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Corporate sustainability disclosures and performance of Top 40 JSE listed companies

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DECLARATION

I, Motleke Virginia Moyane, declare that this research article is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Motleke Virginia Moyane

Signed at Pretoria

On the 22nd day of May 2023

DEDICATION

Completing this report wouldn't have been possible without the much valued and most appreciated support of the following:

The Lord Almighty, thank you for bringing me this far.

My late father, Legare Joseph Sefako, all I ever wanted was to make you proud, this degree is dedicated to you.

I would like to thank my mother, Nokana Sefako, for being a pillar of strength, always encouraging me "*when I felt like there is no light at the end of the tunnel*".

My husband Mjubi, and kids: Nyikiwa and Akani, for the love, understanding and unwavering support.

My brother and sisters, for always encouraging me and being available to listen.

In Nelson Mandela's words: "*It always seems impossible, until it's done*".

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ABSTRACT

"Corporate sustainability reports are typically included as part of integrated annual reports, because they explain to stakeholders how the organisation creates value over time" (IIRC, 2013). Literature posits that being a good corporate citizen is smart business and relevant for companies to report on how they affected the lives of communities in which they operate (King & Lessidrenska, 2009). This study assessed whether corporate sustainability reporting (evidenced through ESG components) affects the financial performance (ROA, ROE, ROI and Tobin's Q) of JSE Top 40 companies.

The study was quantitative in nature and took on characteristics of an event study which saw the collection of panel data on the JSE Top 40 companies over the period from 2017 to 2021. The data comprised of individualised ESG scores as determined through the Bloomberg ESG scoring matrix, together with reported financial performance measures over the period. The dependant variable for this study are the financial performance measures whilst the ESG scores are independent.

From a statistical perspective, the results of the study indicate mixed reactions. The results for environmental factors indicate a positive correlation to all performance measures and that the relationship to performance is statistically significant, suggesting that businesses might increase their financial performance by funding environmental initiatives. For social factors, results indicate a negative correlation to ROA, ROE and ROI whilst there is no correlation to Tobin's Q. Social indicators typically represent human obligations and such negative correlations imply that spending on this area may not yield positive financial returns but may yield better outcomes when considered against other intrinsic measures. The relationship between governance disclosures indicates positive correlations to ROA, ROE and ROI but negative for Tobin's Q whilst the relationship between governance and performance appears to be largely positive and significant, save for Tobin's Q which was negative and not statistically significant, thus proving that issues of effective corporate governance have a positive effect on financial performance.

It is hoped that this research will help focus organisational efforts on issues of sustainability activities by providing broad categories on which ESG factors to focus on in

order to yield more financial performance whilst also contributing to the body of work on corporate sustainability reporting and the effect this has on financial performance.

Keywords: Corporate Sustainability Reporting; Financial Performance; Return on Assets, Return on Investments, Return on Equity, Tobin's Q

Chapter 1: Research Problem

1. Introduction

Sustainability reporting relates to the disclosure by companies of their impact on the environmental, as well as on society, but also how they are governed (Tilt, Qian, Kuruppu, & Dissabayake, 2021). The phrases "ESG" and "Sustainability" are frequently used interchangeably, and neither the Johannesburg Securities Exchange (JSE) nor the London Stock Exchange (LSE) have a preference as to which should be used (JSE, 2022). But according to the King IV Report on Corporate Governance (King IV), sustainability is the ultimate, long-term goal of sustainable development and consists of, among other things, the following elements: "risks, opportunities, strategy, business model and performance" (IODSA, 2016).

"Governments all over the world are requiring companies to publish sustainability reports" (Scholtz, Calitz, Gomez, & Fischer, 2014). Standard setting organisations have developed tools to assist in standardising ESG/Sustainability disclosures, however, in most jurisdictions these remain largely unregulated and are done on a voluntary basis (JSE Ltd, 2021).

Extant literature supports the assertion that companies that allocate resources towards the improvement of their governance, social and environment outcomes get rewarded by the market (Hendrikse & Hefer-Hendrikse, 2012). High quality disclosures require the use of reputable reporting frameworks which call for companies to include ESG information that is standardised and comparable (Peterdy, 2022).

"Because sustainability reports have an impact on the decision making process of various stakeholders" (Guix, Bonilla-Priego, & Font, 2019), it is expected that companies should report truthfully on their positive and negative impacts on their operating environments (King & Lessidrenska, 2009). This is because stakeholders make value judgements based on sustainability reports. Moreover, the International Institute of Integrated Reporting (IIRC) posits that where organisations integrate this type of thinking and reporting to their

stakeholders, it “leads to better integration of information systems that support internal and external reporting” (IIRC, 2013).

1.1. Problem Statement

The JSE, through its Listings Requirements compels “companies listed on its boards to compile an integrated report which includes sustainability information” (JSE, 2022). From a regulatory perspective, “the driver for this was the King Code of Governance Principles for South Africa 2009 (King III) becoming a JSE listing requirement and calling for such disclosures to be made on an “*apply or explain*” basis” (KPMG (SA), 2012). However, from a stakeholder perspective, this was necessitated by that most Investors acknowledge the importance of non-financial information, even though most of them felt their present understanding was insufficient for informed decision making (IIRC, 2013). In order to move towards a sustainable state, all stakeholders, but especially businesses, must play a significant role (Ramanathan & Isaksson, 2021).

Over the past three decades, there has been a consistent increase in the number of corporate sustainability disclosures made by businesses (Huang, Xu, & Liu, 2014). This, coupled with increased stakeholder activism on ESG issues has increased the prominence of sustainability performance indicators to be disclosed by organisations. Whilst there have been notable increases in disclosures, these are not comparable from one year to the next nor from company to another or region to region(Zhang, Gao, & Zhang, 2007).

The guidance document by the JSE titled “*JSE Sustainability Disclosure Guidance June 2022*” aims to solve for the above problem by standardising the reporting landscape and providing for a framework to be used in measuring and reporting on sustainability issues in the JSE listed investments market.

There are numerous frameworks for integrating ESG responsibilities into performance measures(Speziale & Kloviene, 2014). These include amongst others: “the United Nations Sustainability Development Goals (SDG) framework; Global Reporting Initiative Standards (GRI); Integrated Reporting Framework; Sustainability Accounting Standards Board standards; Dow Jones Sustainability Index; Task Force on Climate-related Financial

Disclosures Standards" (Ramanathan & Isaksson, 2021). However, there remains gaps in contributions in academic literature specifically investigating the impact of corporate sustainability disclosures to performance measures (Speziale & Kloviene, 2014). "Thorough and accurate ESG reporting is paramount for both growth and transparency, but without a standardized methodology, sustainability reporting can be difficult to assess" (Envizi, 2021).

Proponents of corporate sustainability disclosures argue that some of the benefits of this include: "enhanced company image, reduced regulatory oversight, increased and/or improved access to capital" (etc.) (Hendrickse & Hefer-Hendrickse, 2012). Furthermore, that that such disclosures enable stakeholders to "benchmark the performance of companies and institutions, ideally year-on-year, against themselves and others within their sectors to assess their progress towards ESG goals" (Ramanathan & Isaksson, 2021).

According to (Elliot, 2004) as cited by Van Zyl (2013): "corporate activity is a major direct and indirect cause of environmental decline through pollution, resource and environmental service exploitation, investment strategies, and environmental and social impacts of international trade" (Van Zyl A. , 2013). Corporates must lead the sustainability narrative and build a coherent story around what they are doing to make an impact. "Sustainability is not just about following a standard or adhering to a rule but creating long term value by embracing opportunities and managing risks deriving from economic, environmental and social developments" (CRISA, 2022). Corporate sustainable development implies corporate social responsibility, it is for this reason that there needs to be an understanding on the impacts and possible impacts each sustainability indicator has on company performance.

This paper seeks to examine the relationships between disclosures and financial performance using firm internal measures (ROA, ROE and ROI) and an external measure (Tobin's Q factor) with the aims of understanding the relationship and impacts that disclosing this information has. Given that proponents for making disclosure argue the benefits of reporting on sustainability activities, the study further seeks to understand

whether sustainability development activities translate to improved company performance or if there is an impact at all.

