0000           .           0.0000
    engycon |    886     0.2357         0.6234         1.65          0.0383
     socdon |    886     0.0000         0.0000           .              .
      disocr |    886     0.0006            .             .              .
    discgft |    886     0.0000         0.0000           .           0.0000
      hrempr |    886     0.0000         0.0000           .           0.0000
       jobcr |    886     0.0504         0.1508         5.88          0.0530
    lnvtemp |    886     0.0000         0.0000           .           0.0000
      ehsdis |    886     0.0000         0.0000           .           0.0000
       bsize |    886     0.0000         0.8178        23.12          0.0000
       boind |    886     0.0000         0.0937        24.96          0.0000
       bogd |    886     0.0000         0.0053           .           0.0000
      dhold |    878     0.0000         0.0000           .           0.0000
      acsiz |    886     0.0000         0.0000           .           0.0000
      dcost |    886     0.0000         0.0000           .              .
    audcred |    886     0.0000            .             .              .
       fsize |    886     0.5810         0.1850         2.06          0.3565
       fage |    886     0.2637         0.0000        70.70          0.0000
      tlbta |    883     0.0000         0.0000           .           0.0000
       ENVI |    886     0.0000         0.0000           .           0.0000
       SOCI |    886     0.0000         0.0000           .           0.0000
       GOVI |    878     0.0000         0.0000           .           0.0000
```

Source: Extract from STATA Output

The above result reveals that all the variables of interest are normally distributed and satisfies the test of significance at 1% level of significance except for the variables of firm size, which did not pass even at 10%. However, this situation may be overlooked since it is a control variable. Overall, the statistics revealed that there is no sample selection bias or outlier in the data that would impair the generalization from this study.

4.1.3   Correlation Analysis

Correlation analysis is a method of statistical evaluation used to study the strength of a relationship between two, numerically measured, continuous variables. This particular type of analysis is useful when a researcher wants to establish if there are possible connections between variables. It is often misunderstood that correlation analysis determines cause and effect; however, this is not the case because other variables that are not present in the research may have impacted on the results.

If correlation is found between two variables it means that when there is a systematic change in one variable, there is also a systematic change in the other; the variables alter together over a certain period of time. If there is correlation found, depending upon the numerical values measured, this can be either positive or negative**.** Measures degree of linear association between two variables,

If there is correlation between two numerical sets of data, positive or negative, the coefficient worked out can allow prediction of future trends between the two variables. However, it cannot be 100% sure that the prediction will be correct because correlation does not determine cause or effect.

Table 4.6: Correlation Analysis

	retoa	tobin	encompo	ensprod	encosd	evrdo	engcon	socdon	disocr	discgft	hrempr	jobcr
retoa	1.0000											
tobin	-0.1942	1.0000										
encompo	0.0911	0.1340	1.0000									
ensprod	0.0700	0.0011	0.1114	1.0000								
enconsd	0.0818	-0.0012	0.0706	0.3394	1.0000							
evrdo	0.0544	0.0666	0.0058	0.1506	0.1987	1.0000						
engycon	0.1431	-0.0825	0.2341	0.1594	0.2975	0.2256	1.0000					
socdon	0.0316	0.0132	0.0521	-0.0169	-0.0019	0.0043	0.0138	1.0000				
disocr	-0.0081	0.0769	0.0555	0.3690	0.2131	0.1702	0.1895	-0.0205	1.0000			
discgft	0.0437	0.0218	-0.0311	0.0939	0.0783	0.1089	0.1012	0.0362	0.0409	1.0000		
hrempr	0.0786	0.0260	-0.0462	0.0442	0.0292	0.0407	-0.0034	0.0138	0.0714	0.2116	1.0000	
jobcr	0.2160	0.1118	0.1430	0.1062	0.1750	0.1621	0.6548	0.0147	0.1687	0.0004	-0.0518	1.0000
invtemp	-0.2455	-0.0771	-0.1192	-0.1200	-0.0647	-0.0075	0.0195	-0.0058	-0.1050	0.0015	0.0006	-0.0251
ehsdis	0.0718	0.0264	-0.0527	0.0464	0.0307	0.0427	-0.0084	0.0143	0.0770	0.1989	0.9529	-0.0390
bsize	0.0984	0.0107	0.1058	0.1788	0.1787	0.1623	0.4602	0.0824	0.1918	0.0474	0.0160	0.4073
boind	-0.0234	-0.0238	-0.0024	-0.0094	0.0537	0.0229	0.0223	-0.0208	-0.0242	0.0194	0.0453	0.0301
bogd	0.1221	-0.0268	-0.1133	0.0475	0.1520	0.0588	0.0582	0.0262	0.0287	0.0715	0.0150	-0.0065
dhold	-0.2211	0.1725	-0.0886	-0.2275	-0.0478	-0.1490	-0.2837	-0.0154	-0.0570	-0.0662	-0.0286	-0.2224
acsiz	0.0929	0.1076	-0.0585	0.0845	0.1644	0.2286	0.2699	0.0206	0.1163	0.0913	0.1318	0.2416
dcost	-0.4446	0.4028	0.0581	-0.0296	-0.0210	-0.0275	-0.1365	-0.0085	0.0746	0.0177	0.0086	-0.1108
audcred	0.0927	-0.0553	0.0202	0.1316	0.1125	0.0138	0.2196	-0.0513	0.0793	-0.0177	-0.0007	0.2280
fsize	0.1929	-0.1474	0.1279	0.1623	0.2886	0.2251	0.9048	-0.0153	0.1908	0.0852	-0.0103	0.6751
fage	0.0418	-0.0478	-0.0392	0.2280	0.1072	0.1668	0.0299	-0.0566	0.1131	-0.0050	-0.1780	0.0589
tlbta	-0.4426	0.6440	0.0789	-0.0395	-0.0336	-0.0305	-0.1840	-0.0208	0.1068	0.0267	-0.0042	-0.1644
ENVI	0.1487	0.0164	0.3771	0.6191	0.7130	0.5122	0.6794	0.0112	0.3510	0.1288	0.0279	0.4394
SOCI	0.0713	0.0389	-0.0530	0.0851	0.0538	0.0687	0.0065	0.0375	0.1451	0.4068	0.9647	-0.0657
GOVI	0.3130	-0.1601	0.0364	0.2427	0.1982	0.2203	0.4856	0.0277	0.1356	0.0762	0.0687	0.4218

	invtemp	ehsdis	bsize	boind	bogd	dhold	acsiz	dcost	audcred	fsize	fage	tlbta
invtemp	1.0000											
ehsdis	0.0093	1.0000										
bsize	-0.0087	0.0275	1.0000									
boind	-0.0706	0.0521	0.1455	1.0000								
bogd	-0.0140	0.0029	0.0380	-0.0237	1.0000							
dhold	0.0093	-0.0200	-0.1705	-0.0857	0.0240	1.0000						
acsiz	-0.0998	0.1313	0.2392	0.0624	0.0864	-0.1965	1.0000					
dcost	-0.0480	0.0089	-0.0830	0.0092	-0.0596	0.2477	0.0392	1.0000				
audcred	0.0335	-0.0091	0.0182	-0.0822	0.0615	-0.2666	0.1354	-0.0872	1.0000			
fsize	-0.0249	-0.0208	0.4491	-0.0314	0.0736	-0.3011	0.3149	-0.1911	0.3205	1.0000		
fage	0.0339	-0.1869	0.0697	0.0253	-0.0042	-0.3084	0.1028	-0.0333	0.2735	0.0486	1.0000	
tlbta	0.0053	-0.0038	-0.0954	-0.0463	-0.0911	0.3193	0.0481	0.6674	-0.0948	-0.2455	0.0165	1.0000
ENVI	-0.0890	0.0265	0.3832	0.0332	0.0933	-0.2715	0.2543	-0.0671	0.1852	0.6168	0.1751	-0.0903
SOCI	-0.0005	0.9620	0.0313	0.0462	0.0263	-0.0331	0.1423	0.0212	-0.0116	-0.0071	-0.1663	0.0153
GOVI	-0.0294	0.0656	0.5422	0.2006	0.1490	-0.7288	0.5647	-0.4083	0.4982	0.5450	0.2933	-0.3695

	ENVS	SOCI	GOVI
ENVS	1.0000		
SOCI	0.1627	1.0000	
GOVI	0.4252	0.0741	1.0000

Source: Extract from STATA Output

Correlation analysis on Table 4.6 above among other things showed that all the independent variable of interest showed a positive correlation with the variable of encosd except for the variable of socdon (-0.0019), invtemp (-0.0647), dhold (-0.0478), dcost (-0.0210) and the variable of tlbta (-0.0336). The correlation result reveal that the variable of evrdo correlated positively with all variables of interest except for the variables of invtemp (-0.0075), dhold (-0.14900, dcost (-0.2750) and the control variable of tlbta (-0.0305).

Again the independent variable of ensprod showed low association coefficient with socdon (-0.0169), invtemp (-0.1200) boind (0.0094), dhold, (-0.2275), dcost (0.0296) and tlbta (-0.0395). Again negative correlation appeared with the independent variables of corporate governance.

The variable of encompo did not show strong association with any of the independent variables employed in the study. However, it showed negative correlation with independent variables of discgft (-0.0311), hrempr (-0.0462), invtemp (-0.1192), ehsdis, (-0.0527), boind (-0.0024), bogd (-0.1133), dhold (-0.0585), acsiz (-0.0585) and with the control variable of fage (-0.0392). From the correlation result table, we observed that the variable of encompo showed more negative correlation with corporate governance and social variables than any of environmental sustainability variables.

A negative correlation appeared between the independent variables of engcon, and hrempr (0.0034), ehsdis (-0.0084), dhold (-0.2837), dcost (-0.1365) and tlbta (-0.0208). Of note, this explanatory variable of engcon, did not show any negative correlation with environmental sustainability explanatory variables'.

The result shows that three variables' of invtemp, boind and dhold showed a negative association with disocr, -0.1050, -0.0242, and -0.0570 respectively. Clearly, none of the variables showed a high positive association hence there will be no consequences of autocorrelation in the regression result. A shocking revelation from this statistics shows that the variable of audit committee size (acsiz) showed positive association with the variables of dcost (0.0392) audcred (0.1354) fsize (0.3949), fage (0.1028), tlbta (0.0481), ENVI (0.2543), SOCI (0.0331) and GOVI (0.4252).

Finally, the correlation statistics revealed that none of the sustainability index score of ENVI, SOCI and GOVI showed a negative correlation with each other. While ENVI correlated with SOCI to the magnitude of 16%, ENVI associated with GOVI to the magnitude of 45% and SOCI correlated with GOVI only to the magnitude of 7%.

4.2   Regression Results for the Specific Environmental, Social and Governance Disclosures

In this section the regression results for each of the specific Environmental, Social and Governance disclosures as extracted from the annual reports were presented. It is important to note that these specific disclosures results were used to determine the index for each of the dimensions of sustainability

through Principal Component Analysis. Thus test of hypotheses in the next section was based on environmental sustainability index, social sustainability index, governance sustainability index derived from these specific disclosures. The summation of theses three index values gave the cumulative sustainability index used for hypothesis four.

4.2.1 Environmental Substainablity Regression Analysis

This section presents the results from environmental sustainability disclosures link to accounting and market based performance measure. To find an equation that describes or summarizes the relationships in our set of data and to examine the cause-effect relationships between the dependent variables (return on asset and Tobins q) and the independent variables of environmental compliance policy, environmental sensitive products, environmental conservative disclosure, environmental donation reporting and energy consuming assets we employ the ordinary least square regression technique to test the hypothesis that environmental sustainability indicators are not statistically significant in influencing companies' financial performance in Nigeria. According to Montgomery (1985), a researcher may have a theoretical relationship in mind, and the regression analysis will confirm this theory and ultimately provide magnitudes and signs of the coefficients.

4.2.1a Accounting Performance and Environmental Sustainability Model

The pooled regression results for examining the cause effect relationship between corporate accounting performance variables and environmental sustainability in Nigerian Quoted Companies over the period of study is presented in the table below. The pooled regression results are based on the assumptions that the sampled companies in this study are homogeneous and it does not incorporate the difference in the sampled firms in the estimation of our coefficients.

Table 4.7: Accounting Performance and Specific Environmental Sustainability for Model 1

Independent Variables	Coef.	t-Stat	P>/t/
encompo	5.203	4.24	0.000***
ensprod	0.501	0.28	0.776
enconsd	2.945	1.18	0.238
envdo	0.879	0.49	0.624
engycon	-3.886	-2.42	0.016*
fsize	5.240	2.93	0.004*
fage	0.056	1.26	0.207
tlbta	0.067	13.88	0.000***
F – Stat	**28.19**		0.000***
R-squared	**0.225**		
Adjusted R-squared	**0.217**		

Source: Extract from STATA Output

Where *, *, implies statistical significance at 05% and 1% levels respectively.**

In the table above, we observed from the OLS pooled regression that the adjusted R-squared value of 0.22 shows that about 22% of the systematic variations in firms' performance in the pooled companies over the period of interest was jointly explained by the independent variables. This implies that

environmental sustainability in Nigeria cannot be 100 percent explained by independent and control variables used in this study. The F-statistic value of 28.19 and its associated P-value of 0.000 shows that the OLS Pooled regression model on the overall is statistically significant at 1% level, this means that the coefficients of the independent variables are statistically different from zero.

Table 4.8: HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST FOR MODEL 1

Mean VIF	2.21
Heteroscedasticity Test (P>chi2)	0.30

Source: Extract from STATA Output

The table above shows the result obtained from the variance inflation factor analysis and also the test for heteroscedasticity. Here the mean VIF value of 2.21 which is less than the benchmark value of 10 indicates the absence of multicolinearity (Kehinde & Osifo, 2017). The probability value of 0.30 resulting from Breusch-Pagan/Cook-Weisberg test for heteroscedasticity implies that the data is free from the presence of unequal variance.

FIRM SIZE (fsize) have a positive influence on firm financial performance. Much concern should be placed on it since it was statistically significant in influencing firm financial performance in a model which comprises of environmental sustainability variables of quoted companies in Nigeria. In other words larger firms produce better performance in terms of return on total asset. This result negates the null hypothesis of no significant relationship between firm size and accounting performance variable of return on total assets. This is evident from the slope coefficient of 5.24 with a P-value of 0.004 significant at 5% level. This empirical evidence coincides with previous findings of Isa (2014), Frias-Accituno et al (2012), Effiok et al (2013), Latridis (2013), Uwuigbe (2012), and Freedman & Patten (2004).

Firm Age (AGE) showed a positive (coefficient of 0.056) and statistically insignificant (P-value of 0.207) relationship with firm accounting financial performance variable of return on total assets. This mean that the age of a firm does not necessarily guarantee a better performance in terms of firm financial performance. Much concern may not be assigned to this variable as it appeared to be insignificantly related to the dependent variable of return on total assets (retoa). Therefore, this result aligns with results of previous empirical studies of Gull, Saeed and Abid (2013).

With respect to the variable of *LEVERAGE* (tlbta = 0.605), its impact on firm financial performance among quoted companies in Nigeria is positive and statistically significant at 1%. The t-value showed 13.88 while its P-value is 0.000. In this model, result reveals that as financial leverage which shows the degree of proportion of external capital and internal capital used to finance the company's assets increases, firm financial performance among quoted companies in Nigeria will significantly increase.

This result is in line with the findings of Ng & Rezaee (2014); Khatab et al (2011) but negates the empirical work of Mulyadi & Anwar (2012).

4.2.1b Market Performance and Environmental Sustainability Model

The pooled regression results for examining the relationship between market performance variable and environmental sustainability in Nigerian Quoted Companies over the period of study is presented in the table below. The pooled regression results are based on the assumptions that the sampled companies in this study are homogeneous and it does not incorporate the difference in the sampled firms in the estimation of our coefficients.

Table 4.9: Market Performance and Environmental Sustainability for Model 1

Independent Variables	Coef.	t-Stat	P>/t/
encompo	0.687	2.54	0.011***
ensprod	0.322	0.83	0.408
enconsd	0.032	0.06	0.954
envdo	1.353	3.44	0.001*
engycon	0.455	1.29	0.199
fsize	-0.614	-1.55	0.121
fage	-0.026	-2.71	0.007*
tlbta	0.023	23.92	0.000***
F – Stat	**74.55**		0.000***
R-squared	**0.435**		
Adjusted R-squared	**0.429**		

Source: Extract from STATA Output

Where *, *, implies statistical significance at 05% and 1% levels respectively**

In the table above, we observed from the OLS pooled regression that the adjusted R-squared value of 0.43 shows that about 43% of the systematic variations in market performance variable of tobin q of the pooled companies over the period of interest was jointly explained by the independent variables. This implies that firm performance in Nigeria cannot be completely explained by all the variables employed in this study. The F-statistic value of 74.55 and its associated P-value of 0.000 shows that the OLS Pooled regression model on the overall is statistically significant at 1% level, which connote that the coefficients of the independent variables are statistically different from zero.

Table: 4.10 HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST ACCOUNTING

Mean VIF	2.21
Heteroscedasticity Test (P>chi2)	0.41

Source: Extract from STATA Output

Table 4.9 above shows the result obtained from the variance inflation factor analysis and also the test for heteroscedasticity. Here the mean VIF value of 2.21 which is less than the bench mark value of 10 indicates the absence of multicolinearity. And the probability value of 0.41 resulting from the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity implies that the data is free from the presence of unequal variance.

In this study, the control variable of **FIRM SIZE** (fsize) have a negative relationship with firm market performance. In this case, much emphasis should not be assigned on it since it is statistically insignificant in influencing firm market performance in a model which comprises of environmental sustainability variables of quoted companies in Nigeria. In other words larger firms produce lesser performance in terms of market based performance measure. This finding is in sharp contrasts with the findings obtained from the model of firm accounting performance variable of return on total asset. This result supports the null hypothesis of no significant relationship between firm size and market performance variable of Tobin's q. This evidence is an outcome from the slope coefficient of -0.614 with a P-value of 0.121. This empirical evidence supports previous findings of Gherghina, Vintila and Dobrescu (2015) but negates that of Carter, Simkins and Simpson (2003)

Firm Age (fage) showed a negative (-0.027) and statistically significant (0.007) relationship with firm market performance variable of tobin q. This implies that as the firm advances in its listing age, performance rate of its market value declines significantly. This again is in sharp contrasts with the result obtained from accounting performance model of return on firm total assets. Much concern should be assigned to this variable as it appears to be significantly related to the dependent variable of tobin q. Therefore, this finding lends credence to the findings of previous empirical studies Albuquerque, Durnev and Koskinen (2013) and Black, Jang and Kim (2003).

With respect to the variable of **_LEVERAGE_** (tlbta = 0.023), it have a positive influence on firm market performance and is statistically significant at 1%. The t-value showed 23.92 while its P-value is 0.000. From this model, the result reveals that as financial leverage which shows the degree of proportion of external capital and internal capital used to finance the company's assets increases, firm market performance of tobin q, among quoted companies in Nigeria will significantly increase. This finding agrees with the finding obtained from firm accounting performance model of return on firm total assets in relation to sign. This result is in line with the findings of Khatab, Masood, Zaman, Saleem and Saeed (2011) though it negates the findings of Fallatah and Dickens (2012).

4.2.2   Social Susstainablity Regression Analysis

This section present the results from social sustainability disclosures of social donations, Disclosure of Community, Social Responsibility, disclosure of donations and charity gifts, disclosure of human resources and employee relations, Job Creations, investment in employee, disclosure of health, safety and welfare to accounting and market based performance measures.

4.2.2a Accounting Performance and Social Sustainability Regression Model

Accounting Performance and Social Sustainability Regression results examine how the variables of social sustainability disclosures with our control variables of firm size, firm age and firm leverage effect

on companies' return on total assets. The general hypothesis of this model is that social sustainability indicators are not statistically significant in influencing companies' financial performance in Nigeria. The results obtained are presented in the table below.

Table 4.11: Accounting Performance and Social Sustainability Regression Model

Independent Variables	Coef.	t-Stat	P>/t/
socdon	1.051	0.67	0.006***
disocr	-0.989	0.85	0.393
discgft	2.871	1.36	0.176
hrempr	19.477	1.14	0.253
jobcr	5.520	4.20	0.000***
invemp	-142.524	-8.50	0.000***
ehswdis	-2.543	-0.16	0.876
fsize	-0.628	-0.64	0.523
fage	0.098	2.32	0.021*
tlbta	-0.058	-14.01	0.000***
F - Stat	35.45		0.000***
R-squared	0.289		
Adjusted R-squared	0.281		

Source: Extract from STATA Output

Where *, *, implies statistical significance at 05% and 1% levels respectively**

Following table above, the specific findings from the explanatory variable and each control variable from the regression model is provided as followings: We observed that the regression results shows that the R-squared and adjusted R-squared values were (0.29) and (0.28). This indicates that all the independent variables jointly explains about 28% of the systematic variations in the performance of return on total assets (rotoa) across the quoted sample in this study and over the period under review. This means that regression models that includes the sustainability indicators of social donations, disclosure of community, social responsibility, disclosure of donations and charity gifts, disclosure of human resources and employee relations, Job Creations, investment in employee and disclosure of health, safety and welfare did not completely explain the behavior of accounting performance variable of return on total asset. The F-statistics (35.45) and its p-value (0.00) show that the ROA regression model is generally significant at 1% levels and its coefficients may be adopted for policy purposes.

Table 4.12 HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST ACCOUNTING

Mean VIF	3.43
Heteroscedasticity Test (P>chi2)	0.41

Source: Extract from STATA Output

Table 4.11 above shows the result obtained from the variance inflation factor analysis and also the test for heteroscedasticity. Here the mean VIF value of 3.43 which is less than the bench mark value of 10 indicates the absence of multicolinearity. And the probability value of 0.41 resulting from the Breusch-

Pagan/Cook-Weisberg test for heteroscedasticity implies that the data is free from the presence of unequal variance.

In this study, the control variable of **FIRM SIZE** (fsize -0.628) have a negative relationship with firm accounting performance. In this case, much emphasis should not be assigned on it since it is statistically insignificant in influencing firm accounting performance in a model which comprises of social sustainability variables of quoted companies in Nigeria. In other words larger firms produce lesser performance in terms of return on firms' total assets. This finding is consistent with the findings obtained from the model of firm market performance and environmental sustainability variables. This result supports the null hypothesis of no significant relationship between firm size and accounting performance variable of return on total assets. This evidence is an outcome from the P-value of 0.523 and t-stat of -0.64. This empirical evidence supports previous findings of Xie (2015), Simionescu & Gherghina (2014).

Firm Age (AGE) showed a positive (0.098) and statistically significant (0.021) relationship with accounting financial performance variable of return on total assets. This implies that as the firm advances in its listing age, financial performance rate of return on total assets improves significantly.

With respect to the variable of **LEVERAGE** (tlbta = -0.058), it have a negative influence on firm accounting financial performance and is statistically significant at 1%. The t-value showed -14.01 while its P-value is 0.000. The results suggest that as financial leverage which describes the degree of proportion of external capital and internal capital used to finance the company's assets increases, firm accounting financial performance of return on total assets, among quoted companies in Nigeria will significantly deplete. This finding agrees with the finding obtained from firm accounting performance and environmental sustainability model of return on firm total assets in relation to sign. This result is in line with the findings of Mulyadi & Anwar (2012), Manchiraju & Rajgopal (2015), Calace (2013).

4.2.2b   Market Performance and Social Sustainability Regression Model

Market Performance and Social Sustainability Regression results examine how the variables of social donations, Disclosure of Community, Social Responsibility, disclosure of donations and charity gifts, disclosure of human resources and employee relations, Job Creations, investment in employee, disclosure of health, safety and welfare with our control variables of firm size, firm age and firm leverage effect on companies' Tobins q. The general hypothesis of this model is that social sustainability indicators are not statistically significant in influencing companies' financial performance in Nigeria. The results obtained are presented in the table below

Table 4.13: Market Performance and Social Sustainability Regression Model

Independent Variables	Coef.	t-Stat	P>/t/
socdon	.3425	0.93	0.051*
disocr	.0246	0.09	0.927
discgft	-.0614	-0.12	0.901
hrempr	.0554	0,01	0.989
jobcr	.1822	0.60	0.001***
invemp	11.819	3.03	0.003*
ehswdis	.8269	0.22	0.827
fsize	.1621	0.71	0.478
fage	-.0186	-1.89	0.051*
tlbta	.0235	24.12	0.000***
F - Stat	64.50		0.000***
R-squared	0.425		
Adjusted R-squared	0.418		

Source: Extract from STATA Output

Where *, *, implies statistical significance at 05% and 1% levels respectively**

From table 4.12 above, we observed from the OLS pooled regression that the R-squared and adjusted R-squared values of 0.42 and 0.41 shows that about 41% of the systematic variations in market performance variable of tobins q of the pooled companies over the period of interest was jointly explained by the independent variables. This implies that firm performance in Nigeria cannot be completely explained by all the explanatory variables employed in this study. Thus about 59% causes of variations in the model is left to other variables outside the explanatory variables used and this requires inclusion of more social sustainability variables that affect corporate performance. The F-statistic value of 64.50 and its associated P-value of 0.000 shows that the OLS Pooled regression model on the overall is statistically significant at 1% level, which connote that the coefficients of the independent variables are statistically different from zero and may be adopted for policy purposes.

Table 4.14: HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST ACCOUNTING

Mean VIF	3.43
Heteroscedasticity Test (P>chi2)	0.52

Source: Extract from STATA Output

Table 4.13 above shows the result obtained from the variance inflation factor analysis and also the test for heteroscedasticity. Here the mean VIF value of 3.43 which is less than the bench mark value of 10 indicates the absence of multicolinearity. And the probability value of 0.41 resulting from the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity implies that the data is free from the presence of unequal variance.

In this study, the variable of **FIRM SIZE** (fsize .1621) have a positive effect on corporate performance measured by tobins q. In this case, much emphasis should be not assigned on it since it is statistically insignificant in influencing firm accounting performance with P-value of 0.478 which is greater than the 5% benchmark for this study.

Firm Age (fage) showed a negative (**-.0186**) and statistically significant (0.051) effect on accounting based performance measureof tobins q. This implies that as the firm advances in its listing age, market performance reduce significantly. This is in sharp contrast with result obtained from accounting performance model of social sustainability. Much concern should be assigned to this variable as it appears to be significantly related to the dependent variable of tobins q.

The variable of **LEVERAGE** has a positive and statistically significant effect on accounting financial performance among quoted companies in Nigeria. This is confirmed by coefficient of .**0235** and P-value of 0.000. In this case, much emphasis should be assigned to financial leverage which describes the degree of proportion of external capital and internal capital used to finance the company's assets since it is statistically significant in influencing firm accounting performance

4.2.3   Corporate Governance Sustainablity Regression Analysis

This section present the results from corporate governance sustainability indicators of board size, board independence, board gender diversity, directors' shareholding, audit committee size, directors' remuneration, audit credibility, and control variables of firm size, firm age, and leverage, to accounting and market based performance measures.

4.2.3a Accounting Performance and Corporate Governance Sustainability Regression Model

Accounting Based Performance Measure and Corporate Governance Sustainability Regression results examines how the variables of corporate governance sustainability indicators of board size, board independence, board gender diversity, directors' shareholding, audit committee size, directors' remuneration, auditors credibility, and control variables of firm size, firm age, and leverage influences companies' return on total assets. The overall hypothesis of this model is that corporate governance sustainability indicators are not statistically significant in influencing companies' financial performance in Nigeria. The results obtained are presented in the table below.

Table 4.15: **Accounting Performance and Corporate Governance Sustainability Regression Model**

Independent Variables	Coef.	t-Stat	P>/t/
bsize	0.120	0.45	0.053*
boind	-4.931	-1.40	0.003***
bogd	16.444	2.48	0.013***
dhold	-0.044	-1.55	0.122
acsiz	1.925	2.76	0.006***
dcost	-0.163	-6.61	0.000***
audcred	0.087	0.07	0.006***
fsize	0.632	0.69	0.493
fage	0.015	0.32	0.746
tlbta	-0.034	-5.88	0.000***
F – Stat	30.42		0.000***
R-squared	**0.260**		
Adjusted R-squared	**0.252**		

Source: Extract from STATA Output

Where *, *, implies statistical significance at 05% and 1% levels respectively**

Based on the result from the table 4.14 above, the specific finding from the explanatory variables and each control variable from the regression model is provided as followings:

We observed that the regression results show that the R-squared and adjusted R-squared values were (0.26) and (0.25). This suggest that all the explanatory variables jointly explains about 25% of the systematic variations in the performance of return on total assets across the quoted sample in this study and over the period under consideration. This means that regression models that include corporate governance indicators of board size, board independence, board gender diversity, directors' shareholding, audit committee size, directors' remuneration, auditors credibility, and control variables of firm size, firm age, and leverage, may not be completely appropriate in explaining the behavior of accounting performance variable of return on total assets. Other variables outside the explanatory variables used in this study need to be included in the social sustainability model. The F-statistics (30.42) and its p-value (0.00) show that the accounting regression model is generally significant at 1% levels and its coefficients may be adopted for policy purposes.

Table 4.16: HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST

Mean VIF	**1.39**
Heteroscedasticity Test (P>chi2)	**0.40**

Source: Extract from STATA Output

The table above shows the result obtained from the variance inflation factor analysis and also the test for heteroscedasticity. From the result above, the mean VIF value of 1.39 which is less than the bench mark value of 10 indicates the absence of multicolinearity. Also, the probability value of 0.45 resulting from the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity implies that the data is free from the presence of unequal variance.

For the control variable of **Firm Size (fsize)** the results discover a positive relationship with firm accounting performance of return on assets. (Coeff.0.632). However the relationship is not significant as its P-value is greater than 5% benchmark adopted in this study. (P-value = 0.493). These finding follows previous empirical result of Tornyeva & Wereko (2012), Okougbo (2011), but disagree with the results of Gull et al (2013).

Firm Age (fage) showed a positive (0.015) and statistically insignificant (P-value = 0.746) effect on firm financial performance measured by return on total assets. This implies that as a firm grows in its listing age, financial performance rate of return on total assets improves but at an insignificant rate. This result is consistent with the postulation that older firms can acquire experience based economies and mitigate the liabilities of newness. However, less concern should be given to this position as it appears to be insignificantly related to the dependent variable of return on assets. This finding negates the empirical findings of Gull et al (2013).

With respect to the variable of **LEVERAGE** (tlbta = -0.034), its effect on financial performance among quoted companies in Nigeria is negative and the influence is statistically significant at 1%. The P-value of 0.000 confirms that. From this analysis it can be seen that an increase in financial leverage decreases firm financial performance among quoted companies in Nigeria during the period under consideration. This finding agrees with the finding obtained from firm accounting performance and social sustainability model of return on firm total assets in relation to level of significance and sign. This result is in line with the findings of Calace (2015, Fallatah & Dickins (2012), but do not agree with the findings of Khatab et al (2011).

4..2.3b Market Based Performance Measure and Corporate Governance Sustainability Regression Model

In this model, the regression results examines how the variables of corporate governance sustainability disclosures of board size, board independence, board gender diversity, directors' shareholding, audit committee size, directors' remuneration, audit credibility, and control variables of firm size, firm age, and leverage influences companies' market value of tobin's q. The overall hypothesis of this model is that corporate governance indicators are not statistically significant in influencing companies' market value in Nigeria. The results obtained are presented in the table below.

Table 4.17: Market Based Performance Measure and Corporate Governance Sustainability Regression Model

Independent Variables	Coef.	t-Stat	P>/t/
bsize	0.170	2.80	0.005***
boind	-0.301	-0.38	0.005***
bogd	1.579	1.05	0.293
dhold	-0.010	-1.63	0.103
acsiz	0.412	2.61	0.009***
dcost	-0.008	-1.53	0.127
big4a	0.267	0.92	0.358
fsize	-0.444	-2.13	0.033*
fage	-0.034	-3.29	0.001
tlbta	0.025	19.07	0.000***
F – Stat	66.43		0.000***
R-squared	0.434		
Adjusted R-squared	0.428		

Source: Extract from STATA Output

Where *, *, implies statistical significance at 05% and 1% levels respectively**

Based on the result from the table above table, the specific finding from the explanatory variable and each control variable from the regression model is provided as follows:

It is important to note that the R-squared value is around 42% indicating that only 42% of market value variations are determined by the corporate governance indicators used in the regression. However, the remaining 58% of variations is attributed to some other variables. However, R-squared has its own limitations, for example it cannot determine whether the coefficients predictions and estimates are biased. Moreover, it does not necessarily indicate if a model is adequate. Therefore, even if the R-squared value is low but the predictors are statistically significant, as can see from the table below, it is still possible to draw important conclusions about how changes in the predictive value are related to the response value. Regardless of the value of R-squared, the coefficients that are significant still represent the mean change in the response for one unit of change in the predictor while keeping other predictors in the model constant. The model is considered to be overall statistically significant, giving the p-value of 0.000 for the F-statistics of 66.43 and therefore rejecting the null hypothesis of insignificance. It means that the variables we use in the regression specification can jointly predict the firm performance in our sample of Nigerian companies.

Table 4.18: HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST ACCOUNTING

Mean VIF	1.39
Heteroscedasticity Test (P>chi2)	0.45

Source: Extract from STATA Output

The table above shows the result obtained from the variance inflation factor analysis and also the test for heteroscedasticity. From the result above, the mean VIF value of 1.39 which is less than the bench

mark value of 10 indicates the absence of multicolinearity. Also, the probability value of 0.45 resulting from the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity implies that the data is free from the presence of unequal variance.

The control variable of **Firm Size (fsize)** reveal a negative effect on firm market performance of tobin q where its slope coefficient is -0.444. The relationship is significant as its probability value is less than 5% benchmark adopted for this study. (P-value = 0.033) Following this background, the finding from this study reveals an indirect significant effect which may be indicative that this model is not in support of scale economics during the period under review. This finding reveals a significant drop in market value by 44% for every single unit increase in firm size. This is at variance with the result obtained from the model of accounting performance in terms of magnitude and sign. This opinion should be given attention as the probability of its occurrence is suggested to be significant. The empirical result of Fallatah & Dickins (2012) is of the same opinion with our result.