Results of this study will be of interest to corporates who are seeking to understand the impacts their sustainability activities have on their financial performance but also to direct and focus resources on those activities that are likely to yield the best financial performance whilst also leading to internal and external efficiencies.

1.2. Research Scope

The primary goal of this study is to ascertain whether there is a relaionship between the statements made by corporates (as calculated through ESG scores over the stated periods) and the monetary results of the company as measured using the various financial performance matrices (ROE; ROI; ROA and TQ).

The coverage period for the analysis is reporting periods in respect of the preceding five (5) years to 31 December 2021, and includes companies that made up the Top 40 JSE Listed companies during that time (i.e., 2017 – 2021).

1.3. Rationale for the research

“There are varying standards and tools for measuring sustainability impacts, which makes it hard to evaluate in a standardised, consistent and comparable way the effects that companies have” (Hendrickse & Hefer-Hendrickse, 2012). ESG scores attempt to solve for this by providing an “objective evaluation of a given company, fund, or security’s performance with respect to ESG issues” (Corporate Finance Institute, 2022).

This study aims to determine if there are any relations between company financial performance and non-financial measures of impacts of investing in sustainability activities. It is envisaged that this study will contribute to determinations of whether firm financial performance is impacted by making sustainability disclosures. The study comprises of companies in the JSE Top 40 index which encompasses approximately fifteen (15)

industries thus showing that the results obtained from the analysis can be replicated in other industries, markets and countries.

1.4. Key assumptions

The JSE measures and considers the list of its top forty (40) companies on a quarterly basis taking in to account the market capitalisation of each of the companies over a given 3 months period (JSE, 2019). This study has two key assumptions:

- That the top 40 index constituents under consideration have not changed over the five years prior to that date. This will have the effect of standardising the data.
- That the top 40 constituents have been listed and made up the JSE Top 40 index for the whole duration of the five years under consideration.

1.5. Research objectives

The key objective of this study is to determine what the relationship is between company financial performance and corporate sustainability disclosures as articulated through ESG scores.

A secondary objective of the study is to understand the components contributing to the environmental, social and governance factors in sustainability reports that informed the ESG scoring.

1.6. Research questions

With the research problem and objectives defined, this study seeks to answer the following questions when considering the relationship between corporate disclosures as evidenced through ESG scores and company financial performance:

i. What is the relationship between company financial performance (as evidenced through ROA, ROI, ROE and Tobin's Q) and corporate sustainability disclosures relating to the governance factors?

ii. What is the relationship between company financial performance (as evidenced through ROA, ROI, ROE and Tobin's Q) and corporate sustainability disclosures relating to the social factors?

iii. What is the relationship between company financial performance (as evidenced through ROA, ROI, ROE and Tobin's Q) and corporate sustainability disclosures relating to the environmental factors?

1.7. Research hypothesis

This research is premised on the following hypothesis:

i. That there is no relationship between firm financial performance and disclosures relating to the governance aspects of Corporate Sustainability Disclosures reports.
ii. That there exists a relationship between firm financial performance and disclosures relating to the societal aspects of Corporate Sustainability Disclosures reports.
iii. That there exists a relationship between firm financial performance and disclosures relating to the environmental aspects of Corporate Sustainability Disclosures reports.

Chapter 2: Literature Review

2.1 Introduction

A vast amount of literature covering the topics of corporate sustainability reporting has been published. This section seeks to consider some of the key bodies of work on the topic of corporate sustainability reporting and company performance and consider the interrelationships existing between the two.

2.2 Shareholder theory

The Shareholder theory is premised on the principle that the sole objective of a company is to generate and maximize profits for its shareholders (Clarke & Friedman, 2018). Accordingly, management's sole motivation for the existence of a company and acting in the best interests of shareholders is to give them the greatest possible returns, thus, they have an “obligation to create value for shareholders” (Accounting Tools, 2022).

This theory presupposes a “declaration in favour of profit above all, and in particular, above all pretences to corporate social responsibility” (Clarke & Friedman, 2018). Moreover, this translates to companies being encouraged to seek short term profits in order to please their shareholders” (Thompson & Martin, 2005). Key to this is that shareholders’ interests come first, in both economics and corporate governance (Rhee, 2017) with everything else being considered as secondary, if at all. From this perspective, Thompson & Martin (2005) state that these interests may include annual dividends, increased return on investment, high and stable returns, increased share prices (etc.) but it all culminates in the shareholder’s interest being put to the fore, over every other objective.

With the world changing as fast as it is, it becomes impossible and irresponsible to ignore emergent issues (such as sustainability, good corporate citizenry etc.) and take advantage of the opportunities they present (Louw & Venter, 2006). A key criticism to this theory is that a singular focus on maximising shareholder value to the detriment of all other stakeholders can lead to poor and unsustainable business practices (Bocken, Short, Rana,

& Evans, 2014). A realisation that issues of sustainability development should be incorporated into strategies of every organisation is of much relevance as this will help the company avoid difficulties such as community anger, employee demotivation, customer dissatisfaction, reputational damage and even worse, loss of licenses which will ultimately negatively impact the company's shareholder in the long term (Louw & Venter, 2006). The financial crisis of 2008 vividly highlighted the dangers of long-term economic and societal harm and short-termism upheld by this management theory (Lipton, 2017).

According to Thompson and Martin (2005), "it is only by considering the long term and the interests of all stakeholders that companies will become more effective in the world markets" (Thompson & Martin, 2005). Furthermore, *Iqbal et al* argue that companies have a duty to uplift society and should take actions that go beyond maximizing shareholders' wealth (Iqbal, Ahmad, Hamad, Bashir, & Sattar, 2014). This theory encourages organisations to pursue profit maximisation so that the shareholders of the organisation may reap benefits (i.e. increased dividends), however, given that organisations operate within societies, this becomes impractical and may lead to negative effects (e.g., negative public image/reputation governance problems (etc.) for the company (Danielson, Heck, & Shaffer, 2008). Thus, from the above assessment, the shareholder theory would not be appropriate for this study as it seeks to only consider the interests of one group of stakeholders at the expense of all others whereas ESG components encompass a multitude of factors.

2.3 Stakeholder theory

"Stakeholders are those parties that have a vested interest (direct or indirect) in the company, they may be internal or external to the organisation and generally comprise anybody who can affect or is affected by an organisation, strategy or project" (Louw & Venter, 2006). "It is premised on the notion that businesses have an obligation to take into account the interests of all parties impacted by their decisions (Branco & Rodrigues, 2007) which is contrary to the afore-mentioned (stakeholder) theory.

Companies rely largely on the acceptability of the societies in which they operate for their existence, continuance, and ability to grow because they are an intrinsic component of those communities (Branco & Rodrigues, 2007). “Companies are seen as having an obligation to consider society’s long-run needs and wants, which implies that they engage in activities that promote benefits for society and minimize the negative effects of their actions, so long as the company is not prejudiced by engaging in such activities” (Branco & Rodrigues, 2007). Brigham and Davies (2010) further argue for this theory by stating that “the same actions that maximize fundamental stock prices (or shareholder value) also benefit society” but also that “to a large extent, the shareholders are also part of society” (Brigham & Davies, 2010).

Various stakeholder groupings (e.g., shareholders; communities, governments, regulators etc.) are urging companies to accept a wider range of responsibility in resolving for stakeholder needs (Libit & Freier, 2013). “As a result, businesses are increasingly collaborating with stakeholders to understand their views and concerns about a range of economic, social, corporate governance, and environmental issues and to incorporate and address those opinions and concerns into the business's strategic decision-making and operational processes” (Libit & Freier, 2013).

Business operations frequently have negative effects on neighbouring communities, the global economy, and the environment (Hendrikse & Hefer-Hendrikse, 2012).Louw and Venter argue that “one of the reasons for the growing activity and awareness of corporate citizenship is that the impact of failure in this area can have a significant negative impact” (Louw & Venter, 2006). In today’s world, stakeholders do not only ask about how a company has made its money nor how much was spent on philanthropy or social investment but whether the company has made its money as a responsible corporate citizen (King & Lessidrenska, 2009).

“Stakeholder engagement includes the formal and informal ways a company stays connected to its stakeholders and helps with enabling informed management decision-making” (Libit & Freier, 2013). Hendrickse & Hefer-Hendrickse (2012) support the above view by stating that where stakeholders are engaged with a business, they are more likely to support the activities and strategies of that business which will contribute to the

sustainability evolution of that business, promote transparency and trust, mitigate risks of litigation and improve its reputation with stakeholders (Hendrikse & Hefer-Hendrikse, 2012).

By encouraging stakeholders to voice their thoughts on business sustainability, participate in activities that have an influence on them, and help define the information in sustainability reports, stakeholder engagement fosters accountability (Wasara & Ganda, 2019). Corporate sustainability disclosures aid in providing an acknowledgement to stakeholders' concerns but also give detail on engagement strategies to be used to address those concerns (Putu, 2021). However, where there are misalignments between corporate financial achievements and social expectations for such results, there is an alignment gap for corporates that are in search of such alignment and rightfulness and critics who doubt the legitimacy of companies actions (Branco & Rodrigues, 2007).

Thus, to conclude on this section, it is evident that engaging in sustainability (environmental, social and governance) activities ultimately benefits stakeholders and may even legitimise the activities of the company in the communities in which they operate (Taliento, Favino, & Netti, 2019). Given this, the stakeholder theory would be considered appropriate for this study as it encapsulates ESG considerations.

2.4 Legitimacy Theory

"Legitimacy theory is a mechanism that supports organisations in implementing and developing voluntary social and environmental disclosures in order to fulfil their social contract that enables the recognition of their objectives and the survival in a jumpy and turbulent environment" (Burlea & Popa, 2013). According to the legitimacy theory, corporate disclosures are made in response to external variables and to justify corporate behaviour (Guthrie & Parker, 2012), In a way, legitimising their accountabilities.

According to this theory, companies disclose information about their social responsibility in order to present a socially conscious and acceptable image and thereby make valid their actions to their impacted groups (IGI Global, 2019). This theory is founded on the notion

that there is an unwritten understanding between business and society that business will behave in certain ways that prove acceptable to the communities in which it operates (IGI Global, n.d.). This suggests that businesses will only behave in accordance with socially acceptable norms but also emphasizes that those disclosures are made in accordance with what society will accept (Cho, Laine, Roberts, & Rodrigue, 2015). Therefore, as a criticism to this theory, legitimacy theory may lead to greenwashing by firms in an effort to be perceived socially responsible because stakeholder legitimacy is a prerequisite for both financial and ESG performance (Lee & Raschke, 2023).

The need to be perceived as right plays a critical role in deciphering and explaining why companies choose to communicate information to their stakeholders in an attempt to alert society and other interested parties about their actions (both incontrovertible and questionable) and their related effects (Owen, 2020).

More investors and society seem to be concerned about matters involving sustainability and the impacts of businesses on the environments in which people live, interest in matters of ESG continues to grow, making business central to the sustainability narrative and creating a move towards shareholder activism (JSE, 2022). As more institutions increasingly invest resources in guaranteeing they contribute to the sustainability narrative, it becomes valuable to gauge the effects of same (JSE Ltd, 2021). Therefore, the theory is important for the context of this study.

In concluding, ESG may add to long term shareholder value creation, however, because companies operate in an interconnected world, this theory is not aligned to sustainable business practices, thus, shareholder theory is less relevant for this study whilst stakeholder theory and legitimacy theory appear appropriate as they capture what is intended in ESG components and financial performance from a firm perspective.

2.6 Brief history of sustainability reporting

The practice of reporting on sustainability has a long history, dating as far back as the 1960s, which period was considered the root period and included the events that created

awareness for environmental issues(Soner, Yildiz, & Gokten, 2020). In 1961, the World Wildlife Fund was created because of the need to preserve the ecology of the societies they serve and the creation of community relief projects safeguarding vegetation and creatures (SAB&T Nexia, 2016). “In the early seventies, the scope and nature of reporting expanded beyond financial information for shareholders to include social and ecological data for other users of accounts”(Larrinaga & Bebbington, 2017). This prevalence in the seventies led to the creation of social accounting and audits and “reflected the concern about the externalities of corporate practices and a critique of the corporate narratives of the straightforward benefits of company activities (Larrinaga & Bebbington, 2017).

In the late eighties, the Brundtland Report defined “sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs and sought to reconcile economic development with the protection of social and environmental balance” (United Nations, 1987). The paper “reported on three pillars: social, economic and environmental factors and sought to implement strategies to prevent environmental degradation and how environmental limits impact energy efficiency, the global economy, economic resources, and overall sustainable industrialization and development”(Delubac, 2022). Using local, national and international development strategies, the Brundtland Report outlined how economic growth, social inclusion, and environmental balance are necessary to form a sustainable development solutions network(Delubac, 2022).The report coined the term “sustainable development” and essentially put it on to the global map whilst also advocating for long term strategies for achieving it (SAB&T Nexia, 2016).

The nineties were extremely important for the concept of sustainable development and reporting, the majority of the ideological rhetoric that had distorted the popular narrative for the majority of the 20th century faded during this decade(Gillespie, 2018). “The development of numerous new agreements and understandings addressing everything from population growth to climate change to ocean and air pollution marked a significant advancement on the environmental front”(Gillespie, 2018) of sustainability reporting. The Rio Earth Summit of 1992 which brough together “179 heads of government, 2000 non-governmental organisations and 10000 journalists” reached decisions in four key areas:

Forest principles, the Rio Declaration on Environment and Development, Forest principles and the Framework convention on climate change. The United Nations Commission on Sustainable Development (UNSCD) whose reason for existence is to check and ensure that the decisions of the UNSCD are actioned was formed at this summit" (SAB&T Nexia, 2016).

The Global Reporting Initiative was founded in 1997 as part of the United Nations Environment Programme and sought to bring about more transparency into the reporting landscape on the impacts by companies (Global Reporting, 2022). The GRI was created and positioned with the aim of creating the world's first accountability mechanism to ensure companies adhere to responsible environmental conduct principles" (Global Reporting, 2022).

Below are some of the major sustainability development activities that took place across the world since the year 2000:

Year	Key developments in sustainability activity
2000	**UNESCO Earth Charter (2000)** Developed through a global process of consultation, this charter is "an international declaration of fundamental values and principles of building a just, sustainable and peaceful global society in the 21st century" (The Earth Charter International, 2000).
	Millennium Declaration Eight development goals were established and agreed upon, their target date for achievement was set for 2015. These included amongst others: ensuring environmental sustainability; eradication of poverty and hunger; reduction of child mortality (etc) (Brightest Inc, 2023).

2002	**The Sarbanes-Oxley Act, 2002** "The Sarbanes-Oxley Act (SOX) is a federal act passed in 2002 with bipartisan congressional support to improve auditing and public disclosure in response to several accounting scandals in the early-2000s" (Cornell Law School, 2021). SOX follows an "apply or else" approach, which is very different to the approach adopted in South Africa via the King Codes and JSE Listings Requirements of "apply or explain" towards corporate governance as advocated for in the King III regime (Klingelhöfer, 2014).
2002	**Johannesburg Summit** This summit sought to develop a plan of implementation for the following: • "developing an institutional framework for sustainable development", • "the protection and management of the natural resource base" and • "the changing of unsustainable patterns of consumption and production" (Christensen, Serafeim, & Sikochi, 2022).
2005	**Kyoto Protocol** Initially developed in 1997, this protocol came into force in 2005 and expired in 2012.The protocol was "an international environmental treaty with the goal of achieving the stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (SAB&T Nexia, 2016).
2008	**The National Framework for Sustainable Development in South Africa** "The framework was developed with the intention for it to be an overarching national strategy for sustainable development in South Africa" (Department of Environmental Affairs & Tourism, 2008). It seeks to link the work done on achieving Millennium Development Goals with the implementation plans of the agreements reached at the 2002 Johannesburg Summit. It elucidates on the

	interdependence between people, planet and prosperity and is centred around the theme of efficient resource use and inter-generational equity (Department of Environmental Affairs & Tourism, 2008)
2009	**Copenhagen Climate Conference and Protocol** The pact aims to stop anthropogenic climate change and global warming. It established an all-encompassing and continual duty on the parts of all societal levels, including those in government, business, and the individual realms, to care for the environment, for one another, for the larger community of life, and for future generations (SAB&T Nexia, 2016).
2013	**Africa 2063 Agenda** It is the "continent's strategic framework of the pan-African drive for unity, self-determination, freedom, progress, and collective prosperity pursued under Pan-Africanism and the African Renaissance. The plan allows a period of 50 years (2013 – 2063) for the realisation of this agenda (African Union, 2013).
2015	**United Nations 2030 Sustainable Development Goals** This protocol was adopted by all United Nations Member states in 2015 and provides for a shared blueprint for peace and prosperity for people and the planet for now and the future. Its a global partnership and comprises of 17 sustainable development goals which are an urgent call for action by all countries developed and developing (United Nations, n.d.). 2015 was a great year for policy development and increased collaboration on an international scale with the following agreements being signed by UN member countries: • Sendai Framework for Disaster Risk Reduction • Addis Ababa Action Agenda on Financing for Development