Firm Age (fage) showed a negative (-0.034) and statistically significant (P-value = 0.001) effect on firm market performance of the variable of tobin q. This implies that as a firm grows in its listing age, its market value of tobin q depletes significantly. This result disagrees with the position that older firms can acquire experience based on economies and mitigate the liabilities of newness. However, serious concern should be assigned to this position as it appears to be significantly related to the explained variable. This again is at variance with the finding obtained from accounting performance model, so the need for further research in this direction is recommended. Our finding negates prior empirical finding of Bubbico & Monda (2012).

With respect to the variable of **LEVERAGE** the slope coefficient of (tlbta = 0.025), have a positive influence on market value of the firm with a statistically significant probability of 1% as shown by P-value of 0.000. From this analysis, an improvement in leverage ratio of quoted firms in Nigeria yields a significant rise in shareholders' value during the period under review. A departure in terms of sign can be noticed between the result of this variable in this model and that of the model of accounting performance. This result is in line with the findings of Khatab et al (2011).

4.3 Test of Hypotheses (ESG Component and Aggregate Regression For Hypotheses 1, 2 3 and 4)
This section present the results from environmental, social, governance sustainability disclosures, control variables of firm size, firm age, leverage and link them to accounting and market based performance measures. To find an equation that describes or summarizes the relationships in our set of data and to examine the cause-effect relationships between the dependent variables (return on asset and Tobins q) and the independent variables of environmental sustainability disclosures, social sustainability disclosures and governance sustainability disclosures, we employ the ordinary least

square regression technique to test hypotheses 1. 2 and 3 that: Environmental sustainability disclosures have no effect on firm performance; social sustainability disclosures have no effect on firm performance; corporate governance sustainability disclosures have no effect on firm performance.

To test the three hypotheses, first based on the specific environmental, social and governance disclosures and regression results, Principal Component Analysis (PCA See Tables 15 - 17 Appendix I) was used to generate the composite index for environmental sustainability (ENVI), social sustainability (SOCI) and corporate governance sustainability (GOVI) which was used for the empirical analysis presented on table 4.19 and 4.21 below.

4.3.1 Accounting Based Performance and ESG Component Regression Models

The regression results examines how the variables of environmental sustainability disclosures, social sustainability disclosures and governance sustainability disclosures together with the control variables of firm size, firm age and firm leverage influences companies' accounting performance. The overall hypotheses of the models are that: Environmental sustainability disclosures have no effect on return on assets of firms in Nigeria; social sustainability disclosures have no effect on return on assets of firms in Nigeria; corporate governance sustainability disclosures have no effect on return on assets of firms in Nigeria. The results obtained are presented in the table below.

TABLE 4.19: Accounting Performance and ESG Component Regression Models

Independent Variables	Coef.	t-Stat	P>/t/
ENVI (H1)	0.806	1.42	0.155
SOCI (H2)	0.882	2.06	0.039*
GOVI (H3)	2.251	3.71	0.000***
fsize	-0.425	-0.41	0.685
fage	0.009	0.19	0.850
tlbta	-0.054	-11.85	0.000***
F – Stat	42.74		0.000***
R-squared	**0.228**		
Adjusted R-squared	**0.222**		

Source: Extract from STATA Output

Where *, *, implies statistical significance at 05% and 1% levels respectively**

Table 4.18 above show results of the three explanatory variables employed in the study and each control variable from the regression model and provides interpretation as follows: It is important to note that the R-squared value of 0.228 and Adjusted R-squared of 0.222 indicate that 22% of the systematic variations in accounting based performance variable of return on total assets of the pooled companies over the period of interest was jointly explained by the independent variables. This implies that variation in firm performance in Nigeria cannot be completely explained by all the explanatory variables employed in this study. Thus about 77% causes of variations are attributed to some other

variables. In order words the R-squared indicates the presence of other variables not considered by this present study that could explain firm performance. Regardless of the value of R-squared, the coefficients that are significant thereby rejecting the null hypothesis of insignificance still represent the mean change in the response for one unit of change in the predictor while keeping other predictors in the model constant. Thus the F-statistic value of 42.74 and its associated P-value of 0.000 shows that the OLS Pooled regression models on the overall are statistically significant at 1% level, which connote that the coefficients of the independent variables are statistically different from zero and may be adopted for policy purposes.

TABLE 4.20: HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST

Mean VIF	**1.51**
Heteroscedasticity Test (P>chi2)	**0.45**

Source: Extract from STATA Output

The result obtained from the variance inflation factor analysis and also the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity revealed a mean VIF value of 1.51 which is less than the bench mark value of 10 thereby absenting the consequences of multicolinearity. Also, the probability value of 0.45 resulting from the test for heteroscedasticity implies that the dataset is free from the presence of unequal variance.

4.3.1a: Testing of Hypothesis One with Model 1c: Environmental sustainability disclosures have no effect on firm performance

To test the above hypothesis, the individual environmental sustainability disclosures were first regressed with firm performance proxy by ROA (model 1a) and then the principal component analysis (PCA) based on the individual disclosures was used to generate the composite index for Environmental sustainability (ENVI) which was used for the regression on table 4.19.

Following the result from table 4.19, the variable of environmental sustainability disclosures with coefficient of 0.806 and P-value of 0.155 have positive but insignificant effect on return on assets of firms in Nigeria during the period of study

Decision: From the foregoing we conclude by accepting the null hypothesis which states that environmental sustainability disclosures have no significant effect on return on assets of firms in Nigeria. This finding cannot be applied for policy recommendation.

4.3.1b: Testing of Hypothesis Two with Model 2c: Social sustainability disclosures do not have effect on firm performance.

In testing the above hypothesis, the individual social sustainability disclosures (social donations, disclosure of community, social responsibility, disclosure of charitable gifts, disclosure of human resources and employee relations, job creations, investment in employee, disclosure of health, safety and welfare) were first regressed with firm performance proxy by ROA (model 2a) and then the principal component analysis (PCA) based on the individual disclosures was used to generate the composite index for social sustainability (SOCI) which was used for the regression on table 4.19.

The variable social sustainability disclosure **(SOCI)** from table 4.19 have positive effect on firm performance measured here with return on assets and the effect is statistically significant. Coefficient of 0.882 and P-value of 0.039 which is less than 5% benchmark adopted for this study.

Decision: From the above empirical analysis, we reject the null hypothesis as stated and conclude that social sustainability disclosures have significant effect on return on assets. The result is sustainable and can be considered for policy action.

4.3.1c: Testing of Hypothesis Three with Model 3c: Corporate governance sustainability disclosures have no effect on firm performance.

In testing the above hypothesis, the individual governance sustainability disclosures were first regressed with firm performance proxy by ROA (model 3a) and then the principal component analysis based on the individual disclosures was used to generate the composite index for corporate governance sustainability (GOVI) which was used for the regression on table 4.19.

We observe from table 4.19 that the variables of **GOVI** with a slope coefficient of = 2.251 impacts positively and significantly at 1% (P-value 0.000) on ROA during the period of study.

Decision: These changes are economically significant and therefore, suggest that we should reject null hypothesis as stated and conclude that corporate governance sustainability have significant positive effect on ROA. The result can be applied for policy recommendations.

Furthermore, for the control variable of **Firm Size (fsize)** the results reveal a negative effect on firm market performance of ROA where its slope coefficient is -0.425. The positive effect is insignificant as its probability value is more than 5% benchmark adopted for this study. (P-value = 0.685). The results indicate that larger firms do not produce better performance in terms of return on total asset. Nevertheless, much emphasis should be not assigned on it since it is statistically insignificant in influencing firm accounting performance.

Firm Age (AGE) showed a positive and statistically insignificant effect on firm accounting financial performance variable of return on total assets as shown by the coefficient value of 0.009 and P-value of 0.850. This mean that the age of a firm does not necessarily guarantee a better performance in terms of firm financial performance. Much concern may not be assigned to this variable as it appeared to be insignificantly related to the dependent variable of return on total assets (retoa). Therefore, this result aligns with results of previous empirical studies of Gull, Saeed and Abid (2013).

The variable of **LEVERAGE** (coefficient -0.054) have a negative influence on firm accounting financial performance and is statistically significant at 1% with P-value of 0.000. The results suggest that as financial leverage which describes the degree of proportion of external capital and internal capital used to finance the company's assets increases, firm accounting financial performance of return on total assets, among quoted companies in Nigeria will significantly deplete. This finding agrees with the finding obtained from firm accounting performance and corporate governance sustainability model of return on firm total assets in relation to sign and direction. This result is in line with the findings of Calace (2015), Mulyadi & Anwar (2012), Manchiraju & Rajgopal (2015).

4.3.2 Market Performance and ESG Component Regression Model

The regression results examines how the variables of environmental sustainability disclosures, social sustainability disclosures and governance sustainability disclosures together with the control variables of firm size, firm age and firm leverage influences companies' accounting performance. The overall hypotheses of the models are that: Environmental sustainability disclosures have no effect firm performance; Social sustainability disclosures have no effect on firm performance; corporate governance sustainability disclosures have no effect on firm performance. The results obtained are presented in the table below.

Table 4.21: Market Performance and ESG Component Regression Model

Independent Variables	Coef.	t-Stat	P>/t/
ENVI (H1)	0.424	3.40	0.001*
SOCI (H2)	-0.034	-0.36	0.716
GOVI (H3)	0.561	4.20	0.000***
fsize	-0.786	-3.40	0.001*
fage	-0.043	-4.13	0.000***
tlbta	0.024	24.38	0.000***
F – Stat	113.34		0.000***
R-squared	0.439		
Adjusted R-squared	0.435		

Source: Extract from STATA Output

Where *, *, implies statistical significance at 05% and 1% levels respectively**

Table 4.21 above show results of the three explanatory variables employed in the study and each control variable from the regression model and provides interpretation as follows:

The R-squared and Adjusted R-squared of the model are 0.439 and 0.435 which indicate that about 44% of the systematic variations in market based performance variable measured by Tobins q of the pooled companies over the period of interest was jointly explained by the independent variables. This implies that variation in firm performance in Nigeria cannot be completely explained by all the explanatory variables employed in this study. Thus about 56% causes of variations in firm value are attributed to some other variables. Regardless of the value of R-squared, the coefficients that are significant thereby rejecting the null hypothesis of insignificance still represent the mean change in the response for one unit of change in the predictor while keeping other predictors in the model constant. Thus the F-statistic value of 113.34 and its associated P-value of 0.000 shows that the OLS Pooled regression models on the overall are statistically significant at 1% level, which connote that the coefficients of the independent variables are statistically different from zero and may be adopted for policy purposes.

TABLE 4.22: HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST

Mean VIF	**1.51**
Heteroscedasticity Test (P>chi2)	**0.20**

Source: Extract from STATA Output

The result obtained from the variance inflation factor analysis and also the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity revealed a mean VIF value of 1.51 which is less than the bench mark value of 10 thereby absenting the consequences of multicolinearity. Also, the probability value of 0.20 resulting from the test for heteroscedasticity implies that the dataset is free from the presence of unequal variance.

4.3.2a: Testing of Hypothesis One with Model 1d: Environmental sustainability disclosures have no effect on firm value.

To test the above hypothesis, the individual environmental sustainability disclosures were first regressed with firm performance proxy by Tobin's Q (model 1b) and then the principal component analysis (PCA) based on the individual disclosures was used to generate the composite index for Environmental sustainability (ENVI) which was used for the regression on table 4.21.

Based on the result from table 4.21, the variable of environmental sustainability disclosures with coefficient of 0.424 and P-value of 0.001 have positive significant effect on market value of firms in Nigeria during the period of study.

Decision: From the foregoing we conclude by rejecting null hypothesis as stated and accepting the alternative hypothesis which states that environmental sustainability disclosures have significant effect on performance of firms in Nigeria via Tobin's Q. This finding can be applied for policy recommendation.

4.3.2b: Testing of Hypothesis Two with Model 2d: Social sustainability disclosures do not have significant effect on firm value.

In testing the above hypothesis, the individual social sustainability disclosures (social donations, disclosure of community, social responsibility, disclosure of charitable gifts, disclosure of human resources and employee relations, job creations, investment in employee, disclosure of health, safety and welfare) were first regressed with firm performance proxy by Tobin's Q (model 2b) and then the principal component analysis (PCA) based on the individual disclosures was used to generate the composite index for social sustainability (SOCI) which was used for the regression on table 4.21.

The variable social sustainability disclosure **(SOCI)** have negative and insignificant effect on firm value measured with tobins q. Coefficient of -0.034 and P-value of 0.716 which is more than 5% benchmark adopted for this study.

Decision: From the above empirical analysis, we accept the null hypothesis as stated and conclude that social sustainability disclosures do not have significant effect on firm performance. The result cannot be considered for policy action.

4.3.2c: Testing of Hypothesis Three with Model 3d: Corporate governance sustainability disclosures have no significant effect on firm value.

In testing the above hypothesis, the individual governance sustainability disclosures were first regressed with firm value proxy by Tobin's q (model 3b) and then the principal component analysis based on the individual disclosures was used to generate the composite index for corporate governance sustainability (GOVI) which was used for the regression on table 4.21.

We observe from table 4.21 that the variables of **GOVI** with a slope coefficient of 0.561 impacts positively and significantly at 1% (P-value 0.000) on firm value during the period of study.

Decision: Based on the regression analysis, we reject null hypothesis as stated and conclude that corporate governance sustainability have significant positive effect on firm value measured by Tobin's q. This result can be applied for policy recommendations.

The control variable of **Firm Size (fsize)** reveal a negative effect on firm market performance of tobin q with its slope coefficient of -0.786. This effect is statistically significant as its probability value is less

than 5% benchmark adopted for this study. (P-value = 0.001) Following this background, the finding from this study reveals an indirect significant effect which may be indicative that this model is not in support of scale economics during the period under review. This finding reveals a significant drop in market value by 78% for every single unit increase in firm size. This result correspond in sign and direction with the model of market performance and corporate governance sustainability. It is also similar to the result obtained from the model of accounting performance and ESG Component in terms of magnitude but differ in sign. This opinion should be given attention as the probability of its occurrence is significant. The empirical result of Gherghina et al (2015), Fallatah and Dickins (2012) that there is a significant negative influence of firm size on firm value, is of the same opinion with our result.

Firm Age (fage) showed a negative (-0.043) and statistically significant (0.000) on market performance variable of tobin q. This implies that as the firm advances in its listing age, performance rate of its market value declines significantly. This again is in agreement with the result obtained from market performance and environmental sustainability model. Much concern should be assigned to this variable as it appears to be significantly related to the dependent variable of tobin q. Therefore, this finding lends credence to the findings of previous empirical studies Albuquerque, Durnev and Koskinen (2013) and Black, Jang and Kim (2003).

The variable of *LEVERAGE* have a positive and significant effect on firm value. The coefficient of 0.024 and P-value of 0.000 confirmed that. This result indicates that as financial leverage which shows the degree of proportion of external capital and internal capital used to finance the company's assets increases, firm value measured with tobin q, among quoted companies in Nigeria significantly increases. This result is in line with the findings of Khatab, Masood, Zaman, Saleem and Saeed (2011) though it negates the findings of Fallatah and Dickens (2012).

4.3.3 Aggregate Sustainability Disclosures Regression Analysis (For Testing Hypothesis 4)

This section present the results from overall sustainability disclosures, control variables of firm size, firm age, leverage and regress them with accounting and market based performance measures. To find an equation that describes or summarizes the relationships in our set of data and to examine the cause-effect relationships between the dependent variables (return on asset and Tobins q) and the independent variable of sustainability disclosures we employ the ordinary least square regression technique to test hypothesis 4 that: Aggregate sustainability indices does not significantly drive firm performance.

Sustainability disclosure index (ESG) is a composite index derived from the individual environmental, social and corporate governance sustainability index and regressed with ROA and Tobin's q.

4.3.3a Accounting Based Performance and Aggregate Sustainability Disclosures Regression Model

The regression results below examine how the variable of overall sustainability disclosures together with the control variables of firm size, firm age and firm leverage influences companies' accounting performance. The overall hypothesis of the model is that: Aggregate sustainability indices does not significantly drive firm performance.

Table 4.23: Accounting Performance and Aggregate Sustainability Disclosure Regression

Independent Variables	Coef.	t-Stat	P>/t/
ESG (H1)	1.931	4.27	0.000***
fsize	-1.032	-0.97	0.334
fage	.0204	0.46	0.648
tlbta	-.0594	-13.71	0.000***
F – Stat	61.94		0.000***
R-squared	0.221		
Adjusted R-squared	0.218		

Source: Extract from STATA Output

Where ***, implies statistical significance at 1% level

Table 4.23 above show regression results of the explanatory variable aggregate sustainability indices and the control variables and provides interpretation as follows:

The R-squared value of 0.221 with Adjusted R-squared of 0.218 indicate that 22% of the systematic variations in accounting based performance variable of return on total assets of the pooled companies over the period of interest was jointly explained by the aggregate sustainability indices. This implies that variation in firm performance in Nigeria cannot be completely explained by the explanatory variable employed in this study. Regardless of the value of R-squared, the F-statistic value of 61.94 and its associated P-value of 0.000 shows that the OLS Pooled regression models on the overall are statistically significant at 1% level, which connote that the coefficients of the independent variable is statistically different from zero and may be adopted for policy purposes.

Table 4.24: HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST

Mean VIF	**1.59**
Heteroscedasticity Test (P>chi2)	**0.000**

Source: Extract from STATA Output

The result obtained from the variance inflation factor analysis and also the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity revealed a mean VIF value of 1.51 which is less than the benchmark value of 10 thereby absenting the consequences of multicolinearity. The probability value

of 0.000 resulting from the test for heteroscedasticity implies that the dataset is not from the presence of unequal variance. The implication is that there is significant differences in the sampled companies. The differences in the sampled companies supposed to be insignificant but based on the P-value of less than 1% we reject null hypothesis and accept alternative hypothesis and conclude that there is heteroscadasticity. To correct for the heteroscadasticity, we did another robust regression.

Table 4.25 Accounting Performance and Aggregate Sustainability Disclosures Robust Regression

Independent Variables	Coef.	t-Stat	P>/t/
ESG (H1)	.902	4.52	0.000***
fsize	.1024	0.22	0.828
fage	.0377	1.92	0.055*
tlbta	-.1054	-50.09	0.000***
F – Stat	704.38		0.000***
R-squared	0.221		
Adjusted R-squared	0.218		

Source: Extract from STATA Output

Where ***, implies statistical significance at 1% level

4.3.3b: Testing of Hypothesis 4 with Model 4a: Aggregate sustainability disclosures does not drive firm performance.

In order to test the above hypothesis, Sustainability disclosure index (SDI) is derived from the individual environmental, social and corporate governance sustainability index and regressed with ROA (model 4a) which is presented in table 4.23. Due to the problem of heteroscadasticity we did a robust regression 4.25 and that is used in testing hypothesis 4.

From table 4.25, the variable **SDI** with a slope coefficient of .902 and P-value of 0.000 have a positive effect on ROA during the period of study.

Decision: These changes are economically significant and therefore, suggest that we should reject null hypothesis as stated and conclude that aggregate sustainability disclosures have significant positive effect on ROA. The result is sustainable and can be applied for policy recommendations.

The results for control variable of **Firm Size (fsize)** show a positive effect firm accounting performance of return on assets. (Coeff. .1024). However the relationship is not significant as its P-value is greater than 5% benchmark adopted in this study. (P-value = 0.828). This finding supports the argument that larger firms have a greater possibility of taking advantage of economies of scale by exploiting experience curve effects and setting prices above the competitive level, develop a greater bargaining power over both suppliers and distributors or clients, and they can be considered more stable and mature in generating greater sales because of the greater production capacity that enhanced capital cost savings with the economies of scale. Although our result is in support of the sign but did not reveal a significant relationship. This result suggests that as quoted companies increase its size of total assets, no meaningful improvement was noticed in relation to firm financial performance.

Following this background, the finding from this study reveals a direct but insignificant relationship which may be indicative of the fact that quoted companies in Nigeria have not been able to effectively maximize its total assets to its optimal level that would impact significantly on quoted firms' financial performance during the period under review. These finding follows previous empirical result of Tornyeva & Wereko (2012), Okougbo (2011), but disagree with the results of Gull et al (2013).

Firm Age (fage) showed a positive (coefficient .0377) and statistically significant (P-value 0.055) effect on accounting financial performance variable of return on total assets. This implies that as the firm advances in its listing age, financial performance rate of return on total assets improves significantly. This is consistent with the result obtained from accounting performance model of environmental sustainability. Much concern should be assigned to this variable as it is significantly related to the dependent variable of return on total assets. Therefore, this finding lends credence to the findings of previous empirical studies of Comincioli, Poddi, & Vergalli (2012).

With respect to the variable of **LEVERAGE**, its effect on financial performance among quoted companies in Nigeria is negative and the influence is statistically significant at 1% as can be seen from the coefficient of -.1054 and P-value of 0.000. Finding from this analysis suggest that an increase in financial leverage decreases firm financial performance among quoted companies in Nigeria during the period under consideration. It also indicate that less leveraged firms outperform more leveraged counterparts. This finding agrees with the finding obtained from firm accounting performance and ESG component model in relation to level of significance and sign. This result is in line with the findings of Calace (2015), Fallatah & Dickins (2012) but do not agree with the findings of Khatab et al (2011).

4.3.3c Market Based Performance and Aggregate Sustainability Disclosures Regression Model

The regression results below examine how the variable of overall sustainability disclosures together with the control variables of firm size, firm age and firm leverage affect firm value measured with Tobin's q. The overall hypothesis of the model is that: Aggregate sustainability disclosures do not significantly drive firm performance.

Table 4.26: Market Performance and Aggregate Sustainability Disclosure Regression

Independent Variables	Coef.	t-Stat	P>/t/
ESG (H4)	.4068	4.06	0.000***
fsize	-.5796	-2.45	0.015****
fage	- .0312	-3.17	0.002***
tlbta	.0235	24.47	0.000***
F – Stat	163.35		0.000***
R-squared	0.4292		
Adjusted R-squared	0.4266		

Source: Extract from STATA Output

Where *, implies statistical significance at 1% level**

Table 4.26 above show regression results of the explanatory variable aggregate sustainability disclosures with the control variables of firm size, firm age, and leverage and provides interpretation as follows: The R-squared value of 0.429 with Adjusted R-squared of 0.426 indicate that about 43% of the systematic variations in the market based performance variable of Tobins q of the pooled companies over the period of interest can be attributable to sustainability disclosures. Regardless of the value of R-squared, the F-statistic value of 61.94 and its associated P-value of 0.000 shows that the OLS Pooled regression models is appropriate and are statistically significant at 1% level, which connote that the coefficients of the independent variable is statistically different from zero and may be adopted for policy purposes.

Table 4.27: HETEROSCEDASTICITY AND VARIANCE INFLATION FACTOR TEST

Mean VIF	**1.58**
Heteroscedasticity Test (P>chi2)	**0.000**

Source: Extract from STATA Output

The result obtained from the variance inflation factor analysis and also the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity revealed a mean VIF value of 1.58 which is less than the benchmark value of 10 thereby absenting the consequences of multicolinearity. The probability value of 0.000 resulting from the test for heteroscedasticity implies that the dataset is not from the presence of unequal variance. The implication is that there is significant differences in the sampled companies. The differences in the sampled companies supposed to be insignificant but based on the P-value of less than 1% we reject null hypothesis and accept alternative hypothesis and conclude that there is heteroscadasticity. To correct for the heteroscadasticity, we did another robust regression.

Table 4.28 Market Based Performance and Aggregate Sustainability Disclosures Robust Regression

Independent Variables	Coef.	t-Stat	P>/t/
ESG (H1)	.193	8.09	0.000***
fsize	-.368	-6.51	0.000***
fage	.0017	0.74	0.458
tlbta	-.0175	76.27	0.000***
F – Stat	1585.84		0.000***
R-squared	**0.429**		
Adjusted R-squared	**0.426**		

Source: Extract from STATA Output

Where *, implies statistical significance at 1% level**

4.3.3d Testing of Hypothesis 4 with Model 4b: Aggregate sustainability disclosures does not significantly drive firm performance.

In order to test the above hypothesis, Sustainability disclosure index (SDI) is derived from the individual environmental, social and corporate governance sustainability index and regressed with

Tobin's q which is presented in table 4.26. Due to the problem of heteroscadasticity we did a robust regression Table 4.28 and that is used in testing the hypothesis.

From table 4.28, the variable **SDI** with a slope coefficient of .193 and P-value of 0.000 have a positive effect on firm value proxy by Tobins q during the period of study.

Decision: These changes are economically significant and therefore, suggest that we should reject null hypothesis as stated and conclude that aggregate sustainability disclosures have significant positive effect on firm value. The result is sustainable and can be applied for policy recommendations.

The control variable of **Firm Size (fsize)** reveal a negative effect on firm value of tobin q where its slope coefficient is -368. The relationship is significant as its probability value is less than 5% benchmark adopted for this study. (P-value = 0.000) Following this background, the finding from this study reveals an indirect significant effect which may be indicative that this model is not in support of scale economics during the period under review. This finding reveals a significant drop in market value by 36% for every single unit increase in firm size. This is at variance with the result obtained from the model of accounting performance and aggregate sustainability disclosure in terms of magnitude and sign. This opinion should be given attention as the probability of its occurrence is suggested to be significant. The empirical result of Fallatah and Dickins (2012) is of the same opinion with our result.

Firm Age (AGE) showed a positive and statistically insignificant effect on market based performance variable of Tobins q based on coefficient of .0017 and P-value of .458 This mean that the age of a firm does not necessarily guarantee a better performance in terms of firm financial performance. Much concern may not be assigned to this variable as it appeared to be insignificantly related to the dependent variable of Tobin's q. Therefore, this result aligns with results of previous empirical studies of Gull, Saeed and Abid (2013). It is contrary to findings of Gherghina et al that age of listing has negative relationship with firm value.

With respect to the variable of **LEVERAGE** (coefficient -.0175), it have a negative influence on firm accounting financial performance and is statistically significant at 1% with P-value of 0.000. The results suggest that as financial leverage which describes the degree of proportion of external capital and internal capital used to finance the company's assets increases, firm market based performance of firm value, among quoted companies in Nigeria will significantly deplete. This result is in line with the findings of Calace (2015), Mulyadi & Anwar (2012), Manchiraju & Rajgopal (2015). Gherghina et al (2015) found that there is a negative relationship between leverage ration and firm value.

4.4 Discussion of Findings

The study evaluates effect of sustainability disclosures on performance of quoted non financial firms in Nigeria from 2006 – 2015. Data obtained from annual reports of sampled firms were analysed using pooled ordinary least square regression with the aid of STATA software 13.0 version. Hypotheses was tested for acceptance or rejection using models 1 – 4. Version (a) and (b) of models 1 – 3 were used to generate disclosures index from companies specific disclosures through Principal component analysis while version (c) and (d) was used to test the hypotheses 1 - 3. To test hypothesis 4, model 4a and 4b were used. Before the data were used to test the hypotheses, they were subjected to some diagnostic tests to confirm regression assumptions. Both results of the diagonostic tests, regression ressults for specific disclosures used for generating disclosure index and regression results for testing the four hypotheses of this study were all discussed below:

4.4.1 Diagnostic Test to Confirm the Assumptions of Classical Regression
The descriptive statistics for environmental sustainability disclosures on Table 4.1 showed that on the average, there is a fair level of compliance to environmental policy among quoted companies in Nigeria. This is an indication from the mean value of (encompo) 58% which may be likely related to the fact that government policies on environmental sustainability are not mandatory, hence strict adherence is not in force. For the variable of environmental sensitive products, the statistics show that only a few firms in our sample of study produces environmental sensitive products hence we expect the volume of emission to be relatively low compared to countries where companies whose environmental sensitive products is in large quantities. This is supported by the mean value of environmental sensitive products (ensprod) 14%. Furthermore the statistics from the variable of environmental conservative disclosure (envconsd) 6% indicates a very low level of environmental conservation disclosure in Nigeria. Again this may align with the fact that there are no formal guidelines that require quoted companies in Nigeria to disclose environmental issues are complied with. As seen from the mean value of the variable of environmental donations (engycon=13%) from the descriptive statistics result, it reveals that reports of environmental related donations have been performed by only thirteen percent of quoted companies under consideration. This result is similar to the work of Behram (2015) which found that 50 percent of sampled firms in Turkey disclose environmental informantion. The finding of this study is a complete deviation from the work of Hook & Thompson (2013) where 81 percent of the sampled companies in the UK showed consistency in reporting of environmental related information. Finally here, the descriptive statistics revealed that on the average firm acquisition of plant and machines capable of using energy and also polluting the environment is relatively high. This is captured by the elasticity of the variable of engycon 6.4 while the maximum level of such acquisition stood at 8.96 during the period of study. These findings indicate that companies in Nigeria are yet to abide by suggestions concerning successful management of carbon emission: that energy efficiency and conservation are very essential

components of policies for addressing emerging concerns on energy security and the reduction of greenhouse gas emissions (Edeoja & Edeoja, 2015; Otene, Murray, & Enongene 2016).

Descriptive statistics for social sustainability disclosures on table 4.2 reveal that on the average the companies under review contributed only 5% of its ratio of total financial social donation to firm total asset into the pool of social donations (socdon) while the maximum donation rose to 78% during the period under review. Interestingly the result reveals that some companies did not make any donations. The variable of disclosure of community social responsibility (disocr) reveals that on the average 42% of the sampled firms disclosed its activities relating to corporate community social responsibility. This implies that 68% percent of these business entities do not follow best practice which may be seen as a failure on the path of corporate managers. Disclosure of donations and charity gifts is seen to be encouraged by almost all the firms under review. This is obtained from the mean value of (discgft) 92% and indicates that less than 10% of the sampled companies do not disclose such items in its financial statement. This result is pretty true since most organization employ this strategy as a medium of advertising a good public image (Adeneye & Ahmed, 2015; Stuebs & Sun, 2011). In disclosing information on human resources and employee relations the variable of (hrempr) 98% indicates that on the average only about 2% of the companies in this study do not disclose information concerning activities on human resources and employee relations in its reports. Meanwhile, the variable of Job Creation (jobcr) revealed a minimum value of 0.66 with a maximum value of 4.28. However, the average value revealed by this variable stood at 2.52. The variable of investment in employee (invemp) showed an average value of 0.02 which is an indication that most of the companies in this study have a low input towards investing in its employees. Although some companies showed a 22% involvement to its employees' needs. This is obtained from the maximum value of the variable of investment in employee (invemp). From the descriptive statistics, information on employee health, safety and welfare is revealed to be disclosed by almost all the firm under consideration during the period of study. This is obtained from the variable statistic of (ehswdis) 98% noting that quoted companies in Nigeria are now beginning to show awareness towards the benefits of such disclosure in its annual reports.