	• Paris agreement (United Nations, n.d.) **The JSE Socially Responsible Investment Index (SRI Index)** now FTSE/JSE Responsible Investment index was launched in 2015 and "sought to progress the JSE's work around promoting corporate sustainability practices" (JSE Ltd, 2021)
2019	**United Nations Principles of Responsible Investing (UN PRI)** "UN PRI announced that PRI signatories are mandated to disclose the PRI climate indicators on four categories: governance, strategy, risk management, and metrics" (Park & Jang, 2021).

2.6 Statutory requirements for sustainability disclosures in South Africa

Despite the fact that company sustainability disclosures are not subject to any legislation (in terms of what should be disclosed, how it should be disclosed and the frequency of such disclosures) in the Republic (JSE Ltd, 2021), South Africa has underlying legislations regulating actions and behaviours in the individual factors that ESG components derive a basis from (Bowmans, 2020). Although in some specific sectors (e.g., mining) guidelines have been issued that give direction on matters that are important to consider and for aspects to include in reporting (IODSA, 2016).

"The Pension Funds Act (1956) through Regulation 28 states that before investing in and whilst invested in an asset consider any factor which may materially affect the sustainable long-term performance of the asset, including but not limited to, those of an environmental, social and governance character" (Davids & Kitcat, 2023). "While Regulation 28 applies to pension funds, it has had a marked influence on the ESG practices of other institutional investors and asset managers in South Africa" (Bowmans, 2020). The Financial Sector Conduct Authority of South Africa (FSCA) agrees with the assertion and posits through the "Prudential Standard GOI3 on Risk Management and Internal Controls for Insurers *that*

investment policies should take into account all ESG factors that can materially impact sustainable performance of assets" (FSCA, 2017).

The Public Investment Corporation Amendment Act (2019), which regulates activities of the Public Investment Corporation SOC Ltd (PIC), one of the largest asset managers in Africa states that the PIC must invest in ways that will, amongst others, "promote sustainable development" and "transform the economy and society" (PIC Act, 2019). "The PIC, as the largest investor on the African continent, states that its investment decision guiding principles include amongst others the Principles of ESG discipline by contributing to and supporting positive, long-term economic, social and environmental outcomes for South Africa and the rest of the African continent which include: more competitive economies; greening the economy; creating jobs and supporting transformation" (PIC, 2022).

Laws such as the Carbon Tax Act 15 of 2019, National Environment Management Act 107 of 1998, National Water Act 10 of 1998, Air Quality Act 39 of 2004 regulate the underlying constituents of ESG factors by "imposing requirements for consents, such as authorisations, licences or permits" (Bowmans, 2020).

2.7 Best practice codes applicable within South Africa

King Code on Corporate Governance

Aiming to produce positive outcomes for organizations and the societies in which they operate, King IV (the code) is a set of principles and expectations for business behaviour (Delloite, 2016). "The Code encourages integrated reporting which encompasses a reporting on not just the financial aspects but also takes into account the non-financial considerations of companies and their related impacts" (IODSA, 2016). In addition, it recognises that "we live in an era of radical transparency, which is prompting a rethink on corporate reporting" and that "financial performance alone can no longer serve as proxy for holistic value creation" nor are audited financial statements sufficient to discharge the duty of accountability (IODSA, 2016).

“It defines good performance as an organisation achieving its strategic objectives and positive outcomes in terms of its effect on the capitals it uses and effects on the triple context in which it operates” (IODSA, 2016). King IV adopts an “apply and explain” approach to corporate governance and has significantly reduced the principles to be adhered to from 75 (King III) to 17. The principles can be applied by any institution with a view of proving that good corporate governance is practised. These kinds of disclosures enable stakeholders to make informed decisions, avoids the “tick-box’ approach to compliance and encourage a mindful; consideration of the activities of the company and its impacts (IODSA, 2016).

Code for Responsible Investing in South Africa (CRISA)

Launched in 2011, CRISA seeks to provide direction on how institutional investors should conduct investment research and activities by addressing how they should utilize their rights and privileges in order to promote healthy governance (Pillay, 2012). It states that institutional investors should include sustainability considerations into their investment activities and have a policy that addresses how these are incorporated into their investment processes (Delloite, 2016). The code is made up of 5 principles which its users are expected to adopt on an apply or explain basis. In 2022, CRISA 2 was launched and contains principles that are of universal relevance, capable of flexible application on a proportionate basis as the context may require” (CRISA, 2022).

2.8 Advantages and disadvantages of Corporate Sustainability Reporting

Some benefits of sustainability reporting are as follows: “Boost the position of sustainability in your company's agenda, allowing the business to keep track of which sustainability goals to work on, maintain regulatory compliance, draw customers, foster pride and loyalty, and become more appealing to investors”(Burlea-Schiopoiu & Popa, 2013).

According to Major Sustainability, a business education site from the Smeal College of Business, some drawbacks of making available information related to sustainability efforts include:

1. Incompatibility: The majority of generated information is produced by the reporting company, reporting between companies is not an equal footing as it is not standardized. According to Major Sustainability, it is difficult to rely on the reported data as it isn't aligned to any model and is inconsistent from company to company and industry to industry (Major Sustainability, 2021).
2. Biased and untrue information provided by rating agencies: ratings can be biased when corporations report high scores on irrelevant criteria whilst also funding the same rating agencies whom are then not independent (Major Sustainability, 2021).

2.9 Corporate sustainability reporting and company performance

According to Ciby (2013), the summarized economic impact of the different operational and strategic decisions made by management of companies is disclosed and shared with stakeholders in financial statements, thus they are construed representations for economic activity and results thereof. "Financial reports provide stakeholders with information about an entity's financial position, operating results, and cash flows"(Gokten, 2020). The King IV report contends "there has been a shift in the corporate world from financial capitalism to inclusive capitalism with a clear recognition that the provision of financial capital represents only a fraction of an organisation's activities'' (IODSA, 2016). Stakeholders are interested in learning about the effects that organizations have on the environment and society (Christensen, Serafeim, & Sikochi, 2022).

It has become crucial to deliver high-quality financial reporting in light of the 2008 financial crisis in order to influence users' investment decisions and to increase market efficiency (Herath & Albarqi, 2017). "Transparency is vital for an efficient economy" (Brigham & Davies, 2010), hence, the need for credible financial and non-financial information, of good quality to help stakeholders make informed decisions (Herath & Albarqi, 2017). Some of the factors impacting on the credibility of financial statement reporting include relevance, understandability, faithful representation and timelines for reporting of that information (Herath & Albarqi, 2017). The aspect of timeliness refers to information delivery to users in the right amount of time so they're able to act (Accounting Tools, 2022).

The Companies Act (2011) requires for all companies to prepare annual financial statements within six months after the end of their financial year (Nexia-SAB&T, 2018). The reason for this is to enable informed decision making by users of such information because the information contained therein widely describes all types of business activity (Williams, Bettner, & Carcello, 2021). However, financial statements are typically historical in nature and always make a “general purpose” assumption, this is because the reporting is always on past events and transactions, moreover there is always a presumption that the information is fit for all user groups (Williams, Bettner, & Carcello, 2021).

According to (Brigham & Davies, 2010), “an analysis of financial statements may help companies to identify deficiencies, predict future conditions and then take actions to improve performance”. There are numerous methods to analyse financial statements, such as: comparative analysis, trend analysis, ratio analysis etc. (Williams, Bettner, & Carcello, 2021). Joseph Ciby argues that ratio analysis is the most effective and vital instrument for analyzing financial statements since it assists in connecting the financial figures to the factors that affect businesses (Ciby, 2013). He goes further to state It helps one to judge a company's performance, profitability, efficiency, and financial structure and offers helpful insights into the state of a company's financial health (Ciby, 2013).

This research focuses on the following measures of firm internal efficiency: ROA, ROI and ROE, furthermore, it focuses on an external measure of performance: Tobin’s Q ratio (TQ)

i. Return on Assets (ROA)

Illustrated as Net Income/Total Assets.

$$\mathrm{ROA} = \frac{\text{Net Income}}{\text{Total Assets}}$$

“The return on assets ratio is used in evaluating whether management has earned a reasonable return with the assets under its control” (Brigham & Davies, 2010). ROA helps one to judge a company's performance, profitability, efficiency, and financial structure and offers helpful insights into the state of a company's financial health (Burhan & Rahmanti, 2012). According to this study, Return on Assets proved a much more efficient measure to economic performance

when compared to other measures because it focuses on internal efficiencies of the firm (Burhan & Rahmanti, 2012).

ii. Return on Equity (ROE)

Depicted as Net Income/Owners 'Equity.

ROE measures the return earned by shareholders on the funds they place into the company as an investment (Williams, Bettner, & Carcello, 2021). The return to shareholders is shown as net income and comprises returns from all sources (operating and non-operating) (Williams, Bettner, & Carcello, 2021). According to Delloite (2021) research conducted found that whilst there is a positive association between CSR and firm value, a study done in China indicated that better CSR can increase firm value by lowering the firm's anticipated cost of equity capital (Delloite, 2021). "Generally, the higher the ROE, the better" (Bodie, Kane, & Marcus, 2021).

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

iii. Return on Investment (ROI)

Shown as Return/Average Amount Invested.

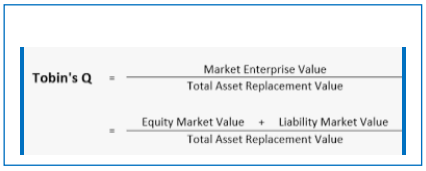
According to (Williams, Bettner, & Carcello, 2021), return on investment seeks to determine the effectiveness of the use of financial resources by evaluating the percentage of return on such resources. The results of a 2019 study on JSE listed mining companies in South Africa that looked at the interaction among corporate social disclosures and company results demonstrated that there exists a negative correlation between disclosures regarding the environment and return on investment and a positive correlation between social accountability and return on investment (Garcia-Castro, Arino, & Canela, 2010). Inference led the researchers to the conclusion that this indicates an increase in business disclosure of social and environmental concerns results in elevated earnings (by way of an increase in return on investment). The afore mentioned is problematic because

$$\text{ROI} = \frac{\text{Current Value of Investment} - \text{Cost of Investment}}{\text{Cost of Investment}}$$

it implies that when addressing sustainability issues, the calibre of the information being delivered, not its amount, is what matters. (Garcia-Castro, et al).

iv. Q Ratio or Q theory of investment (Tobin's Q)

Expressed as market value/Total Asset replacement cost



Often referred to as the "Tobin's Q" forecasts a substantial correlation between the market prices of firms and their rates of investment (Andrei, Mann, & Moyen, 2019). It has been used as an indicator for potential investments in finance literature, and if Q is a valid proxy, we ought to find an upward trend between the q ratio and the operational efficiency of a firm (Fu, Singahal, & Parkash, 2016). The q ratio and future operating performance typically have significant correlations, and this association indicates that Tobin's q ratio has a long-term impact on the firm's profitability, and not just a short-term effect (Fu, Singahal, & Parkash, 2016).

2.10 ESG Scores (the 3 components for each ESG factor)

The rising popularity among investors in sustainability factors reflects the view that environmental, social, and corporate governance issues - including risks and opportunities - may influence the long-term financial health of issuers and should, therefore, be afforded sufficient consideration in investment decisions (OECD, 2020). It is for this reason that its believed ESG scoring (as a standardising framework for presented ESG data) and reporting can unravel a lot of information that is necessary to help investors align their portfolios with key factors impacting on their sustainable development objectives and those of the communities they operate in (OECD, 2020).

The Organisation for Economic Co-operation and Development (OECD) argues that ESG progress and practices are improving, more so that techniques continue to advance and become more open while scoring is still in transition, this is exacerbated by the fact that there are numerous methods, subjective application of materiality and different ways of accounting for multiple factors that constitute the weightings/scores (OECD, 2020). Due to

the lack of a uniform methodology, the majority of ESG reports are incomparable (ESGTheReport, 2021).

In today's age, the investment process requires the use of environmental, societal, and governance (ESG) information such that it becomes important that the raw data disclosed by companies be decoded and normalised using standardising tools that will enable comparability and consistency (Bloomberg, 2020). ESG scores may be used as such a tool because "the scores provide transparent data driven insights into company performance" (Bloomberg, 2020). An advantage to using ESG scores is that "they offer a valuable, quantitative and normalised benchmark that will easily highlight ESG performance" (Bloomberg, 2020).

The table below sets out the ESG factors on which the Bloomberg ESG Scores are based:

Environment	Societal	Governance
Climate Change	Compensation	Audit, Risk & Oversight
Air Quality	Diversity	Board Independence, Structure & Tenure
Water & Energy Management	Health & Safety	Shareholders' Rights

Environment

- **Climate Change** – Stakeholders now have a greater understanding of how climate change will harm them. "They anticipate companies to be open about the risks associated with climate change" (Mallikage, 2018). Companies that don't disclose the risks associated with climate change could jeopardize their profitability and reputation (Mallikage, 2018).
- **Air Quality** – According to the Clean Air Fund, "all companies, regardless of size and location contribute to air pollution" Dealing with air pollution will help society, customers and communities, and companies should spear-head this change by reducing emissions across their value chains (Clean Air Fund-UK, 2021).

- **Water and Waste Management** – “Environmental pollution is reduced via sustainable waste management, making workplaces and communities safer and healthier places for people to live and work” (Mallikage, 2018). Availability of clean and fresh water is part of the UN Sustainable development Goal 6, when companies use fresh water responsibly, they protect their future and that of the communities in which they operate (Greenwood, 2022)

Societal

- **Compensation** – “The inclusion of ESG metrics in compensation contracts” of executives to encourage adoption and implementation sustainable development and activities into the operations of the company (Cohen, Kadach, Ormazabal, & Reichelstein, 2022). According to Harvard Corporate Law, the reasons for including ESG measures is “to signal that ESG is a priority; to respond to investor expectations; and to achieve ESG commitments the firm has made” (Spierings, 2022).
- **Diversity** – Issues of diversity, equity and inclusion have come to the fore over the last few decades with regulatory bodies across the world increasingly requiring for disclosures and explanations on why these have not been met (PWC - US, 2022). Proponents for these disclosures argue that “organizations that are successful in this initiative may potentially be better able to communicate their commitment and progress, increase employee engagement, manage associated risk and check that their efforts are achieving their goals — while also improving their reputation and gaining greater interest from investors” (PWC - US, 2022).
- **Health and Safety** – This aspect relates to occupational health, safety and well being but it also extends to community health and safety. Issues of compliance with laws governing workplace safety and health and related policies, employee retention strategies, training, employee engagement are managed and reported upon under this umbrella (Brodersen, 2022)

Governance

- **Audit, Risk and Oversight** – “Typically, the Board of directors drive strategy and seek to act in the best interest of the company and its shareholders (wealth creation and maximisation)” (Hendrikse & Hefer-Hendrikse, 2012). In executing on this role, the board delegates an oversight role to ensure the integrity of the financial reporting and audit process and to oversee the maintenance of sound internal control and risk management systems to the Audit and Risk Committees (Hendrickse & Hefer-Hendrickse, 2012).
- **Board Independence, Structure and Tenure** – Principle of 7 of the King Code is clear in that it requires that “the board should comprise the appropriate balance of knowledge, skills, experience, diversity and independence for it to discharge its governance role and responsibilities objectively and effectively” (IODSA, 2016). “The South African Companies Act, 2008 sets out the maximum duration for which an individual may serve as a director to remain effective, objective and independent” (Hendrickse & Hefer-Hendrickse, 2012)
- **Shareholders’ rights** – Shareholders are the owners of companies and have a residual claim on the company, they wield a lot of power as they appoint directors to manage the company, and then also ultimately appoint auditors to ensure the information being reported on by directors is true and complete (Hendrikse & Hefer-Hendrikse, 2012). King IV report states that shareholders are a strong sub-set of stakeholders as they are able to hold boards of companies accountable and can then serve as the voices for the other stakeholder groupings (IODSA, 2016).