Descriptive statistics for corporate governance sustainability disclosures on table 4.3 show that the largest board in the sample during the period under review had seventeen (17) members, while on the average most of the companies had a board size of nine (9) members which indicates that most of sampled companies have moderate board size. The variable of board independence reveals that 64% of the sampled firms had more independent directors than dependent directors in their board. This again is a good fit as this could mean that quoted firms in Nigeria do want to meet up with global best practice and consequently benefit from the inherent advantages. The statistics show that the ratio of female to male directors in the board is 7%. The statistics also show that some companies do not have any female

representation in its board. This is relatively not a welcome development as this result does not align with global best practice need for twenty-first century firms to take competitive advantage of a diverse workplace (Sila, Gonzalez, & Hagendorff, 2016) ensuring that men and women have the same opportunities and be given the same possibilities to take leadership positions. It is indicative of the fact that there is less awareness of the importance of female participation in the board among quoted firms in Nigeria. This situation is below the European Commission's proposed law to improve the gender balance in Europe's company boardrooms, aiming for at least 40% female representation (European Commission, 2012). Also in the US, there is also a US-wide campaign that asks firms to pledge 20% female participation on board (Sila et al 2016). The maximum director shareholding (dhold) stood at 123.58 units, while its minimum holding lowered to 0 connoting that among the sampled companies and during the period of study some independent directors had no share of the companies they are directing. However the statistics showed that on the average most of the independent directors had its company's share to the tone of 16.5units. The variable of Audit committee size (acsiz) indicated that 50% of the entire sampled companies had an audit committee size of 6 members with a least size of 4 members. The variable of board remuneration (dcost) showed a large variance between its averages (2.70) and its highest board remuneration of 495.34. This may be factored into the reasoning that all the companies are not the same in terms of size, profitability, and a host of other factors. In accounting for the variable of audit credibility (audcred), the statistics revealed that about 60% of the sampled firms employed the big audit firms. Therefore, just about 40% did not employ the services of big four audit firm during the period under review.

Normality test was done with skewness/kurtosis statistic test as shown on table 4.5. The skewness/kurtosis statistic test determine if the data series were normally distributed by evaluating the disparity of the skewness as well as the kurtosis of the series compared with those from the normal distribution. It confirms the assumption that data disturbances were normally distributed. A series would be normally distributed if the probability of the statistic is less than 5% which is 0.05. However, if the data set is not normal, then these tests could have a high chance of false positives. The normality test on table 4.5 reveals that all the variables of interest are normally distributed and satisfies the test of significance at 1% level of significance except for the variables of firm size, which did not pass even at 10%. However, this situation may be overlooked since it is a control variable. Overall, the statistics revealed that there is no sample selection bias or outlier in the data that would impair the generalization from this study.

Correlation analysis on Table 4.6 above among other things showed that all the independent variable of interest showed a positive correlation with the variable of encosd except for the variable of socdon (-0.0019), invtemp (-0.0647), dhold (-0.0478), dcost (-0.0210) and the variable of tlbta (-0.0336). The

correlation result reveal that the variable of evrdo correlated positively with all variables of interest except for the variables of invtemp (-0.0075), dhold (-0.14900, dcost (-0.2750) and the control variable of tlbta (-0.0305). Again the independent variable of ensprod showed low association coefficient with socdon (-0.0169), invtemp (-0.1200) boind (0.0094), dhold, (-0.2275), dcost (0.0296) and tlbta (-0.0395). Again negative correlation appeared with the independent variables of corporate governance. The variable of encompo did not show strong association with any of the independent variables employed in the study. However, it showed negative correlation with independent variables of discgft (-0.0311), hrempr (-0.0462), invtemp (-0.1192), ehsdis, (-0.0527), boind (-0.0024), bogd (-0.1133), dhold (-0.0585), acsiz (-0.0585) and with the control variable of fage (-0.0392). From the correlation result table, we observed that the variable of encompo showed more negative correlation with corporate governance and social variables than any of environmental sustainability variables. A negative correlation appeared between the independent variables of engcon, and hrempr (0.0034), ehsdis

(-0.0084), dhold (-0.2837), dcost (-0.1365) and tlbta (-0.0208). Of note, this explanatory variable of engcon, did not show any negative correlation with environmental sustainability explanatory variables. The result shows that three variables' of invtemp, boind and dhold showed a negative association with disocr, -0.1050, -0.0242, and -0.0570 respectively. Clearly, none of the variables showed a high positive association hence there will be no consequences of autocorrelation in the regression result. A shocking revelation from this statistics shows that the variable of audit committee size (acsiz) showed positive association with the variables of dcost (0.0392) audcred (0.1354) fsize (0.3949), fage (0.1028), tlbta (0.0481), ENVI (0.2543), SOCI (0.0331) and GOVI (0.4252). Finally, the correlation statistics revealed that none of the sustainability index score of ENVI, SOCI and GOVI showed a negative correlation with each other. While ENVI correlated with SOCI to the magnitude of 16%, ENVI associated with GOVI to the magnitude of 45% and SOCI correlated with GOVI only to the magnitude of 7 percent.

The heteroscedasticity and multicollinearilty tests for each of models 1 – 3 on tables: 4.8, 4.10, 4.12, 4.14, 4.16, 4.18, 4.20, and 4.22 respectively show that the Variance Inflation Factor (VIF) analyses are all less than the bench mark value of 10 which implies the absence of multicolinearity. Also the probability value of heteroscedasticity test are all greater than 5% which implies that the datasets are all free from the presence of unequal variance hence their regression result are interpreted as shown. The VIF test for model 4a and 4b are also less than the bench mark value of 10. However the probability value of heteroscedasticity test is less than 5% which implies that the data set is not free from the presence of unequal variance hence a robust regression was done to correct the heteroscedasticity problem. The robust regression was used to test hypothesis four.

4.4.2 Regression Results for Companies Specific Disclosures

Firstly, the regression results for accounting based performance measure ROA and specific environmental disclosures (model 1a) on table 4.7 revealed that *Environmental Compliance Policy (encompo = 5.203)* have a positive influence on firm performance and is statistically significant at 1%. The t-value is 4.24 while its P-value is 0.00. This result indicates that the variable of environmental compliance policy is a significant driver of performance via return on asset. The results indicate that compliance with environmental policies such as: Harmful Waste Act 42 of 1988, Associated Gas Re-injection Act Cap 26, LFN 1990 and its attendant regulations. The Oil in Navigable Waters Act Cap 331, LFN 1990 and its attendant regulations. Solid and Hazardous Management Regulation 1991, the Pollution Abatement in Industries and Facilities Generating Wastes- Regulations S.1.9, of 1999, National Environmental Standards and Regulations Enforcement Agency (NESREA) Act of 2007 etc improves performance significantly in Nigeria quoted companies during the period under review. This finding agrees with the previous findings of Asuquo (2012) and Ayoola (2011) that firms' performance has significant positive relationship with environmental policies. From the foregoing we conclude by rejecting the null hypothesis which states that environmental compliance policy is not significantly related to firm performance in Nigeria.

As regards the variable of *Enviromental Sensitive Products (ensprod = 0.501),* its impact on firm performance among quoted companies in Nigeria appears to have a positive relationship with firm performance and is statistically insignificant even at 10%. The t-value showed 0.28 while its P-value is 0.776. In other words, firms products capable of emitting toxics and harmful waste is positively but insignificantly related to firm financial performance. This result is in consonant with the findings of Nyirenda et al (2013) that there is no significant relationship between emission reduction and return on equity. Cortez & Cudia (2011), Aggarwal (2013). But contrary to the work of Oti et al (2012) that waste management has significant relationship with return on investment. Fisher-Vanden & Thorburn (2011) found that there is significant losses in the market value of firms announcement of a greenhouse gas emissions reduction goals.

Enviromental Conservative Disclosure (encosd = 2.945) Evidence from the result suggest that the variable of environmental conservative disclosure is positive but not significantly related to performance among quoted firms in Nigeria during the period under review. This is revealed from the P-value of 0.238 which is greater than 5% level of significance adopted for this study. This finding indicate that as quoted firms in Nigeria engage in disclosure of environmental conservative practices and activities, financial performance of these companies improves but at an insignificant level. However, this finding lend credence to the empirical result of Isa (2014), Plumlee et al (2015), Bassey et al (2013), Latridis (2013), Uwuigbe (2012), Oba et al (2012), Clarkson et al (2010),

As regards the variable of environmental donations ***Enviromental Donations*** (envdo), it can be deduced that based on the slope coefficient of (0.879) the variable have a positive influence on our sampled quoted company's financial performance and was statistically insignificant even at 10 percent since it p-value is greater than 0.05[0.624]. Based on the above finding, we find a discordant relationship with previous studies of Aggarwal (2013).

As regards the variable of Energy Consuming Assets ***Energy Consuming Assets*** (engycon), it can be deduced that based on the slope coefficient of (-3.886) the variable have a negative influence on our sampled company's financial performance and was statistically significant at 5 percent since it p-value was less than 0.05[0.02]. This implies that shareholders, investors, and financial institutions value firms lowly if the firm increase investing more on energy consuming assets capable of emitting wasteful greenhouse gases (GHGs) that causes global warming, disequilibrium of the earth, unpredictable weather changes and major natural disasters causing harm to humans, animals, plants and the entire physical environment. The above finding showed a discordant relationship with previous studies of Nyirenda et al (2013) that there is no significant relationship between energy usage and Return on Equity. But agree with the empirical findings of Clarkson et al (2010). This finding on one hand conforms to conventional wisdom that any investment in environment protection comes as an additional cost to firms and detracts them from profit maximization (Ambec & Lanoie, 2008; Hart & Ahuja, 1996). On the other hand, the more sampled companies are spending money buying energy consuming assets with the associated increase in carbon emission, the lesser the profit. But by switching to a more environmentally friendly production process, energy saving cost minimizing innovations process that would otherwise be unexploited, firms differentiate themselves from their dirtier competitors. This will be rewarding to the firm.

The regression results for market based performance measure -Tobin's q and specific environmental disclosures (model 1b) on table 4.9 revealed that the variable of ***Enviromental Compliance Policy*** *(encompo = 0.687)* have a positive influence on firm performance and is statistically significant at 1%. The t-value is 2.54 while its P-value is 0.011. In other words, the alternative hypothesis concerning environmental compliance policy provides a satisfactory basis for explaining market performance by Nigerian quoted companies for the period under study. This result indicates that the variable of environmental compliance policy is a significant driver of performance via tobin q. Compliance with environmental policies such as: Harmful Waste Act 42 of 1988, Associated Gas Re-injection Act Cap 26, LFN 1990 and its attendant regulations. The Oil in Navigable Waters Act Cap 331, LFN 1990 and its attendant regulations. Solid and Hazardous Management Regulation 1991, the Pollution Abatement in Industries and Facilities Generating Wastes- Regulations S.1.9, of 1999, National Environmental Standards and Regulations Enforcement Agency (NESREA) Act of 2007, Security and Exchange

Commission (SEC) Code of Corporate Governance, 2016, International Accounting Standard (IAS 37) on contingency costs which creates the need for tracking and reporting environmental liabilities that affect the Statement of Financial Position of a firm, Nigerian Gas Master Plan, 2008 which is a guide for the commercial exploitations and management of Nigeria's gas sector aimed at growing the economy with gas, Final Deadline on Gas Flaring etc: significantly improves market performance in Nigerian quoted companies during the period under review. This finding does not agree with previous findings of Garg (2015), Hussain (2015). But agree with the findings of Yu & Zhao (2015), Ioannou & Serafeim (2014). Asuquo (2012) found that firms' performance has significant positive relationship with environmental policies.

With reference to ***enviromental sensitive products (ensprod = 0,322),*** its effect on firm market performance among quoted companies in Nigeria is positive on market performance but statistically insignificant even at 10%. The t-value showed 0.83 while its P-value is 0.408. In other words, firms products capable of emitting toxics and harmful waste is positively but insignificantly related to firm financial performance. Contrary to finding of Fisher-Vanden & Thorburn (2011) that there is significant losses in the market value of firms announcement of a greenhouse gas emissions reduction goals. Notice that the result from this model has a close resemblance with the result obtained from the same variable of the accounting performance model in terms of direction and sign.

Evidence from the result suggest that the variable of *environmental conservative disclosure (enconsd =* 0.032) is positive but not significantly related to firm market performance among quoted firms in Nigeria during the period under review. This is revealed from the P-value of 0.954 which is greater than 5% level of significance adopted for this study. This finding indicate that as quoted firms in Nigeria engage in environmental conservative disclosure practices and activities, market performance of these companies improves but at an insignificant level. Here, a cursory look shows that the result from this model has a close resemblance with the result obtained from the same variable of the accounting performance model in terms of direction and sign. This finding lends credence to the Yu and Zhao (2015), Isa (2014), Calace (2013), Ameer and Othman (2012).

As regards to the variable of *environmental donations (envdo),* it is revealed that based on the slope coefficient of (1.35) the variable have a positive influence on our sampled quoted company's market performance and is statistically significant at 1%   since it p-value was less than 0.05[0.001]. This outcome translate to suggest that quoted companies in Nigeria whose accounting activities covers reports of environmental related donations have been experiencing significant improvement in its performance of shareholders value. This revelation contradicts the findings obtained from the same

variable in the model of firm financial accounting performance. Based on the above result, we find a varying relationship with previous studies of Manchiraju and Rajgopal (2015).

Energy Consuming Assets (engycon) As relates to the variable of Energy Consuming Assets, it can be deduced that the slope coefficient of (0.455) reveals that Energy Consuming Assets have a positive influence on our sampled quoted company's market performance and is statistically insignificant at 5 percent since it p-value is greater than 0.05[0.19]. This contradict the findings of Khlif et al (2015) that polluting sectors reduces corporate performance measured by Tobin's q.

FIRM SIZE (fsize) have a positive influence on firm financial performance. Much concern should be placed on it since it was statistically significant in influencing firm financial performance in a model which comprises of environmental sustainability variables of quoted companies in Nigeria. In other words larger firms produce better performance in terms of return on total asset. This is evident from the slope coefficient of 5.24 with a P-value of 0.004 significant at 5% level. This empirical evidence coincides with previous findings of Isa (2014), Frias-Accituno et al (2012), Effiok et al (2013), Latridis (2013), Uwuigbe (2012), and Freedman & Patten (2004).

Firm Age (AGE) showed a positive (coefficient of 0.056) and statistically insignificant (P-value of 0.207) relationship with firm accounting financial performance variable of return on total assets. This mean that the age of a firm does not necessarily guarantee a better performance in terms of firm financial performance. Much concern may not be assigned to this variable as it appeared to be insignificantly related to the dependent variable of return on total assets (retoa). Therefore, this result aligns with results of previous empirical studies of Gull, Saeed and Abid (2013).

With respect to the variable of *LEVERAGE* (tlbta = 0.605), its impact on firm financial performance among quoted companies in Nigeria is positive and statistically significant at 1%. The t-value showed 13.88 while its P-value is 0.000. In this model, result reveals that as financial leverage which shows the degree of proportion of external capital and internal capital used to finance the company's assets increases, firm financial performance among quoted companies in Nigeria will significantly increase. This result is in line with the findings of Ng & Rezaee (2014); Khatab et al (2011) but negates the empirical work of Mulyadi & Anwar (2012).

Secondly, the regression results for accounting based performance measure ROA and specific social sustainability disclosures (model 2a) on table 4.11 the variable of *Social Donation (socdon)* with a coefficient of = 1.051 impacts positively on firm financial performance and it is statistically significant at 1% level (P-value 0.006) during the period of study. This signifies that on the basis of a strategic

provision of social donations in generating profit, more and more financial donations in social sustainability guarantee significant improvement in firm financial performance of quoted companies in Nigeria during the period under review. ₦1 increase in social donation will lead to 105% increase in return on assets.

The variable of ***Disclosure of Community, Social Responsibility (disocr)*** was found to have a negative and insignificant relationship with firm performance (-0.989 with P-value = 0.94). This does not support prior evidences that suggest that an improvement in disclosure activities of social responsibility will lead to significant improvement in the firm's financial performance. The outcome as obtained here however supports the empirical findings of Nguyen et al, (2015) and Vujicic (2015) that found that community disclosure has significant negative relationship with Return variables. But not in line with the work of Usman & Amran (2015) that found a significant positive relationship between community involvement disclosure and ROA. Aggarwal (2013), that found an insignificant positive realationship with ROA and other accounting based performance measures

Furthermore, social sustainability variable of ***Disclosure of Charitable Gifts (discgft)*** reveals a positive relationship with firm financial profitability (2.871). However the relationship is insignificant as its probability value is greater than 5% benchmark adopted in this study. (P-value = 0.18). This result suggest that as quoted companies in Nigeria continue to engage in disclosing donations and charity gifts activities in its annual reports meant for users of its financial statement, no meaningful improvement in terms of firm financial performance have been experienced. Against this backdrop, the finding from this study reveals a direct but insignificant relationship which may be indicative of less optimal disclosure that would impact significantly on quoted firms' financial performance during the period of study. This result supports the findings of Ioannou and Serafeim (2014). Okwemba et al (2014) that found a significant positive relationship between organizational profitability and philanthropic activities.

Another result to note in this study is the variable ***Disclosure of Human Resources and Employee Relations (hrempr = 19.477).*** This have a positive influence on accounting performance of return on total assets but statistically insignificant even at 10%. The t-value is 1.14 while its P-value is 0.25. In other words, the null hypothesis provides a satisfactory basis for explaining the depth of social sustainability practices on human resources and employee relation activities implemented by Nigerian companies. This result agrees with prior empirical result Albuquerque et al (2013). But contradict the findings of Usman and Amran (2015) that human resource disclosure have a posisitive relationship with ROA

Job Creation (jobcr = 5.520) have a positive influence on firm performance and it is statistically significant at 1%. The t-value is 4.20 while its P-value is 0.000. The finding support the findings of Gherghina, Vintilă, & Dobrescu (2015) Our finding further suggest that an additional man power to the services of the firm will significantly improve firm financial performance among quoted companies for the period under consideration in Nigeria. The result indicates that this is sustainable because it is statistically significant at 1%, hence may be considered for policy action.

Investment in Employee *(invemp = 142.52)* have a positive influence on environmental disclosure and is statistically significant at 1%. The t-value is 8.50 while its P-value is 0.00. In other words, the alternative hypothesis concerning investment in employee provides a satisfactory basis for explaining the breath of social sustainability practices and activities implemented by Nigerian companies. Stretching this result further, it is evident that a unit increase in human capacity building leads to a significant increase of N142.52 in firm financial performance among quoted companies in Nigeria. This result follow prior researchers' argument which suggests that investment in human capacity building can significantly increase firm financial performance. However, our finding contradict the empirical findings of Onyekwelu, & Ugwu (2017). Aggarwal (2013), found that employee performance rating has significant negative relationship with ROA and other accounting based performance measures. The favorable relationship between investment in employee and accounting based measure of performance is due to the additional workers input, associated with such investments in employee. It is the belief that those profit opportunities forgone by investing in employee will improve the ability to attract and retain quality personnel which will increase the competitiveness and the profit of the organization (Samy, Odemilin, & Bampton, 2010).

Furthermore, social sustainability ***Disclosure of Employee Health, Safety and Welfare (ehswdis)*** suggest a negative relationship with firm financial performance. (-2.543). However the relationship is not significant as its probability value is greater than 5% benchmark adopted in this study. (P-value = 0.876). This result suggest that as quoted companies in Nigeria continue to engage in disclosing items relating to employee health, safety, and its welfare packages in its annual reports meant for users of its financial statement, no meaningful improvement in relation to firm financial performance have been experienced. Following this background, the finding from this study reveals an inverse but insignificant effect which may be indicative of less optimal disclosure that would impact significantly on quoted firms' financial performance during the period under review. This finding follows the findings of previous empirical result of Uwuigbe (2012). The study is contrary to the findings of Oti et al (2012) that there is significant relationship between employee health and safety and return on assets.

Result of the regression for market based performance measure Tobin's q and specific social sustainability disclosures (model 2b) on table 4.13 showed that the variable of *Social Donation (socdon)* with a coefficient of .3425 have positive effect on firm financial performance and it is statistically significant at 5% level (P-value 0.051) during the period of study. This signifies that on the basis of a strategic provision of social donations in generating profit, more and more financial donations in social sustainability, guarantee significant improvement in firm financial performance of quoted companies in Nigeria during the period under review by 34%.

On the other hand, the variable of *Disclosure of Community, Social Responsibility (disocr)* was found to have a positive but insignificant effect on firm performance (.0246 with P-value 0.927). This support prior evidences that an improvement in disclosure activities of social responsibility will lead to significant improvement in the firm's financial performance. The outcome as obtained here however supports the empirical findings of Siddiq and Javed (2014). But negates the work of Oti et al (2012) that found a significant relationship between community development and return on investment of environmentally responsible firms.

Furthermore, social sustainability variable of **Disclosure of Charity Gifts (discgft)** reveals an insignificant negative effect on firm financial performance measured by tobins q. This is confirmed by a coefficient of -.0614 and its probability value of 0.901 which is greater than 5% benchmark adopted in this study. This result suggest that as quoted companies in Nigeria continue to engage in disclosing donations and charity gifts activities in its annual reports meant for users of its financial statement, there is reduction in financial performance of firms. This result supports the findings of Folajin, Ibitoye, & Dunsin (2014).

Another result to note in this study is the variable *Disclosure of Human Resources and Employee Relations* (HREMPR = .0554) which have a positive influence on accounting performance of Tobin's q but statistically insignificant even at 10% confirmed by its P-value is 0.989. This is similar to the findings of Usman & Amran (2015), that human resource disclosure have no relationship with share price.

Job Creation (.1822) have positive and significant effect on firm performance. The coefficient value of .1822 and P-value of 0.001 confirms that. Our finding further suggest that an additional man power to the services of the firm will increase financial performance among quoted companies for the period under consideration in Nigeria at significant rate. Notice that the result from this model has a close resemblance with the result obtained from the same variable of the accounting performance model in

terms of direction and sign. Thus job creation is significant driver of firm performance and hence may be considered for policy action.

Investment In Employee *(invemp* = 11.819*)* have a significant positive effect on corporate performance measured by Tobin's q as confirmed by P-value of 0.003 which is less than the bench mark of 5%. This result follow prior researchers' argument which suggests that investment in human capacity building can significantly increase firm financial performance. This did not support the findings of Onyekwelu, & Ugwu (2017), that employee cost have no effect on firm performance. Result from this analysis has a close resemblance with the result obtained from the same variable of the accounting performance model in terms of direction and sign.

Furthermore, social sustainability indicator: ***Disclosure of employee Health Safety and Welfare (ehswdis)*** show a positive effect on firm performance. (.8269). However the effect is not statistically significant as its probability value is greater than 5% benchmark adopted in this study. (P-value 0.827). This result suggest that as quoted companies in Nigeria continue to engage in disclosing items relating to health, safety, and its welfare packages in its annual reports meant for users of its financial statement, no meaningful improvement in relation to firm financial performance have been experienced. This is not in line with the findings of Nguyen et al (2015) that employee disclosures have negative effect on firm value.

Thirdly, the regression results for accounting based performance measure ROA and specific corporate governance sustainability disclosures (model 3a) on table 4.15 show that , the variable of ***board size (bsize)*** with a coefficient of = 0.120 impacts positively on accounting performance and it is statistically significant at 5% level (P-value 0.053) during the period of study. This result reveals that expanding an eight-person board by one member implies an addition in profitability of about 0.120. This change is economically significant. This justifies the argument that larger boards are positive and significantly related with higher corporate performance. Also that larger board will be more effective in monitoring financial reporting, because the company might be able to appoint directors with relevant and complementary expertise and skills and, thus, draw from a broader range of knowledge and experiences. Additionally, previous researchers posit that executives may start to prioritize the firm's interests rather than their own along with the increase in the board size. This finding contradicts the findings of Narwal and Jindal (2015), Akinyomi and Olutoye (2015) that found that there is no statistically significant relationship between board size and profitability. Uwuigbe, & Oyeniyi (2014), Dincer & Dincer (2013), but uphold the findings of Danoshana & Ravivathani (2013), Gull, Saeed & Abid (2013), Tornyeva & Wereko (2012), and Duke et al (2012).

On the other hand, the variable of **Board Independence (boind)** have a negative and statistically significant effect on accounting performance of return on total assets. Coefficient of -4.931 and P-value of 0.003 confirms this. One possible reason for this result is that outside directors appointed to the board may lack specific knowledge regarding the operations of the companies into which they direct specifically in Nigeria. The outcome as obtained here however negates the findings of Uwuigbe (2014) but correspond with the assertion of Malm and Mobbs (2014) that one concern with independent directors is that they are less knowledgeable of firm-specific actions than are inside directors. They also found that greater board independence can inhibit a board's ability to monitor internal actions or favor shareholders over other stakeholders. Specifically, mandatory increases in board independence, which reduces a board's knowledge of firm-specific information, makes a firm more susceptible to product liability, and labor litigation. Thus greater board independence did not indeed increase the likelihood of a firm improving performance. This is also in line with Bradley and Chen (2015) that document that an exogenous increase in board independence leads to an increase in firm risk-taking behavior. Gull et al (2013) found that percentage of non-executive gave negative association with firm performance. Contradict the findings of Narwal and Jindal (2015) that Non-executive directors has insignificant positive influence on profitability.

Furthermore, corporate governance variable of **Board Gender Diversity (bodg)** reveals a positive effect on return on total assets of the firm (16.444). The relationship is significant as its probability value is lesser than 5% benchmark adopted in this study. (P-value = 0.013). This result suggest that as quoted companies in Nigeria continue to engage more female on the board, there will be meaningful improvements in terms of firm accounting performance. This result may equally suggest that the market will punish firms that did not give female chance to participate on boards since board gender diversity was found to have a significant effect on performance. These findings may have arisen because majority of the sampled companies have significant numbers of women directors on the board thereby influencing the strategies of the firms. Prior research finds that female executives are more risk averse (Faccio, Marchica, & Mura, 2015). This characteristics can cause their monitoring and advising to focus on reducing the possibility of extreme negative outcomes, which reduces the likelihood of the firm being subject to poor future corporate performance. This result supports the findings of Garba and Abubakar (2014) and Reguera-Alvarado, de Fuentes, and Laffarga (2015), Taib et al (2012) that diverisity indices has a positive significant impact on ROA but negates finding of Sila, Gonzalez, & Hagendorff (2016).

Another result to note in this study is the variable: Size of **Directors Shareholding (dhold = -0.044)** which have a negative influence on market performance but statistically insignificant even at 10%. The t-value is -1.55 while its P-value is 0.122. In other words, the null hypothesis concerning Size of

Directors Shareholding provides a satisfactory basis for explaining accounting performance of Nigerian quoted companies. This contravene the argument that directors shareholding aligns the interests of managers and shareholders and thus enhances performance (Zhou 2001). This result is in line with the finding of Akinyomi and Olutoye (2015), Uadiale (2010) that there is insignificant negative relationship between directors interest and profitability. But disagree with prior empirical results of Fallatah & Dickins (2012), Cho (1998) and Mehran (1995). This did not support the assertion that managers who have equity ownership may attempt to maximize firms' performance as well as shareholders' wealth.

Audit Committee Size *(1.925)* have a positive influence on accounting performance and it is statistically significant at 1%. The t-value is 2.76 while its P-value is 0.006. A plausible explanation for this positive relationship is that according to our expectations, the findings of the study suggest that a higher number of audit committee members have a positive impact on return on assets. This is in line with the regulator's requirement of having at least 3 members in audit committees. Such a result is also in consonants with the agency theory which posit that the larger the number of audit committee members to monitor the actions of manager, the more information asymmetry is reduced and the interest of the owners not managers are pursued, the better the company's financial performance. Though larger audit committee size may seem on the surface to increase monitoring cost but the end benefit surpass the cost. A small audit committee lacks the variety offered by a large one in terms of skills, expertise and knowledge and this makes them ineffective. This finding is also in agreement with the findings of Danoshana and Ravivathani (2013), Fallatah and Dickins (2012), Tornyeva and Wereko (2012), Okougbo (2011), but disagree with the findings of Narwal and Jindal (2015) Dincer and Dincer (2013) and Akhtaruddin, Hossain, Hossain, and Yao (2009) that audit committee members have significant negative impact on profitability. Our findings further indicate that an additional audit committee member will significantly improve firm performance value by 193% among quoted companies in Nigeria for the period under consideration in Nigeria. The researcher suggests that this opinion is sustainable because it is statistically significant at 1%, hence may be considered for policy action.

Director Remuneration *(dcost = -0.163)* have a negative influence on firm financial performance and is statistically significant   The P-value and coefficient of -0.163 confirms that. This indicates that an increase in director's remuneration will reduce return on assets by 16%. This result contradict the findings of Ruparelia and Njuguna (2016), Narwal and Jindal (2015) found that directors remuneration has significant positive impact on profitability, Miyienda, Oirere, & Miyogo (2013) and Fernandes, (2008).

Auditors Credibility (audcred 0.087) have a positive influence on firm financial performance but is statistically insignificant even at 10%. Its P-value is 0.947. This result is not in support of the reasoning that while it would be easy for firms to arm twist Non-Big 4 audit firms and get them to do their bidding even when it is unethical, it would be nearly impossible to get a Big 4 audit firm to go against the tenets of auditing practices because it has a reputation to protect. This result is not in consonant with prior researchers' argument which suggests that employing the services of big4 audit firms can significantly increase firm financial performance.