“While ethical, sustainable and corporate governance are considered non-financial performance indicators, their role is to ensure accountability and systems to manage a corporation's impact, such as its carbon footprint” (Mathis S. , 2022). Capital markets use ESG to evaluate organizations and determine future financial performance (Mathis S. , 2022).

2.11 Research Hypothesis

Contemporary literature and proponents of sustainability reporting posit that issues of sustainability and the practice thereof are fast becoming topical (Cho, Laine, Roberts, & Rodrigue, 2015). There however are gaps in the literature addressing the relationships between disclosures and performance. Moreover, it is worth noting that the economic sustainability of organisations is a key factor in determining whether organisations will perform corporate sustainability activities because this determines if they are able to afford them.

In answering to the research questions, the following are the hypothesis that are expected of this research and the sample studies informing them:

i. **No relationship between financial performance and disclosures relating to governance**

Governance is important in ensuring that companies always act in the best interest of the business (Paniagua, Rivelles, & Sapena, 2018), however, this is always at a cost. In considering the effect of governance on financial performance, studies have found that the presence of governance structures does not directly impact financial performance outcomes (Saidat, Silva, & Seaman, 2019) (Abang'a, Tauringana, Wang'ombe, & Achiro, 2022).

ii. **There is a relationship between financial performance and disclosures relating to the societal aspects**

Costs associated with environmental and social disclosures exist, yet large publicly traded companies are increasingly providing greater and better-quality disclosures (Qiu, Shaukat, & Tharyan, 2016). A study undertaken in Brazil on the impact of societal disclosures on financial performance found there is a negative correlation and that such disclosures were found to be value destroying instead of increasing (Crisóstomo, de Souza Freire, & De Vasconcellos, 2011) .

iii. **There is a relationship between financial performance and disclosures relating to the environment.**

Previous studies in this area have found that there exist mixed results on whether environmental disclosures have a relationship to financial performance (Deswanto & Siregar, 2018) (Nor, Bahari, Adnan, Kamal, & Ali, 2016).

This study will assess the individual impacts of each ESG component on firm financial performance.

Chapter 3: Research Methodology

3.1 Introduction

This study is an event study in as far as the analysis examining the relationship between how firm financial performance indicators as detailed above behave following disclosure of corporate sustainability information. According to Mackinlay (1997), an event study is carried out to assess the impact of certain events on the value of a company using financial market data (MacKinlay, 1997). This is considered appropriate for purposes of this research in order to understand the behaviours of the variables. However, it should be noted that “event studies have been criticised because they obviate the need to analyse accounting-based measures of profit which are often not good indicators of the true firm performance” (McWilliams & Siegel, 1997).

This paper follows a deductive approach because it seeks to understand the theories underlying the approaches to performance and ESG considerations of companies and their relative significance in the context of this study. The research strategy followed is the quantitative research method, which is associated with gathering and studying structured information that can be presented numerically (Goertzen, 2017). This research methodology is selected because the researcher is seeking to answer questions on the extent of the relationship between two independent variables. The quantitative data will be used to decipher patterns or trends and determine correlations.

The research design followed adopts a longitudinal type of study in that the same variables (ESG components and financial performance measures) are being observed at given points in time over the five (5) year period under review. According to Alchemer (2021), a longitudinal study should be used where data relates to a large number of interactions over a long duration and has as a main advantage that it has the capability to show variable’s patterns over time, thus being able to show cause and effect relationships (Alchemer, 2021).

The data type collected is panel data representing the information of the JSE Top 40 companies as the observations. This is such because the Top 40 companies (i.e., data subjects) remain the same over the length of the period observed (2017-2021). Thus to elucidate, the observations (ESG scores and financial performance measures) are of the same companies in each period.

For purposes of standardising the data set considered, ESG scores have been used as proxy for the corporate sustainability disclosures as made by companies. Literature has established there are a variety of methods and considerations when making corporate sustainability disclosures with different entities disclosing different factors, moreover, different providers use non-standardised methodology to assess ESG and sustainability contributions of the different companies (OECD, 2020).

3.2 Data collection and analysis

The data used for this research paper is continuous quantitative data and includes measures of profitability namely Return on Assets, Return of Equity, Return on Investment and Tobin's Q. In addition, the data set also contains other continuous quantitative data sets in the form of ESG scores representing environmental, societal and governance scores. All data sets to be used for purposes of this analysis are from secondary sources.

The data (ESG Scores, ROA, ROI, ROE and ROI) used for this research has been extracted from a Bloomberg Terminal which according to (WallStreetPrep, n.d.), has "data sets that are more comprehensive and are updated more quickly than any of its peers".

In terms of collection, all of the information required for purposes of this study is publicly available through the company integrated reports which data has been reviewed and analysed according to the different categories and criteria of Bloomberg's ESG rating methodology (Bloomberg, 2020). As some of these information will date as far back as the last five years, these may be considered archival records, and these are relevant for providing a clear status on the organisation at a point in time. Van Zyl (2012) defines archival records as data associated with a certain event which has been stored under

conditions where they are maintained, preserved and made accessible researchers" (Van Zyl L. , 2012).

Correlational research methods are undertaken with a view of determining the relationships between the different measures of financial performance and the ESG scores. In addition, a regression analysis to determine the relatability of the variables with Profitability being the independent measure and ESG scores under consideration being the dependent variables.

3.3 Population and Sampling

The population for this study comprises all of the companies listed on the JSE for the time period of the study, whilst the sample includes companies listed in the J200 – JSE Top 40 index as at 31 December 2021.

This sample comprises companies in approximately 15 sectors listed on the JSE that made up the index as at the reporting date of 31 December 2021, thus the sample is representative of the population. Because the index is reviewed on a quarterly basis; its constituents also change, thus the sample is constrained to those companies that made up the index as at 31 December 2021.

3.4 Limitations on research approach

i. The JSE Top 40 index is reviewed on a quarterly basis, this study is limited to the companies that formed part of the index as at 31 December 2021, whom would have had to report to shareholders and other stakeholders on the results of the 2021 financial year at differing times in 2022.
ii. In this study, we further presume that the index constituents were listed for the whole duration of the study (i.e. from 2017 to 2021).
iii. This study further relies on the ESG scores as determined by Bloomberg using their methodology.

Chapter 4: Data Analysis

This chapter follows on Chapter 3, which addressed the research methodology and design of the study. In this chapter, the focus is on the presentation of the research results as well as the analysis of the data obtained when assessing the relationships between performance measures and ESG scores. This chapter is divided into two main sections, firstly the results and analysis on correlation and secondly results and analysis from regression.

4.1 Correlation Analysis

“Correlational research is the statistical investigation of the relationship between two variables” (Leedy & Ormrod, 2010). Gogtay and Thatte (2017) state that the end result of a correlation analysis yields a correlation coefficient, whose range of values is -1 to +1. “A correlation coefficient of +1 indicates that the two variables are perfectly related in a positive manner, a correlation coefficient of -1 indicates that two variables are perfectly related in a negative manner, while a correlation coefficient of zero indicates that there is no relationship between the two variables being studied” (Gogtay & Thatte, 2017).

“The Pearson’s correlation coefficient establishes a relationship between the two variables based on three assumptions: the relationship is linear; variables being considered are independent of each other and that such variables are normally distributed” (Gogtay & Thatte, 2017).

This section considers whether variables depicted as performance measures (ROA; ROE; ROI and Tobin’s Q) and ESG scores have an influence or a relationship with one another. The following table presents the results of the correlation analysis between the ESG Scores and performance measures:

Correlations

		Social	Governance	Environmental	ROA	ROE	ROI	TobinsQ
Social	Pearson Correlation	1	.417**	.393**	-0,005	-0,047	0,000	-.247**
	Sig. (2-tailed)		0,000	0,000	0,949	0,521	0,995	0,001
	N	185	185	185	185	185	185	185
Governance	Pearson Correlation	.417**	1	.363**	0,125	0,118	.222**	-0,091
	Sig. (2-tailed)	0,000		0,000	0,090	0,109	0,002	0,216
	N	185	185	185	185	185	185	185
Environmental	Pearson Correlation	.393**	.363**	1	.288**	.168*	.363**	.148*
	Sig. (2-tailed)	0,000	0,000		0,000	0,022	0,000	0,045
	N	185	185	185	185	185	185	185
ROA	Pearson Correlation	-0,005	0,125	.288**	1	.921**	.696**	.499**
	Sig. (2-tailed)	0,949	0,090	0,000		0,000	0,000	0,000
	N	185	185	185	185	185	185	185
ROE	Pearson Correlation	-0,047	0,118	.168*	.921**	1	.695**	.497**
	Sig. (2-tailed)	0,521	0,109	0,022	0,000		0,000	0,000
	N	185	185	185	185	185	185	185
ROI	Pearson Correlation	0,000	.222**	.363**	.696**	.695**	1	.613**
	Sig. (2-tailed)	0,995	0,002	0,000	0,000	0,000		0,000
	N	185	185	185	185	185	185	185
TobinsQ	Pearson Correlation	-.247**	-0,091	.148*	.499**	.497**	.613**	1
	Sig. (2-tailed)	0,001	0,216	0,045	0,000	0,000	0,000	
	N	185	185	185	185	185	185	185

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

*. Correlation is significant at the 0.05 level (2-tailed).

4.1.1 Correlation Analysis: Social Scores and Performance Measures (ROA, ROE, ROI and Tobin's Q)

Considering the correlation coefficients between the Social scores and the highlighted performance measures, which relate to the JSE Top 40 companies in the period from 2017

to 2021, the correlation coefficient for the variables social scores and ROA is -0.005 which indicates that there is a negative co-relationship between the two variables but also, one which is weak. The correlation coefficient for social scores for ROE and social scores is -0.047 whilst the correlation coefficient for Tobin's Q and social scores is -0.247. These indicate a negative and weak correlation in the variables under consideration. According to Taylor (1990), "a negative correlation indicates an inverse relationship where as one variable increases, the other decreases". The correlation coefficient between social scores and ROI is 0.000, which implies that there is no relationship between the two variables (Gogtay & Thatte, 2017). This correlation coefficient shows the lack of relationship between the two variables but also that if there were to be any relationship between the two variables due to any reason, that this would be weak (Lumen Learning, 2016). As a result, the dependent variable cannot then be predicted from the independent variable under study.

4.1.2 Correlation Analysis: Governance Scores and Performance Measures (ROA, ROE, ROI and Tobin's Q)

The correlation coefficient for the governance scores and performance measures indicate that there is a positive but weak correlation between ROA and governance scores, with a coefficient of 0,125; ROE and governance scores with a coefficient of 0,118 and ROI and governance scores with a coefficient of 0.222. Whilst these are positive, they are indicating the weak positive correlation amongst the relationships of the variables under study. This implies that any change in these measures will be associated with positive changes in Governance scores, albeit not significant. According to Statology.org, this indicates that "when one variable increases, the other variable tends to increase too but in a weak or unreliable manner". Considering Tobin's Q and governance scores, the coefficient for these two variables is -0,091, this indicates a negative relationship between the two variables (Gogtay & Thatte, 2017).

4.1.3 Correlation Analysis: Environmental Scores and Performance Measures (ROA, ROE, ROI and Tobin's Q)

When considering the correlations analysis between environmental scores and performance measures, the correlation coefficients indicate a generally positive co-relationship between environmental scores and the four variables, albeit not that strong. The ROA and environmental scores yielded a coefficient of 0.288, whilst ROE and governance obtained the coefficient of 0.168; Tobin's Q and governance correlation coefficient is 0.148. The highest correlation coefficient in this series is the ROI and Environmental scores coefficient which is 0.363. Although this remains a technically weak co-relation between the variables, it is closest to 0.5. Although these variables (Environmental scores and ROI) tend to increase when considered together, a weak positive correlation indicates that the relationship is not very strong.

The above results are supported by previous research, particularly the research of Ruan and Liu (2021) who found that for companies listed on the China Stock Exchange, ESG scores are largely negatively correlated to firm financial performance measures (Ruan & Liu, 2021). Hillman and Keim in their 2021 study on the relationship between shareholder value and management and social issue participation found that "social issue participation is negatively associated with shareholder value" (Hillman & Keim, 2021). The positive association between environmental scores and ROI agrees with the findings of Secinaro et al., (2021) who found that "firm-wide adoption of environmental practices reduces environmental risks, and thereby lowers production costs and increases profits" (Secinaro, Brescia, & Calandra, 2020).

"Correlation implies association, but not causation. Conversely, causation implies association, but not correlation" (Altman & Krzywinski, 2015). "Correlation coefficients should be interpreted for what they are: associations, and not causal relationships" (Akoglu, 2018). The following section delves deeper on the issue of causality between the different variables and provides results and analysis derived from regression analysis

which enables the researcher to address the objectives as well as the hypothesis that guide the study.

4.2 Regression Analysis

Regression analysis is a statistical tool used to establish if there exist any relationships between variables of interest with the aim of determining if there is a causal relationship and the significance thereof (Sykes, 1993). “Regression analysis is a reliable method of identifying which variables have impact on a topic of interest. The process of performing a regression allows you to confidently determine which factors matter most, which factors can be ignored, and how these factors influence each other” (Alchemer, 2021).

4.2.1 Multiple Regression Analysis

“Multiple regression is a statistical technique used to analyse the relationship between a dependent variable and several independent variables with the aim of using the independent variables whose values are known to predict the value of the single dependent value” (Moore & Wong, 2006). “The R-square is a goodness-of-fit metric for linear regression models that emphasizes the proportion of variance in the dependent variable that the independent variables collectively explain” (Sohrabpour, Oghazi, Toorajipour, & Nazarpour, 2021). For purpose of this study, the aim is to determine the relationships of ESG scores and the performance measures understudy.

4.3 Multiple Linear Regression Analysis: Return on Assets and ESG Scores

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.322[a]	0,104	0,089	8,8101251

a. Predictors: (Constant), Environmental, Governance, Social

b. Dependent Variable: ROA

The R-square value is 0,104, this suggests that Return on Assets varies by about 10,4% depending on ESG Scores. This implies that the remaining 89,6% is based on other factors or attributes not investigated in this study.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-0,587	4,688		-0,125	0,901	-9,837	8,664		
	Social	-0,932	0,460	-0,164	-2,027	0,044	-1,839	-0,025	0,759	1,317
	Governance	0,733	0,774	0,075	0,947	0,345	-0,794	2,260	0,779	1,283
	Environmental	1,551	0,376	0,325	4,120	0,000	0,808	2,294	0,797	1,254

a. Dependent Variable: ROA

Multiple regression is used to assess the predicted association between ESG (Environmental, Social and Governance) and Return on Assets. According to various authors, for a relationship to be considered significant, the p-value should be less than 0.05 and the t-value should be above 1.96 (Zaid, Abuhijleh, & Pucheta-Martínez, 2020); (Martins, et al., 2021). The relationship between Social scores (β =-0,164, t =-2,027, Sig < 0,044) and ROA is negative but statistically significant however we reject the null hypothesis as it is less than 0,05. The relationship between Governace scores (β =-0,075, t =0,947, Sig < 0,345) is positive but not statistically significant as it is above the threshold of 0.05, thus we accept the null hypothesis. In addition, the relationship between Environmental scores and ROA yields the following: (β =-0,325, t =4,120, Sig < 0,000), this means that relationship is positive and statistically significant but we reject the null hypothesis that environmental scores have an impact on ROA since the p-value is equal to 0.000 and further less than the acceptable threshold of 0.05. These findings support the findings of Mardini (2022) and Saygili, Arslan & Birkan (2022) who found that the social factors in ESG tends to have a negative relationship to ROA when considering “firm resources, influence on the firm’s reputation and may lead to competitive disadvantage”. In concluding on the relationship between ESG factors and ROA, this study also agrees to

the findings of Velte (2017) who in a study on German companies found that ESG performance has a positve impact on ROA and further supported by Alareeni and Hamdan (2020) who also concluded on the negative association between ROA and the social aspects of corporate sustainability.