Result of the regression for market based performance measure Tobin's q and specific corporate governance sustainability disclosures (model 3b) on table 4.17 showed that the variable of **board size** (bsize) with a coefficient of = 0.170 impacts positively on market performance and it is statistically significant at 1% level (P-value 0.005) during the period of study. This result reveals that expanding an eight-person board by one member implies an addition in profitability of about 0.170. This change is economically significant. This result validates the argument that larger boards are positive and significantly related with higher corporate performance. Following the same argument that, larger board might be more effective in monitoring financial reporting, because the company might be able to appoint directors with relevant and complementary expertise and skills and, thus, draw from a broader range of knowledge and experiences. Additionally, previous researchers posit that executives may start to prioritize the firm's interests rather than their own along with the increase in the board size. Drawing inference from our finding, we conclude that board size is significantly related to firm market value. Interestingly this finding is the same with the result obtained from the model of accounting performance and corporate governance. This finding lends credence to the views of Gull et al 2013, Danoshana & Ravivathani (2013) but negates Narwal & Jindal (2015).

On the other hand, the independent variable of **Board Independence** (boind) is found to have a negative and significant relationship with firm performance of tobin q (coefficient of -0.301 with P-value = 0.005). This result aligns with the findings obtained from the model of accounting performance and corporate governance sustainability indicators. The ressult supports the findings of Fauzi & Locke (2012) and Garg, (2007). The outcome as obtained here however negates the findings of Gull et al (2013), Fallatah & Dickins (2012) but supports findings of Fauzi & Locke (2012), Garg, (2007).

Corporate governance variable of **Board Gender Diversity (bodg)** reveals a positive relationship with tobin q (1.57). However the relationship is not statistically significant as its probability value is greater than 5% benchmark adopted in this study. (P-value = 0.293). This result is slightly different from the accounting performance model in that the explanatory variable revealed a statistically significant effect on return on assets but here it reveal an insignificant effect on tobin's q. The findings suggest that although the variable of board gender diversification enhances firm performance via accounting

measures of performance it was not strong enough to enhance shareholders value via tobin q. This is in line with the finding of Reguera-Alvarado et al (2015), Garba & Abubakar (2014) but contradict Sila et al (2016).

Another result to note in this study is the variable: Size of **Directors Shareholding** *(dhold = -0.010) which* appears to have a negative influence on market performance but statistically insignificant even at 5%. The t-value is -1.63 while its P-value is 0.103. This outcome agrees with the outcome obtained from the model of accounting performance. The findings contradict Gonzalez, & Hagendorff (2016) but is in line with the study of Reguera-Alvarado, de Fuentes, & Laffarga (2015) and Garba & Abubakar (2014).

Audit Committee Size (0.412) have a positive influence on market performance and it is statistically significant at 5%. The t-value is 2.61 while its P-value is 0.009. Compared with the model of accounting performance, we observe that the variable is in tandem taking a look at both the sign and level of significance. The researcher suggests that this opinion is sustainable because it is statistically significant at 5%, hence may be considered for policy action. This support the findings of Danoshana & Ravivathani (2013). However, this finding is not in agreement with the findings of Narwal & Jindal (2015) and Dincer & Dincer (2013).

Director Remuneration *(dcost = -0.008)* have a negative influence on firm market value but statistically insignificant even at 10%. The t-value is -1.53 while its P-value is 0.127. Stretching this result further, it is evident that a naira increase in directors' remuneration or an increase in factors that will increase the naira value of directors' remuneration will lead to an insignificant fall in firm market performance of 0.008 among quoted companies in Nigeria. A more careful observation shows that market performance model and firm accounting performance model reveals that the variable of director remuneration equals in sign but differs in magnitude and level of significance.

Auditors Credibility (big4a coeff 0.267) have a positive influence on firm market based performance measure but it is statistically insignificant even at 10%. The t-value is 0.92 while its P-value is 0.358. This insignificant positive relationship is also found in the model of accounting based performance. This finding did not support the reasoning that while it would be easy for firms to arm twist Non-Big 4 audit firms and get them to do their bidding even when it is unethical, it would be nearly impossible to get a Big 4 audit firm to go against the tenets of auditing practices because it has a reputation to protect. This result is not in consonant with prior researchers' argument which suggests that employing the services of audit big4 firms can significantly increase firm financial performance.

4.4.3 Regression Results for Components of Sustainability Disclosure and Test of Hypotheses

To test hypothesis one that: Environmental sustainability disclosures have no effect on firm perforamcne. Regression result for both accounting based performance measure ROA and market based performance measure Tobin's q and Environmental Sustainability Index (model 1c amd 1d) on tables 4.19 and 4.21 was used. Specific variables of environmental compliance policy, environmental sensitive products, environmental conservative disclosure, environmental donation reporting and energy consuming assets were first regressed with firm performance proxy by ROA and Tobin's Q (model 1a and 1b) and then the principal component analysis (PCA) based on the individual disclosures was used to generate the composite index for environmental disclosures sustainability (ENVI) which was used for the regression on table 4.19 and 4.21. Analysis shows that the variable of environmental sustainability disclosures index (ENVI) with coefficient of 0.806 and P-value of 0.155 have positive but insignificant effect on return on assets of firms in Nigeria during the period of study. The result indicates that a unit increase in environmental sustainability disclosures will result to an insignificant increase in the return on total assets of sampled firms during the period of study. Stretching this result further, it is evident that environmental compliance policy, environmental sensitive products, environmental sustainability disclosure, environmental donation reporting and energy consuming assets are not significant drivers of corporate performance via return on assets. This is in line with the findings of Taib et al (2012) that Environmental indices do not have significant impact on ROA. Okwemba et al (2014), Nyirenda et al (2013), Cortez and Cudia (2011) found insignificant positive relationship between environmental activities and organisational profitability. but negates the findings of Hussain (2015) Eze et al (2016), Khlif et al (2015), Uwuigbe (2012), Bassey et al (2013), Clarkson, Fang, Li, and Richardson (2010). Freedman and Patten (2004), Aggarwal (2013) that environmental performance rating has significant negative relations with ROA and other performance measures.Specifically analysis revealed that environmental compliance policy is a significant driver of performance via return on asset. Environmental sensitive products has no significant effect on return on assets. Environmental conservative disclosure has positive but insignificant effect on return on assets. Environmental donations has positive but insignificant effect on return on assets. While Energy consuming assets has significant negative effect on return on assets.

When interacted with Tobin's q, the variable of Environmental Sustainability Disclosures Index (ENVI) with coefficient of 0.424 and P-value of 0.001 have positive and significant effect on market value of firms in Nigeria during the period of study. The result indicates that a unit increase in environmental sustainability disclosures will result to 42% significant increase in the market value (tobin's q) of sampled firms during the period of study. This support the findings of Hussain (2015) Ioannou and Serafeim (2014), that environmental sustainability have positive and significnt relationship with both

firm value and accounting performance of reporting firms. Makori and Jagongo found that envionmental cost has a significant positive relations with the net profit margin and dividend per share. Cortez and Cudia (2011) found that Environmenatak sustainability performance has positive and significant impact on revenue generation but insignificant positive impact on profitability and shareholders wealth. Wagner (2010) and Clarkson et al (2010) found that environmental sub indices of corporate sustainability reporting ia significantly and positively associated with Tobin Q. But contrary to the findings of Usman and Amran (2015), that environmental disclosures have significant negative effect on both measures of corporate financial performance; and also Mervellskemper et al (2015) that environmental performance scores have negative impact on market value of equity. Reddy and Gordon (2010) found that Environmental report component of sustainability reporting was insignificant in explaining the abnormanl returns of companies. Stretching this result further, various specific disclosures results show that environmental compliance policy is a significant driver of performance Tobins q Environmental sensitive products has positive but insignificant effect on Tobins q. Environmental conservative disclosure has positive but insignificant effect on Tobins q. Environmental donations has positive and significant effect on Tobins q. While Energy consuming assets has positive but insignificant effect on Tobin's q.

Decision: From the foregoing we conclude that environmental sustainability disclosures have positive but insignificant effect on ROA of firms in Nigeria. Also environmental sustainability disclosures have positive significant effect on Tobin's Q of firms in Nigeria.

To test hypothesis two that: Social sustainability disclosures have no effect on firm Perforamcne.
Regression result for both accounting based performance measure of ROA and market based performance measure of Tobin's q and Social Sustainability Index (model 2c amd 2d) on tables 4.19 and 4.21 was used. Recall that the individual social sustainability disclosures (social donations, disclosure of community, social responsibility, disclosure of charitable gifts, disclosure of human resources and employee relations, job creations, investment in employee, disclosure of health, safety and welfare) were first regressed with firm performance proxy by ROA and Tobin's Q (model 2a and 2b) and then the principal component analysis (PCA) based on the individual disclosures was used to generate the composite index for social sustainability (SOCI) which was used for the regression on table 4.19 and 4.21. Social sustainability disclosure Index **(SOCI)** have positive effect on firm performance measured here with return on assets and the effect is statistically significant. Coefficient of 0.882 and P-value of 0.039 which is less than 5% benchmark adopted for this study confirms this assertion. The results indicate that as sampled firms continue to be involve and disclose on social sustainability issues, their return on assets increase by 88%. The results show that social sustainability with our control variables of firm size, firm age and firm leverage affect companies' return on assets.

Specific analysis shows that social donations have significant effect on performance of quoted companies in Nigeria. Disclosure of community, social responsibility was found to have a negative and insignificant effect on return on assets. Disclosure of charitable gifts have positive and insignificant effect on firm performance. Disclosure of human resources and employee relations has positive but insignificant effect on firm performance in Nigeria. Job creation have a positive and significant influence on return on assets. Investment in employee have significant positive effect on return on assets. Disclosure of employee health, safety and welfare has insignificant negative effect on return on assets. This findings lend credence to the empirical result of Hasan et al (2016), Hussain (2015) and Ioannou and Serafeim (2014), that social sustainability have significant and positive relationship with both market performance and accounting performance of reporting firms. Reddy and Gordon (2010) found that only CSR component of sutainability report was significant in explaining abnormanl retuns of companies. But contradict the work of Onyekwelu and Ugwu (2017), Mervellskemper et al (2015) that social performance score have a negative impact on market value of equity. Taib et al (2012) that community indices do not have signifcant impact on ROA.

Also variable social sustainability disclosure **(SOCI)** have negative and insignificant effect on firm performance measured with tobins q. Coefficient of -0.034 and P-value of 0.716 which is more than 5% benchmark adopted for this study confirms this assertion. The results indicate that as sampled firms continue to be involve and disclose on social sustainability issues, their market value decreases by an insignificant fraction. Specific analysis shows that social donations have significant positive effect on market value. Disclosure of community, social responsibility was found to have a positive but insignificant effect on firm value. Disclosure of charitable gifts have negative and insignificant effect on firm value. Disclosure of human resources and employee relations has positive but insignificant effect on firm value. Job creation have positive and significant influence on firm performance. Investment in employee have significant positive effect on return on assets. Disclosure of employee health, safety and welfare has insignificant positive effect on firm value. This negates the findings of Hasan et al (2016), Hussain (2015), Gherighina et al (2015) and Ioannou and Serafeim (2014), that social sustainability have significant and positive relationship with both market performance and accounting performance of reporting firms. Reddy and Gordon (2010) found that only CSR component of sutainability report was significant in explaining abnormanl retuns of companies. Wagner (2010) found that social sub indices of corporate sustainability reporting is significantly and positively associated with Tobins Q. Khlif et al (2015) that social disclosures has insignificant positive effect on Tobins Q. But support the work of Nnamani et al (2017) that social responsibility measured by Total Equity to Total Asset (TETA) ratio has no significant effect on the return on assets (ROA). Mervellskemper et al (2015) that social performnce scores have negative impact on market value of equity. Vujicic (2015) found that CSR score has an extremely statistically significant negative impact on the returns.

Decision: From the above empirical analysis, Social sustainability disclosures have significant positive effect on ROA. On the other hand social sustainability disclosures have insignificant negative effect on Tobin's Q.

To test hypothesis three that corporate governance sustainability disclosures have no effect on firm Perforamance. Regression result for both accounting based performance measureof ROA and market based performance measure of Tobin's q and Governance Sustainability Index (model 3c amd 3d) on tables 4.19 and 4.21 was used. Recall that the individual governancne sustainability disclosures of of board size, board independence, board gender diversity, directors' shareholding, audit committee size, directors' remuneration, auditors credibility, were first regressed with firm performance proxy by ROA and Tobin's Q (model 3a and 3b) and then the principal component analysis (PCA) based on the individual disclosures was used to generate the composite index for Governance sustainability Imdex (SOCI) which was used for the regression on table 4.19 and 4.20. Results reveal that the variables of **GOVI** with a slope coefficient of = 2.251 impacts positively and significantly at 1% (P-value 0.000) on ROA during the period of study. This result reveals that a unit increase in the components of board size, board independence, board gender diversity, directors' shareholding, audit committee size, directors' remuneration, and audit credibility significantly improve ROA of quoted companies in Nigeria. Specifically board size have significant positive effect on ROA. Board independence have significant negative effect on ROA. Board Gender Diversity have significant positive effect on ROA. Directors Shareholding which have a negative influence on ROA and it statistically insignificant. Audit Committee Size have a significant positive effect on ROA. Director Remuneration have a significant negative influence on ROA. Auditors Credibility have an insignificant positive influence on ROA. The result support the findings of Mervellskemper, et al (2015), Haryono and Paminto (2015) that corporate governance has positive significant effect on firms financial performance. Aggarwal (2013) found that Governance performance rating has significant positive relationship wit ROA and other performance measures. Tornyeva and Wereko (2012) found that corporate governance has positive impact on ROE and ROA.

The result also show that the variables of **GOVI** with a slope coefficient of 0.561 impacts positively and significantly at 1% (P-value 0.000) on firm value during the period of study. This result reveals that a unit increase in the components of corporate governance sustainability disclosures will significantly improve market value of quoted companies in Nigeria. Specifically board size have significant positive effect on firm value. Board independence have significant negative effect on firm value. Board Gender Diversity have insignificant positive effect on firm value. Directors Shareholding have a negative influence on firm value and it statistically insignificant. Audit Committee Size have a significant

positive effect on firm value. Director Remuneration have a insignificant negative influence on firm value. Auditors Credibility have an insignificant positive influence on firm value.

Decision: These changes from the analysis are economically significant and therefore, suggest that we conclude that corporate governance sustainability disclosures have significant positive effect on both ROA and Tobin's Q. The result can be applied for policy recommendations

To test hypothesis four that aggregate sustainability indices does not significantly drive firm performance, Robust regression results for both accounting based performance measureof ROA and market based performance measure of Tobin's q and overall Sustainability Disclosures Index (SDI) model 4a amd 4b on tables 4.25 and 4.28 was used. Sustainability Disclosure Index (SDI or ESG) is a composite index derived from the individual ENVI, SOCI, GOVI and regressed with ROA and Tobin's q (model 4a and 4b). Robust analyses reveal that the variable **SDI** with a slope coefficient of .902 and P-value of 0.000 have a positive effect on ROA during the period of study. This effect is statistically significant at 1% which is less than 5% benchmark adopted for this study. This result reveals that an increase in aggregate sustainability disclosure significantly improve ROA of quoted companies in Nigeria by 90%. The finding is similar to the work of Nwobu, O. (2015) that there is positive correlation between sustainability index and Profit After Tax and shareholders fund. Also Yu and Zhao (2015) that found that sustainability indices is significantly and positively associated with firm value. The work of Haryono and Iskandar (2015), found that Corporate Social Performance sum of economic, environment and social performance have a significant positive effect to financial measures of ROA. Ameer and Othman (2012) discovered that companies disclosing ustianbility related information have significantly higher ROA and other accounting based performance measures. Lopez et al (2007) found that in the long run there is a direct relation between sustainability indices and perormance of profit before tax. This result is contrary to the finding of Garg (2015) that sustainability reporting has negative impact on ROA and Tobins q in the short run and insignificant impact on both measures in the long run. Siew et al (2013) discovered that the correlation between financial performance and ESG is not strong.

Similarly, the variable **SDI** with a slope coefficient of .193 and P-value of 0.000 have a positive effect on firm value proxy by Tobins q during the period of study. This effect is statistically significant at 1% which is less than 5% benchmark adopted for this study. This result reveals that an increase in aggregate sustainability disclosure significantly improve market value of quoted companies in Nigeria. This support the work of Yu and Zhao (2015) that sustainability indices is significantly and positively associated with firm value. Reddy and Gordon (2010) found that sustainability reporting has statistically significant relationship with market returns.This result is contrary to the finding of Garg (2015) that sustainability reporting has negative impact on ROA and Tobins q in the short run and insignificant impact on both measures in the long run. It also negates the findings of Mervellskemper et al (2015) that

all ESG scores have insignificant effect on market value of equity. And Haryono and Iskandar (2015) that sum of economic, environmental and social performance which they terms corporate social performance have negative insignificant effect on firm value performance measures of Tobins q and price to book value.

Decision: Changes from the analyses are economically significant and therefore, suggest that we should reject null hypothesis as stated and conclude that aggregate sustainability disclosures have significant positive effect on both ROA and Tobin's Q. The result is sustainable and can be applied for policy recommendations.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

The study investigates the effect of sustainability disclosures on firm performance taking into account environmental, social and governance sustainability attributes by employing samples from quoted companies in Nigeria between the periods of 2006–2015. The result from Pooled ordinary least squares multiple regression using ROA and Tobin's Q measures of performance showed that:

1. Environmental sustainability disclosures have positive but insignificant effect on accounting based performance measured by ROA of firms in Nigeria. By interacting each specific environmental disclosure, it was discovered that environmental compliance policy is a

significant driver of performance via return on asset. Environmental sensitive products has no significant effect on return on assets. Environmental conservative disclosure has positive but insignificant effect on return on assets. Environmental donations has positive but insignificant effect on return on assets. While Energy consuming assets has significant negative effect on return on assets.

On the other hand, environmental sustainability disclosure have significant positive effect on market based performance measured by Tobin's q. Various specific disclosures results showed that environmental compliance policy is a significant driver of performance Tobins q Environmental sensitive products has positive but insignificant effect on Tobins q. Environmental conservative disclosure has positive but insignificant effect on Tobins q. Environmental donations has positive and significant effect on Tobins q. While Energy consuming assets has positive but insignificant effect on Tobins.

2. The variable social sustainability disclosure have significant positive effect on accounting performance measured here with return on assets. Specific analysis shows that social donations have significant effect on performance of quoted companies in Nigeria. Disclosure of community, social responsibility was found to have a negative and insignificant effect on return on assets. Disclosure of charitable gifts have positive and insignificant effect on firm performance. Disclosure of human resources and employee relations has positive but insignificant effect on firm performance in Nigeria. Job creation have a positive and significant influence on return on assets. Investment in employee have significant positive effect on return on assets. Disclosure of employee health, safety and welfare has insignificant negative effect on return on assets.

Social sustainability disclosure have negative and insignificant effect on firm value measured with Tobin's q. Specific analysis shows that social donations have significant positive effect on market value. Disclosure of community, social responsibility was found to have a positive but insignificant effect on firm value. Disclosure of charitable gifts have negative and insignificant effect on firm value. Disclosure of human resources and employee relations has positive but insignificant effect on firm value. Job creation have positive and significant influence on firm performance. Investment in employee have significant positive effect on return on assets. Disclosure of employee health, safety and welfare has insignificant positive effect on firm value.

3. It was discovered that corporate governance sustainability have significant positive effect on ROA. Specifically board size have significant positive effect on ROA. Board independence have

significant negative effect on ROA. Board Gender Diversity have significant positive effect on ROA. Directors Shareholding which have a negative influence on ROA and it statistically insignificant. Audit Committee Size have a significant positive effect on ROA. Director Remuneration have a significant negative influence on ROA. Auditors Credibility have an insignificant positive influence on ROA.

Similarly, corporate governance sustainability have significant positive effect on firm value measured by Tobin's q. Specifically board size have significant positive effect on firm value. Board independence have significant negative effect on firm value. Board Gender Diversity have insignificant positive effect on firm value. Directors Shareholding have a negative influence on firm value and it statistically insignificant. Audit Committee Size have a significant positive effect on firm value. Director Remuneration have a insignificant negative influence on firm value. Auditors Credibility have an insignificant positive influence on firm value.

4. Overall sustainability disclosures have significant positive effect on ROA among sampled firms during the period of the study. Also, overall sustainability disclosures have significant positive effect on Tobin's q used to measure market performance of firms.

The results for control variable of Firm Size (fsize) showed an insignificant positive effect on firm accounting based performance measureof ROA. In a market performance and aggregate sustainability disclosure regression model, firm size revealed a significant negative effect on Tobin's q. The results with each component of sustainability disclosure was discussed in the last chapter.

Firm age showed a positive and statistically significant effect on accounting performance variable of return on assets. It also have positive but insignificant effect on Tobin's q. The result of interaction with each component of sustainability disclosure was discussed in chapter four.

With respect to the variable of **LEVERAGE**, it has a statistically significant negative effect on accounting performance variable of return on assets. Interestingly, it also have a significant negative effect on Tobin's q used to measure market performance. The debt level of a firm has the potential to impact financial performance due to costs of finance and risk of default.

Overall, our findings suggest that sustainability disclosures are more aligned with firm value as seen in the higher values for the Adjusted R-squared for all the market based performance models.

5.2 **Conclusion**

Sustainability disclosures require great deal; nevertheless evidence from this study suggests that it is one worth taking. This indicates that financial rewards of engaging in sustainability disclosures practices outweigh the costs involved in the long run. Companies which score highly on the sustainability metrics are more sustainable and therefore more attractive to long-term investors and other stakeholders. Pleasing investors through increasing transparency on aggregated environmental, social and corporate governance disclosures ultimately resulted in financial benefits for the company.

The study shows that firms in Nigeria are rapidly catching up when it comes to increases in the level of disclosure in each components of sustainability disclosures. Pooled ordinary least squares multiple regression provided support that environmental sustainability disclosures through compliance with environmental policies by firms improves bottom line. Shareholders, investors, and others value firms lowly if the firm increases investment on energy consuming assets. This indicates that firms that uses more energy do not outperform others. Firms in Nigeria whose accounting activities covers disclosure on environmental related donations experienced significant improvement in its performance of shareholders value.

Fostering greater social sustainability disclosure can have value enhancing or decreasing effect depending on whether it is related to market value of firm or return on assets. Strategic provision of social donations guarantee significant improvement in performance. Additional man power to the services of the firm through job creation significantly improve firm performance just like investment in human capacity building is value enhancing.

Corporate governance sustainability disclosures that are positively associated with firm bottom line are board size, engaging more female on the board and adequate member in the audit committee to monitor the actions of managers. However, care should be taken about the number of outside directors appointed to the board and the mode of compensating the directors as they have value decreasing effect.

The findings of this study supported the assumptions of agency theory that when imbalance in information is reduced through sustainability disclosures some agency costs will be reduced and this will translate to firms' bottom line. Cost of complying with sustainability disclosure is being offset by improve competitiveness and long term financial performance by helping the principal have details of all the agents' activities.

Also by disclosing on all the sustainability issues, firms are shifting from the conventional objective of maximizing shareholders interest only to consider also other groups that both affect and are affected by the actions of the firm. This support the propositions of stakeholders' theory that communicating effectively with all stakeholders of a firm, is critical to its long term success, viability and growth.

The results showed that components of a firm's sustainability disclosures like making social donations help a firm in gaining social legitimacy which enables them to enjoy increased patronage and revenue. This conforms with the assumptions of legitimacy theory.

5.3   Recommendations

The findings of this study have policy implications for government, managers, shareholder, accountancy regulatory bodies and other stakeholders. Major Recommendations based on empirical findings:

1. Firms in Nigeria should adopt and disclose environmental friendly policies like making donation towards environmental protection and providing for alternative source of energy considering resultant carbon emissions associated with using more energy consuming assets and finitness of these natural resources. These environmental sustainability activities when implemented allows managers to achieve both social and firm purposes.

2. Cosidering that no firm will survive in a collapsed society, companies operating in Nigeria should make their investment attractive by addressing such issues as investment in human capacity building, strategic provision of social financial and in-kind donations, increasing

workforce through job creation since they are not only important for long term survival but will reduce their vulnerability to societal crises.

3. Corporate governance and sustainability should be linked and reported together as this offer new opportunities for integrative approaches in addition to being value relevant. Diversity in the workplace particularly giving female chance to participate on the board is strategy that should be sustained by all companies in Nigeria considering that women with the risk averse nature influence firms strategies. Bearing in mind that number of outside directors appointed to the board and mode of compensation can have counter productive effect on corporate performance, shareholders are advised to be cautious in handling these issues.

4. Since a robust sustainability disclosures lift a firm above their competitors, companies should foster greater sustainability and long-term value creation by integrating sustainability metrics into their business model and strategy.

Other Recommendations based on Incidental Findings

1. We also recommended that accounting rules and reporting framework be reviewed so that with uniformity in sustainability practices among firms in Nigeria greater accountability and transparency will evolve.

2. The study also have some policy implications for government. Sustainability disclosures will remain sporadic among Nigeria firms without legislations, so regulatory authorities in Nigeria should take steps like South Africa and other countries that have shown unprecedented commitment in driving corporate sustainable development initiatives leading to sustainable business environment that will be beneficial to government, firms and other stakeholders. There should be stiff penalties on firms against non-compliance as that will reduce environmental degradation to a tolerable threshold.

3. The study has managerial implications even for variables that showed insignificant effect like disclosure of environmental sensitive products, employee health and safety issues in place to assist workforce members. Firms should keep on reporting on these strategies, programs as they can also bring operational improvements and make the company more sustainable over the long term.

4. Governmental and international agency in Nigeria should develop database of sustainability disclosures by firms in Nigeria like Thomson Reuters Asset4 database, Kinder, Lydenberger

and Domini (KLD) database, Dow Jones Sustainability Index DJSI in developed countries, it will encourage firms and even researchers to have increased concern for sustainability.

5.4   Contribution to Knowledge

The analysis of this study offers insights into sustainability literature in Nigeria by refining previous categorisations amd fragmented approaches, uncovering overlooked topic areas and substantiating trends.

Empirical evidence on the valuation effect of sustainability disclosure using ESG dimensions on performance of Nigerian firms is provided.

Another contribution of this study is that it extended the findings of effect of sustainability disclosures on corporate performance by using company specific disclosures to ensure that all the sustainability related issued disclosed by firms are considered.

To the best of our knowledge this study is the first from Nigerian literature to use single indicators of sustainability to develop sustainability model for the three dimensions of sustainability based on principal component analysis of the specific disclosures. Subsequently the effect of both the specific indicators and the cumulative scores were determined.

The study also confirms the theoretical assumptions that provision of sustainability related information is critical to a firm's ability to reduce information asymmetry between agent and principal, accommodate information needs of variety of stakeholders with sometimes conflicting demands, operate within the bounds and norms of the society to obtain acceptance while simultaneously improving overall performance.

5.5   Suggestions for Further studies

Futher studies on the effect of sustainability disclosure using ESG dimensions should be extended to Banks and other Financial sectorss of Nigeria.

There should be a study to disaggregate the effect of sustainability disclosures on corporate performance to market segments that is, finding out the outcome from different sectors.

There are factors that might help better explain the relationships identified in the paper. Future research may wish to explore these factors and also examine the mediating and moderating roles of some countries characteristics like macroeconomic context, institutional framework, financial system along with other companies' characteristics.

Other measurement of the control variables used in study and corporate performance measures should be considered. For instance firm size can be measured with natural log of revenue, natural log of market capitalization and natural log of employee may be considered. Also other corporate performance measures like Earnings Before Interest and Tax Margin, Gross profit margin, Return on capital employed.

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APPENDX I: DATA ANALYSIS

.

TABLE 1: DESCRIPTIVE STATISTICS (ENVIRONMENTAL)

stats	encompo	ensprod	ensonsd	envdo	engycon	ENVS
mean	.5880361	.1444695	.0677201	.1275395	6.432077	1.31e-09
p50	1	0	0	0	6.48	-.2848658
min	0	0	0	0	3.92	-2.295757
max	1	1	1	1	8.96	5.468668
sd	.4924666	.3517638	.2514069	.3337648	.8811275	1.32549
N	886	886	886	886	886	886

TABLE 2: DESCRIPTIVE STATISTICS (SOCIAL)

Fig 2:   Interlink between the three dimensions of sustainability reporting

stats	socdon	disocr	discgft	hrempr	jobcr	invtemp	ehsdis	SOCI
mean	.053544	.4288939	.9232506	.9875847	2.536321	.0296479	.986456	-8.69e-10
p50	.0009	0	1	1	2.52	.022	1	.1977686
min	0	0	0	0	.66	-.02	0	-12.90239
max	9.7867	1	1	1	4.28	.288	1	.8771055
sd	.3452238	.4951976	.2663438	.1107929	.5724079	.0326933	.1156533	1.439911
N	886	886	886	886	886	886	886	886

TABLE 3: DESCRIPTIVE STATISTICS (CORPORATE GOVERNANCE)

stats	bsize	boind	bogd	dhold	acsiz	dcost	audcred	GOVI
mean	8.866817	.6423363	.0747856	16.50044	5.465011	2.703342	.5970655	-1.07e-09
p50	9	.67	.08	3.72	6	.2975	1	.19503
min	3	0	0	0	4	0	0	-7.989573
max	17	1.13	.4	123.58	7	495.342	1	2.80061
sd	2.431963	.164372	.0858043	23.1074	.8781178	30.36445	.4907648	1.27332
N	886	886	886	878	886	886	886	878

TABLE 4: DESCRIPTIVE STATISTICS (PERFORMANCE AND CONTROL VARIABLES)

stats	retoa	tobin	fsize	fage	tlbta
mean	3.08296	2.460158	6.894616	23.04402	74.07687
p50	4.06	1.37	6.87	25	59.54
min	-188.95	.05	4.84	1	-253.15
max	232.62	75.65	9.05	65	1797.72
sd	19.03013	4.924098	.7785661	13.23816	135.6332
N	885	885	886	886	883

```
TABLE 5: ESG DESCRIPTIVE STATISTICS
    variable |     mean       p50        max       min        sd         N
-------------+-------------------------------------------------------------
         ESG |  1.44e-09 -.3621199  7.297141  -3.78998  1.843197       878
             -------------------------------------------------------------
```

TABLE 6: NORMALITY TEST

```
                 Skewness/Kurtosis tests for Normality
                                                     ------- joint ------
    Variable |   Obs   Pr(Skewness)  Pr(Kurtosis)  adj chi2(2)   Prob>chi2
-------------+---------------------------------------------------------------
       retoa |   885      0.0000        0.0000          .           0.0000
       tobin |   885      0.0000        0.0000          .           0.0000
     encompo |   886      0.0000           .            .              .
     ensprod |   886      0.0000        0.0000          .           0.0000
     enconsd |   886      0.0000        0.0000          .           0.0000
       evrdo |   886      0.0000        0.0000          .           0.0000
     engycon |   886      0.2357        0.6234        1.65          0.0383
      socdon |   886      0.0000        0.0000          .              .
      disocr |   886      0.0006           .            .              .
     discgft |   886      0.0000        0.0000          .           0.0000
      hrempr |   886      0.0000        0.0000          .           0.0000
       jobcr |   886      0.0504        0.1508        5.88          0.0530
     lnvtemp |   886      0.0000        0.0000          .           0.0000
      ehsdis |   886      0.0000        0.0000          .           0.0000
       bsize |   886      0.0000        0.8178       23.12          0.0000
       boind |   886      0.0000        0.0937       24.96          0.0000
        bogd |   886      0.0000        0.0053          .           0.0000
       dhold |   878      0.0000        0.0000          .           0.0000
       acsiz |   886      0.0000        0.0000          .           0.0000
       dcost |   886      0.0000        0.0000          .              .
     audcred |   886      0.0000           .            .              .
       fsize |   886      0.5810        0.1850        2.06          0.3565
        fage |   886      0.2637        0.0000       70.70          0.0000
       tlbta |   883      0.0000        0.0000          .           0.0000
        ENVI |   886      0.0000        0.0000          .           0.0000
        SOCI |   886      0.0000        0.0000          .           0.0000
        GOVI |   878      0.0000        0.0000          .           0.0000
```

TABLE 7: CORRELATION ANALYSIS

	retoa	tobin	encompo	ensprod	encosd	evrdo	engcon	socdon	disocr	discgft	hrempr	jobcr
retoa	1.0000											
tobin	-0.1942	1.0000										
encompo	0.0911	0.1340	1.0000									
ensprod	0.0700	0.0011	0.1114	1.0000								
enconsd	0.0818	-0.0012	0.0706	0.3394	1.0000							
evrdo	0.0544	0.0666	0.0058	0.1506	0.1987	1.0000						
engycon	0.1431	-0.0825	0.2341	0.1594	0.2975	0.2256	1.0000					
socdon	0.0316	0.0132	0.0521	-0.0169	-0.0019	0.0043	0.0138	1.0000				
disocr	-0.0081	0.0769	0.0555	0.3690	0.2131	0.1702	0.1895	-0.0205	1.0000			
discgft	0.0437	0.0218	-0.0311	0.0939	0.0783	0.1089	0.1012	0.0362	0.0409	1.0000		
hrempr	0.0786	0.0260	-0.0462	0.0442	0.0292	0.0407	-0.0034	0.0138	0.0714	0.2116	1.0000	
jobcr	0.2160	0.1118	0.1430	0.1062	0.1750	0.1621	0.6548	0.0147	0.1687	0.0004	-0.0518	1.0000
invtemp	-0.2455	-0.0771	-0.1192	-0.1200	-0.0647	-0.0075	0.0195	-0.0058	-0.1050	0.0015	0.0006	-0.0251
ehsdis	0.0718	0.0264	-0.0527	0.0464	0.0307	0.0427	-0.0084	0.0143	0.0770	0.1989	0.9529	-0.0390
bsize	0.0984	0.0107	0.1058	0.1788	0.1787	0.1623	0.4602	0.0824	0.1918	0.0474	0.0160	0.4073
boind	-0.0234	-0.0238	-0.0024	-0.0094	0.0537	0.0229	0.0223	-0.0208	-0.0242	0.0194	0.0453	0.0301
bogd	0.1221	-0.0268	-0.1133	0.0475	0.1520	0.0588	0.0582	0.0262	0.0287	0.0715	0.0150	-0.0065
dhold	-0.2211	0.1725	-0.0886	-0.2275	-0.0478	-0.1490	-0.2837	-0.0154	-0.0570	-0.0662	-0.0286	-0.2224
acsiz	0.0929	0.1076	-0.0585	0.0845	0.1644	0.2286	0.2699	0.0206	0.1163	0.0913	0.1318	0.2416
dcost	-0.4446	0.4028	0.0581	-0.0296	-0.0210	-0.0275	-0.1365	-0.0085	0.0746	0.0177	0.0086	-0.1108
audcred	0.0927	-0.0553	0.0202	0.1316	0.1125	0.0138	0.2196	-0.0513	0.0793	-0.0177	-0.0007	0.2280
fsize	0.1929	-0.1474	0.1279	0.1623	0.2886	0.2251	0.9048	-0.0153	0.1908	0.0852	-0.0103	0.6751
fage	0.0418	-0.0478	-0.0392	0.2280	0.1072	0.1668	0.0299	-0.0566	0.1131	-0.0050	-0.1780	0.0589
tlbta	-0.4426	0.6440	0.0789	-0.0395	-0.0336	-0.0305	-0.1840	-0.0208	0.1068	0.0267	-0.0042	-0.1644
ENVI	0.1487	0.0164	0.3771	0.6191	0.7130	0.5122	0.6794	0.0112	0.3510	0.1288	0.0279	0.4394
SOCI	0.0713	0.0389	-0.0530	0.0851	0.0538	0.0687	0.0065	0.0375	0.1451	0.4068	0.9647	-0.0657
GOVI	0.3130	-0.1601	0.0364	0.2427	0.1982	0.2203	0.4856	0.0277	0.1356	0.0762	0.0687	0.4218

	invtemp	ehsdis	bsize	boind	bogd	dhold	acsiz	dcost	audcred	fsize	fage	tlbta
invtemp	1.0000											
ehsdis	0.0093	1.0000										
bsize	-0.0087	0.0275	1.0000									
boind	-0.0706	0.0521	0.1455	1.0000								
bogd	-0.0140	0.0029	0.0380	-0.0237	1.0000							
dhold	0.0093	-0.0200	-0.1705	-0.0857	0.0240	1.0000						
acsiz	-0.0998	0.1313	0.2392	0.0624	0.0864	-0.1965	1.0000					
dcost	-0.0480	0.0089	-0.0830	0.0092	-0.0596	0.2477	0.0392	1.0000				
audcred	0.0335	-0.0091	0.0182	-0.0822	0.0615	-0.2666	0.1354	-0.0872	1.0000			
fsize	-0.0249	-0.0208	0.4491	-0.0314	0.0736	-0.3011	0.3149	-0.1911	0.3205	1.0000		
fage	0.0339	-0.1869	0.0697	0.0253	-0.0042	-0.3084	0.1028	-0.0333	0.2735	0.0486	1.0000	
tlbta	0.0053	-0.0038	-0.0954	-0.0463	-0.0911	0.3193	0.0481	0.6674	-0.0948	-0.2455	0.0165	1.0000
ENVI	-0.0890	0.0265	0.3832	0.0332	0.0933	-0.2715	0.2543	-0.0671	0.1852	0.6168	0.1751	-0.0903
SOCI	-0.0005	0.9620	0.0313	0.0462	0.0263	-0.0331	0.1423	0.0212	-0.0116	-0.0071	-0.1663	0.0153
GOVI	-0.0294	0.0656	0.5422	0.2006	0.1490	-0.7288	0.5647	-0.4083	0.4982	0.5450	0.2933	-0.3695

	ENVS	SOCI	GOVI
ENVS	1.0000		
SOCI	0.1627	1.0000	
GOVI	0.4252	0.0741	1.0000

```
TABLE 8: ESG CORRELATION MATRIX
            |    retoa    tobin      ESG     ENVS     SOCI     GOVI
------------+------------------------------------------------------
      retoa |   1.0000
      tobin |  -0.1943   1.0000
        ESG |   0.2232  -0.0306   1.0000
       ENVS |   0.1225   0.0050   0.8640   1.0000
       SOCI |  -0.0919   0.0865  -0.3215  -0.2069   1.0000
       GOVI |   0.3116  -0.1587   0.6761   0.3430  -0.2395   1.0000
```

TABLE 9: ACCOUNTING PERFORMANCE AND ENVIRONMENTAL SUBSTAINABILITY INDICATOR (E)
 regress retoa encompo ensprod ensusrp evrdo engycon fsize fage tlbta

```
      Source |       SS       df       MS              Number of obs =      882
-------------+------------------------------           F(  9,   872) =    28.19
       Model |  72149.7318     9   8016.63687          Prob > F      =   0.0000
    Residual |  247934.975   872    284.3291           R-squared     =   0.2254
-------------+------------------------------           Adj R-squared =   0.2174
       Total |  320084.707   881  363.319758           Root MSE      =   16.862

------------------------------------------------------------------------------
       retoa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     encompo |   5.203135   1.227236     4.24   0.000     2.794454    7.611817
     ensprod |   .5019041   1.763402     0.28   0.776    -2.959105    3.962913
     enconsd |   2.945595   2.496251     1.18   0.238    -1.953766    7.844957
       evrdo |   .8799017   1.792149     0.49   0.624    -2.637529    4.397332
     engycon |   -3.88677   1.604387    -2.42   0.016    -7.035681   -.7378586
       fsize |   5.240255   1.790303     2.93   0.004     1.726448    8.754062
        fage |   .0563064   .0445845     1.26   0.207     -.031199    .1438119
       tlbta |   .0605822   .0043651    13.88   0.000     .0691495    .0520149
       _cons |  -8.387802   5.733762    -1.46   0.144    -19.64139    2.865785
------------------------------------------------------------------------------
```

TEST FOR MULTICOLINEARITY (VIF TEST)

```
    Variable |       VIF       1/VIF
-------------+----------------------
     engycon |      6.10    0.163809
       fsize |      5.99    0.166855
     enconsd |      1.23    0.816001
     ensprod |      1.20    0.835614
     encompo |      1.13    0.884549
       evrdo |      1.10    0.905384
       tlbta |      1.09    0.919711
        fage |      1.08    0.925948
-------------+----------------------
    Mean VIF |      2.21
```

TEST FOR HETEROSCEDASTICITY
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of retoa

        chi2(1)   = 1938.80
        Prob > chi2 =   0.3000

TABLE 10: MARKET PERFORMANCE AND ENVIRONMENTAL SUBSTAINABLITY INDICATORS (E)
  regress tobin Q encompo ensprod ensusrp evrdo engycon fsize fage tlbta

Source	SS	df	MS		Number of obs = 882
Model	9317.16947	9	1035.24105		F(9, 872) = 74.55
Residual	12108.6047	872	13.8860146		Prob > F = 0.0000
					R-squared = 0.4349
					Adj R-squared = 0.4290
Total	21425.7742	881	24.3198345		Root MSE = 3.7264

tobin	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]
encompo	.6873783	.2710229	2.54	0.011	.1554449 1.219312
ensprod	.3227017	.3897646	0.83	0.408	-.4422846 1.087688
ensusrp	.0320772	.5516727	0.06	0.954	-1.050684 1.114839
evrdo	1.353815	.3940787	3.44	0.001	.5803612 2.127269
engycon	.4558094	.3545585	1.29	0.199	-.2400784 1.151697
fsize	-.6141115	.3954651	-1.55	0.121	-1.390286 .1620631
fage	-.0266261	.0098319	-2.71	0.007	-.045923 -.0073291
tlbta	.0230733	.0009646	23.92	0.000	.02118 .0249665
_cons	2.031811	1.266628	1.60	0.109	-.4541843 4.517806

TEST FOR MULTICOLINEARITY

Variable	VIF	1/VIF
engycon	6.09	0.164083
fsize	5.98	0.167173
ensusrp	1.23	0.815944
ensprod	1.20	0.835334
encompo	1.13	0.885035
evrdo	1.10	0.907560
tlbta	1.09	0.919756
fage	1.08	0.927122
Mean VIF	2.21	

TEST FOR HETEROSCEDATICITY
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of tobin

        chi2(1)   =   345.89
        Prob > chi2 =   0.4100

TABLE 11: ACCOUNTING PERFORMANCE AND SOCIAL SUBSTAINABLITY INDICATORS
regress retoa socdon disocr discgft hrempr jobcr invtemp ehsdis fsize fage tlbta

Source	SS	df	MS		Number of obs = 882
Model	92588.8424	10	9258.88424		F(10, 871) = 35.45
Residual	227495.864	871	261.189282		Prob > F = 0.0000
					R-squared = 0.2893
					Adj R-squared = 0.2811
Total	320084.707	881	363.319758		Root MSE = 16.161

retoa	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]
socdon	1.051282	1.57934	0.67	0.006	-2.048475 4.151038
disocr	-.9891851	1.157751	-0.85	0.393	-3.261493 1.283123
discgft	2.871123	2.118081	1.36	0.176	-1.286017 7.028263
hrempl	19.47718	17.01284	1.14	0.253	-13.91378 52.86814
jobcr	5.52098	1.31316	4.20	0.000	2.943653 8.098308
invtemp	142.5246	16.76346	8.50	0.000	175.4261 109.6231
ehsdis	-2.543934	16.28422	-0.16	0.876	-34.50484 29.41697
fsize	-.6283505	.9833865	-0.64	0.523	-2.558435 1.301734
fage	.098586	.0425623	2.32	0.021	.0150493 .1821226
tlbta	-.0588752	.004201	-14.01	0.000	-.0671204 -.0506299
_cons	-19.31338	7.468457	-2.59	0.010	-33.97166 -4.655104

```
TEST FOR MULTICOLINEARITY (VIF TEST)
    variable |      VIF       1/VIF
-------------+----------------------
      hrempl |     12.04    0.083073
      ehsdis |     12.02    0.083213
       fsize |      1.97    0.508017
       jobcr |      1.86    0.536472
      disocr |      1.11    0.901543
       tlbta |      1.10    0.912152
     discgft |      1.08    0.927695
        fage |      1.07    0.933336
     invtemp |      1.02    0.984996
      socdon |      1.01    0.992890
-------------+----------------------
    Mean VIF |      3.43

TEST FOR HETEROSCEDATICITY
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of retoa

         chi2(1)      =   1512.74
         Prob > chi2  =    0.4100
```

TABLE 12: MARKET PERFORMANCE AND SOCIAL SUBSTAINABILITY INDICATORS

```
 regress tobin Q socdon disocr discgft hrempr jobcr invtemp ehsdis fsize fage tlbta
       Source |       SS       df       MS              Number of obs =      882
-------------+------------------------------           F( 10,   871) =    64.50
        Model |  9115.94822    10   911.594822          Prob > F       =   0.0000
     Residual |  12309.826    871   14.1329805          R-squared      =   0.4255
-------------+------------------------------           Adj R-squared =   0.4189
        Total |  21425.7742   881   24.3198345          Root MSE       =   3.7594

------------------------------------------------------------------------------
       tobin |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      socdon |   .3425855   .3673631     0.93   0.051    -.378435    1.063606
      disocr |   .0246635   .2691506     0.09   0.927   -.5035961    .5529231
     discgft |  -.0614877   .4926516    -0.12   0.901   -1.028411    .9054354
      hrempr |   .0554244   3.957444     0.01   0.989   -7.711817    7.822666
       jobcr |   .1822615   .3052661     0.60   0.001    .7814047    .4168817
     invtemp |   11.81903   3.898824     3.03   0.003    19.47122    4.166841
      ehswdis |   .8269366   3.787879     0.22   0.827   -6.607501    8.261374
       fsize |   .1621499   .2285812     0.71   0.478   -.2864844    .6107842
        fage |  -.0186527   .0098818    -1.89   0.059   -.0380476    .0007422
       tlbta |    .023564   .0009771    24.12   0.000    .0216463    .0254817
       _cons |   .0014247   1.736432     0.00   0.999   -3.406656    3.409506
------------------------------------------------------------------------------
```

```
    TEST FOR MULTICOLINEARITY
        Variable |      VIF       1/VIF
    -------------+----------------------
          hrempr |     12.04    0.083073
          ehsdis |     12.02    0.083217
           fsize |      1.96    0.509281
           jobcr |      1.86    0.537367
          disocr |      1.11    0.902619
           tlbta |      1.10    0.912384
         discgft |      1.08    0.927874
            fage |      1.07    0.934107
         invtemp |      1.02    0.984679
           donta |      1.01    0.992978
    -------------+----------------------
        Mean VIF |      3.43

    TEST FOR HETEROSCEDATICITY
    Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
             Ho: Constant variance
             Variables: fitted values of tobin

             chi2(1)      =    210.95
             Prob > chi2  =    0.5200
```

```
TABLE 13: ACCOUNTING PERFORMANCE AND CORPORATE GOVERNANCE
regress rota bsize boind bogd dhold acsiz dcost audcred
      Source |       SS       df       MS              Number of obs =      874
-------------+------------------------------           F( 10,    863) =    30.42
       Model |  83301.726     10   8330.1726           Prob > F      =   0.0000
    Residual | 236357.503    863   273.878914          R-squared     =   0.2606
-------------+------------------------------           Adj R-squared =   0.2520
       Total | 319659.229    873   366.161775          Root MSE      =   16.549


------------------------------------------------------------------------------
       retoa |    Coef.    Std. Err.      t     P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       bsize |   .1209186   .2688257     0.45   0.053    -.4067101    .6485472
       boind |  -4.931931   3.530066    -1.40   0.003   -11.86045    1.996589
        bogd |   16.44486   6.634647     2.48   0.013    3.422931    29.46679
       dhold |  -.0441601   .0285656    -1.55   0.122    -.1002262    .0119061
       acsiz |   1.925228   .6985159     2.76   0.006     .5542391    3.296217
       dcost |  -.1633447   .024722     -6.61   0.000    -.2118671   -.1148224
     audcred |    .087477   1.285642     0.07   0.006    -2.435874    2.610828
       fsize |   .6327748   .9218187     0.69   0.493    -1.176494    2.442044
        fage |   .0150508   .0463759     0.32   0.746     -.075972    .1060735
       tlbta |   -.034112   .005797     -5.88   0.000    -.0454899   -.0227341
       _cons |   -7.65862   6.614843    -1.16   0.247    -20.64168    5.324443
------------------------------------------------------------------------------


TEST FOR MULTICOLINEARITY (VIF TEST)
    Variable |      VIF       1/VIF
-------------+----------------------
       tlbta |     1.99     0.502403
       dcost |     1.82     0.549225
       fsize |     1.64     0.610949
       dhold |     1.39     0.719422
       bsize |     1.35     0.742295
     audcred |     1.27     0.788164
        fage |     1.20     0.835506
       acsiz |     1.19     0.840561
       boind |     1.06     0.946021
        bogd |     1.03     0.972714
-------------+----------------------
    Mean VIF |     1.39


TEST FOR HETEROSCEDATICITY
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of retoa

        chi2(1)      =    520.18
        Prob > chi2  =    0.4000

TABLE 14: MARKET PERFORMANCE AND CORPORATE GOVERNANCE SUBSTAINABLITY INDICATORS
  regress tobin q bsize boind bogd dhold acsiz dcost audcred

      Source |       SS       df       MS              Number of obs =      874
-------------+------------------------------           F( 10,    863) =    66.43
       Model |  9313.90565    10   931.390565          Prob > F      =   0.0000
    Residual |  12100.0472   863   14.0209122          R-squared     =   0.4349
-------------+------------------------------           Adj R-squared =   0.4284
       Total |  21413.9528   873   24.5291556          Root MSE      =   3.7445


------------------------------------------------------------------------------
       tobin |    Coef.    Std. Err.      t     P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       bsize |   .1704281   .0607704     2.80   0.005     .051153    .2897032
       boind |  -.3019308   .7984959    -0.38   0.005   -1.869152    1.26529
        bogd |   1.579196   1.501961     1.05   0.293   -1.368727    4.52712
       dhold |  -.0105325   .0064571    -1.63   0.103    -.023206    .002141
       acsiz |   .4121272   .1580242     2.61   0.009    .1019703    .722284
       dcost |  -.0085396   .0055937    -1.53   0.127    -.0195184    .0024391
     audcred |   .2674935   .2908823     0.92   0.358    -.3034261    .838413
       fsize |  -.4445072   .2084441    -2.13   0.033    -.8536239   -.0353906
        fage |  -.0344752   .0104713    -3.29   0.001    -.0550273    -.013923
       tlbta |   .0250095   .0013116    19.07   0.000     .0224351    .0275838
       _cons |   .8233623   1.496687     0.55   0.582    -2.11421    3.760935
------------------------------------------------------------------------------
```

```
TEST FOR MULTICOLINEARITY (VIF TEST)
     variable |      VIF        1/VIF
------------+---------------------
       tlbta |     1.99     0.502414
       dcost |     1.82     0.549219
       fsize |     1.63     0.612317
       dhold |     1.39     0.720788
       bsize |     1.35     0.742854
      audcred |     1.27     0.787482
        fage |     1.20     0.836451
       acsiz |     1.19     0.840799
       boind |     1.06     0.945098
        bogd |     1.03     0.972524
------------+---------------------
     Mean VIF |     1.39
```

TEST FOR HETEROSCEDATICITY
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of tobin

```
     chi2(1)      =     230.83
     Prob > chi2  =     0.4500
```

TABLE 15: ENVIRONMENTAL SUBSTAINABLITY INDICATORS SCORE

```
Principal components/correlation              Number of obs    =        886
                                              Number of comp.  =          5
                                              Trace            =          5
       Rotation: (unrotated = principal)      Rho              =     1.0000

       ---------------------------------------------------------------------
        Component |   Eigenvalue   Difference       Proportion   Cumulative
       -----------+---------------------------------------------------------
           Comp1  |    1.75692     .731107             0.3514       0.3514
           Comp2  |    1.02582     .125255             0.2052       0.5565
           Comp3  |     .900562     .17162             0.1801       0.7367
           Comp4  |     .728942    .141188             0.1458       0.8824
           Comp5  |     .587753        .                0.1176       1.0000
       ---------------------------------------------------------------------
```

Principal components (eigenvectors)

```
    ----------------------------------------------------------------------------
     Variable |    Comp1      Comp2      Comp3      Comp4      Comp5 | Unexplained
    -----------+-----------------------------------------------------+-----------
      encompo |   0.2874     0.8234    -0.0406     0.3585     0.3305 |     0
      ensprod |   0.4661    -0.2157    -0.5910     0.4503    -0.4292 |     0
      enconsd |   0.5332    -0.2477    -0.2772    -0.4526     0.6104 |     0
        envdo |   0.3876    -0.3736     0.6791     0.4703     0.1670 |     0
      engycon |   0.5154     0.2731     0.3332    -0.4926    -0.5532 |     0
    ----------------------------------------------------------------------------
```

TABLE 16: SOCIAL SUBSTAINABLITY INDICATORS SCORE

```
Principal components/correlation              Number of obs    =        886
                                              Number of comp.  =          7
                                              Trace            =          7
       Rotation: (unrotated = principal)      Rho              =     1.0000

       ---------------------------------------------------------------------
        Component |   Eigenvalue   Difference       Proportion   Cumulative
       -----------+---------------------------------------------------------
           Comp1  |    2.07334     .854308             0.2962       0.2962
           Comp2  |    1.21904     .207929             0.1741       0.4703
           Comp3  |    1.01111    .0330118             0.1444       0.6148
           Comp4  |     .978095   .0862476             0.1397       0.7545
           Comp5  |     .891847    .108181             0.1274       0.8819
           Comp6  |     .783666    .740761             0.1120       0.9939
           Comp7  |    .0429056        .                0.0061       1.0000
       ---------------------------------------------------------------------
```

Principal components (eigenvectors)

variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7	Unexplained
socdon	0.0258	-0.0035	0.9507	-0.1334	-0.2441	0.1346	0.0006	0
disocr	0.1020	0.6774	-0.0933	0.0774	-0.0086	0.7183	0.0033	0
discgft	0.2923	0.0378	0.2404	0.0396	0.9231	-0.0391	-0.0101	0
hrempr	0.6721	-0.0390	-0.0581	-0.0022	-0.1912	-0.0715	0.7083	0
jobcr	-0.0505	0.6146	0.1331	0.4744	-0.0898	-0.6073	0.0086	0
invtemp	0.0021	-0.3993	0.0716	0.8657	-0.0277	0.2919	0.0066	0
ehswdis	0.6703	-0.0328	-0.0591	0.0113	-0.2068	-0.0724	-0.7057	0

TABLE 17: CORPORATE GOVERNANCE INDICATORS SCORE

Principal components/correlation

Number of obs	= 878
Number of comp.	= 7
Trace	= 7
Rho	= 1.0000

Rotation: (unrotated = principal)

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	1.62134	.435378	0.2316	0.2316
Comp2	1.18597	.132806	0.1694	0.4010
Comp3	1.05316	.0528154	0.1505	0.5515
Comp4	1.00034	.159436	0.1429	0.6944
Comp5	.840908	.145715	0.1201	0.8145
Comp6	.695193	.0921047	0.0993	0.9138
Comp7	.603088	.	0.0862	1.0000

Principal components (eigenvectors)

Variable	Comp1	Comp2	Comp3	Comp4	Comp5	Comp6	Comp7	Unexplained
bsize	0.4261	0.4426	0.0146	0.1109	-0.5035	0.5948	-0.0515	0
boind	0.1548	0.5966	-0.3292	0.1463	0.6730	0.0124	0.1927	0
bogd	0.1098	-0.0807	0.5864	0.7320	0.2353	0.0111	-0.2149	0
dhold	-0.5731	0.1670	0.2622	0.1376	-0.1235	0.2105	0.7045	0
acsiz	0.4454	0.2676	0.4536	-0.2492	-0.1463	-0.5784	0.3259	0
dcost	-0.3197	0.3535	0.4790	-0.5034	0.2274	0.2021	-0.4443	0
audcred	0.3916	-0.4660	0.2087	-0.3098	0.3870	0.4756	0.3377	0

TABLE 18: ACCOUNTING PERFORMANCE AND ESG COMPONENT

regress retoa ENCI SOCI GOVI

Source	SS	df	MS
Model	72965.1707	6	12160.8618
Residual	246694.059	867	284.537553
Total	319659.229	873	366.161775

Number of obs	= 874
F(6, 867)	= 42.74
Prob > F	= 0.0000
R-squared	= 0.2283
Adj R-squared	= 0.2229
Root MSE	= 16.868

retoa	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
ENVS	.8062005	.5658202	1.42	0.155	-.304337	1.916738
SOCI	.88237	.427345	2.06	0.039	.0436184	1.721122
GOVI	2.251492	.6064115	3.71	0.000	1.061286	3.441698
fsize	-.425835	1.049107	-0.41	0.685	-2.484921	1.633251
fage	.0090034	.0477408	0.19	0.850	-.0846976	.1027044
tlbta	-.0543905	.0045911	-11.85	0.000	-.0634015	-.0453796
_cons	9.820521	7.587133	1.29	0.196	-5.070775	24.71182

TEST FOR MULTICOLINEARITY (VIF TEST)

Variable	VIF	1/VIF
fsize	2.04	0.490047
GOVI	1.83	0.546603
ENVS	1.72	0.581662
fage	1.22	0.819099
tlbta	1.20	0.832168
SOCI	1.07	0.933839
Mean VIF	1.51	

```
TEST FOR HETEROSCEDATICITY
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of retoa

        chi2(1)      =   1184.74
        Prob > chi2  =    0.4500
```

TABLE 19: MARKET PERFORMANCE AND ESG COMPONENT
regress tobin's q ENCI SOCI GOVI

```
      Source |       SS           df       MS              Number of obs =       874
-------------+----------------------------------         F( 6,   867) =    113.34
       Model |  9413.01042         6   1568.83507         Prob > F      =    0.0000
    Residual |  12000.9424       867   13.8419174         R-squared     =    0.4396
-------------+----------------------------------         Adj R-squared =    0.4357
       Total |  21413.9528       873   24.5291556         Root MSE      =    3.7205

-------------------------------------------------------------------------------------
       tobin |      Coef.   Std. Err.        t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------------
        ENVS |   .4243334   .1247845      3.40    0.001     .1794184    .6692483
        SOCI |  -.0343494   .0942491     -0.36    0.716    -.2193325    .1506337
        GOVI |    .561194   .1335387      4.20    0.000     .2990971    .8232908
       fsize |  -.7864555   .2312014     -3.40    0.001    -1.240235   -.3326756
        fage |  -.0434129   .0104992     -4.13    0.000    -.0640198   -.0228061
       tlbta |   .0246846   .0010126     24.38    0.000     .0226972    .026672
       _cons |    7.06219   1.670954      4.23    0.000     3.782602    10.34178
-------------------------------------------------------------------------------------
```

TEST FOR MULTICOLINEARITY (VIF TEST)

```
    Variable |       VIF       1/VIF
-------------+----------------------
       fsize |      2.04    0.491354
        GOVI |      1.82    0.548641
        ENVS |      1.72    0.581819
        fage |      1.22    0.821384
       tlbta |      1.20    0.832203
        SOCI |      1.07    0.933963
-------------+----------------------
    Mean VIF |      1.51
```

TEST FOR HETEROSCEDATICITY
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
```
        Ho: Constant variance
        Variables: fitted values of tobin

        chi2(1)      =    272.15
        Prob > chi2  =    0.2000
```

TABLE 20: ESG AND ACCOUNTING PERFORMANCE

```
      Source |       SS           df       MS              Number of obs =       874
-------------+----------------------------------         F( 4,   869) =     61.94
       Model |  70918.9931         4   17729.7483         Prob > F      =    0.0000
    Residual |  248740.236       869   286.237326         R-squared     =    0.2219
-------------+----------------------------------         Adj R-squared =    0.2183
       Total |  319659.229       873   366.161775         Root MSE      =    16.919

-------------------------------------------------------------------------------------
       retoa |      Coef.   Std. Err.        t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------------
         ESG |   1.931564   .4527311      4.27    0.000      1.04299    2.820138
       fsize |  -1.032277   1.068639     -0.97    0.334    -3.129693    1.065138
        fage |   .0204025   .0446387      0.46    0.648    -.0672098    .1080148
       tlbta |  -.0594533   .0043357    -13.71    0.000    -.0679629   -.0509437
       _cons |   14.11613   7.651328      1.84    0.065    -.9011148    29.13337
-------------------------------------------------------------------------------------
```

```
TEST FOR MULTICOLINEARITY (VIF TEST)

    Variable |       VIF       1/VIF
-------------+----------------------
         ESG |      2.11    0.473478
       fsize |      2.10    0.475118
       tlbta |      1.07    0.938687
        fage |      1.06    0.942494
-------------+----------------------
    Mean VIF |      1.59


Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of retoa

         chi2(1)      =   1488.14
         Prob > chi2  =    0.0000


Robust regression                          Number of obs =     873
                                           F(  4,   868) =  704.38
                                           Prob > F      =  0.0000

-----------------------------------------------------------------------------
       retoa |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
         ESG |  .9022059   .1995758     4.52   0.000     .5104982    1.293914
       fsize |   .102485   .4709088     0.22   0.828    -.8217682    1.026738
        fage |  .0377383   .0196724     1.92   0.055    -.0008728    .0763494
       tlbta | -.1054869   .0021058   -50.09   0.000    -.1096199   -.1013539
       _cons |  9.025322   3.371685     2.68   0.008     2.407712    15.64293
-----------------------------------------------------------------------------



TABLE 21: ESG AND MARKET PERFORMANCE (TOBINQ)

      Source |       SS        df       MS            Number of obs =     874
-------------+------------------------------         F(  4,   869) =  163.35
       Model |  9190.60713      4   2297.65178       Prob > F      =  0.0000
    Residual |  12223.3457    869   14.0659905       R-squared     =  0.4292
-------------+------------------------------         Adj R-squared =  0.4266
       Total |  21413.9528    873   24.5291556       Root MSE      =  3.7505


-----------------------------------------------------------------------------
       tobin |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
         ESG |  .4068476   .1001918     4.06   0.000     .2102015    .6034937
       fsize | -.5796488   .2366769    -2.45   0.015    -1.044174   -.1151236
        fage | -.0312716   .0098735    -3.17   0.002    -.0506503    -.011893
       tlbta |  .0235132   .0009611    24.47   0.000     .0216269    .0253996
       _cons |  5.441759   1.693569     3.21   0.001     2.117796    8.765723
-----------------------------------------------------------------------------
```