4.4 Multiple Linear Regression Analysis: Return on Equity and ESG Scores

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.234[a]	0,055	0,039	17,8224066

a. Predictors: (Constant), Environmental, Governance, Social
b. Dependent Variable: ROE

The R-squared is also known as the multiple determination coefficient Corporate Finance Institute (2022). The R-squared is a statistical measure of how near the data are to the fitted regression line (Manogaran, et al., 2018). The R-square value is 0,055, this suggests that ROE varies by about 5,5% depending on ESG Scores. This implies that 94,5% of the measure is based on other factors that are not investigated in this study, which therefore can be investigated in future studies.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	0,829	9,484		0,087	0,930	-17,884	19,542		
	Social	-1,943	0,930	-0,173	-2,090	0,038	-3,778	-0,108	0,759	1,317
	Governance	2,310	1,566	0,121	1,475	0,142	-0,780	5,399	0,779	1,283
	Environmental	1,809	0,762	0,192	2,376	0,019	0,307	3,312	0,797	1,254

a. Dependent Variable: ROE

The relationship between ROE and Social scores scores is (β =-0,173, t =-2,090 Sig < 0,038), this implies that this relationship is negative but statistically significant moreover,

we reject the null hypothesis as the p-value is less than 0,05. Considering the relationship between ROE and Governance scores (β =0,121, t =1,475, Sig < 0,142), although positive, this relationship is considered to not be statistically significant as the T-test for it measures below the threshold of not being above 1,96 and its P-value is greater than 0,05 as such, we accept the null hypothesis. The relationship between ROE and Environmental scores is (β =0,192, t =2,376, Sig < 0,019), whilst this relationship is positive, the T-test for it is greater than 1,96 and its below the significance level of 0,05 which means we must reject the null hypothesis. The findings on the relationships between environmental and governance factors and ROE contradict the findings of Alareeni and Hamdan (2020) who found these to be negatively associated.However, these results support the findings of Buallay (2019) who found that the relationships between social disclosures and ROE tends to be negative but contradict in that they found the relationships between ROE and corporate governance disclosures to also be negative.

4.5 Multiple Linear Regression Analysis: Return on Investment and ESG Scores

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.425[a]	0,180	0,167	15,1497117

a. Predictors: (Constant), Environmental, Governance, Social

b. Dependent Variable: ROI

The R-square value is 0,180, this suggests that ROI varies by about 18% depending on ESG Scores. This implies that about 82% of the ROI measure is based on other factors that are not ESG related nor investigated in this study.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-9,386	8,062		-1,164	0,246	-25,293	6,520		
	Social	-2,316	0,790	-0,226	-2,931	0,004	-3,876	-0,757	0,759	1,317
	Governance	3,061	1,331	0,175	2,300	0,023	0,435	5,688	0,779	1,283
	Environmental	3,339	0,647	0,389	5,158	0,000	2,062	4,616	0,797	1,254

a. Dependent Variable: ROI

The relationship between ROI and Social scores scores is (β =-0,226, t =-2,931 Sig < 0,004), this implies that this relationship is negative but statistically significant moreover, we reject the null hypothesis as it is less than 0,05. The relationship between ROI and Governance scores is (β =0,175, t =2,300, Sig < 0,023), the relationship is evidently positive,- also this relationship is considered to be statistically significant as p-value is less than 0,05 as such, we also reject the null hypothesis. The relationship between ROI and Environmental scores is (β =0,389, t =5,158, Sig < 0,000), whilst this relationship is positive, the T-test for it is far greater than 1,96 and its below the significance level of 0,05 which means the researcher ought to reject the null hypothesis as the relationship is statistically significant. The findings on the relationships above are supported by Kim and Li (2021) who found that corporate governance has the most significant impact on corporate profitability. Findings in relation to the relationship between ROI and environmental disclosures differ from those of Wasara and Ganda (2019) whom studied the relationship between corporate sustainability disclosures and financial financial performance for mining companies listed on the JSE and found this to be negatively associated. It is also worth noting that Wasara and Ganda (2019), who found that “social disclosure has a positive relationship with the return on investment” and thus posit that firms who disclose social impacts are likely to increase their profitability and indirectly ROI.

4.6 Multiple Linear Regression Analysis: Tobin's Q and ESG Scores

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367[a]	0,135	0,121	0,7048816
a. Predictors: (Constant), Environmental, Governance, Social				
b. Dependent Variable: TobinsQ				

The R-square value is 0,135 which suggests that Tobin's Q varies by about 13.5% depending on ESG Scores. In this instance, this suggests that approximately 86.5% of the factors influencing this measure are attributable to other factors that are not investigated in this study. Tobin's Q appears to be less sensitive to ESG factors.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	2,025	0,375		5,398	0,000	1,285	2,765		
	Social	-0,159	0,037	-0,342	-4,311	0,000	-0,231	-0,086	0,759	1,317
	Governance	-0,047	0,062	-0,059	-0,754	0,452	-0,169	0,075	0,779	1,283
	Environmental	0,118	0,030	0,304	3,921	0,000	0,059	0,178	0,797	1,254

a. Dependent Variable: TobinsQ

The relationship between Tobin's Q and Social scores scores is (β =-0,342, t =-4, 311 Sig < 0,000), this implies that this relationship is negative though statistically significant moreover, we reject the null hypothesis as it is less than 0,05. The relationship between Tobin's Q and Governance scores is (β =-0,059, t =-0,754, Sig < 0,452), the relationship is negative but is also considered to not be statistically significant as the p-value is higher than 0,05 as such, we therefore accept the null hypothesis. The relationship between Tobin's Q and Environmental scores is (β =0,304, t =3,921, Sig < 0,000), whilst this relationship is positive, the T-test for it is far greater than 1,96 and though below the

significance level of 0,05 which means we must reject the null hypothesis. Velte (2017) found that generally, sustainability disclosures have a positive effect on firm value as evidenced through Tobin's. The findings on the relationships above are supported by Mardini (2022) who suggests that a firm with higher environmental disclosure tends to increase its Tobin's Q in order to satisfy stakeholders' decision-making needs but that the social factors tend to be negative and have a draining effect on firm resources but also indirectly the market. Quereshi, et al.(2021) postulates that "investors favourably perceive ESG investments due to being a good corporate citizen which in turn boost the stock market performance indicators of firms" this could explain why the relationship between environmental factors and market performance (Tobin's Q) tends to be positive.

Based on the overal findings from the multiple regression analysis the next section provides the conclusion for the chapter.

4.7 Conclusion

Data analysis was the subject of this chapter, a correlation analysis and multi-regression analysis were undertaken in order to determine the statistical relationships between firm financial performance and corporate sustainability disclosure factors as evidenced through ESG variables. The Pearson correlation coefficients were used to determine the effects that variables have on one another whilst multiple linear regression sought to understand causality in these relationships.

Considering the research questions as highlighted in Chapter 1, specifically on what the relationship between company financial performance and corporate sustainability disclosures is relating to societal factors, it appears the relationships between the measures of firm financial performance (ROA, Tobin's Q and ROE) is generally negative and can be considered statistically significant and there appears to be no correlation between social factors and ROI.

Looking at the research question on what the relationship between company financial performance and corporate sustainability disclosures is relating to governance, it appears the relationships between internal measures of firm financial performance (ROA, ROI and ROE) is generally positive, albeit not statistically significant and negative when it relates to Tobin's Q which is external to the firm and measures market performance.

Lastly, considering the research question on the relationship between company financial performance and corporate sustainability disclosures relating to environmental factors, the correlation analysis indicates a generally positive relationship between the variables.

The next chapter will give a broad summary of the research by bringing into more context the theoretical and empirical goals of this study.

Chapter 5: Discussion of findings

This study sought to determine if there exist relationships between company financial performance and corporate sustainability disclosures. The main aim being to obtain an understanding of the relationship between corporate sustainability disclosures and company financial performance.

The preceding chapter focused on the data analysis of the performance measures and ESG factors that make up corporate sustainability disclosures. This chapter seeks to delve deeper into these relationships by following a three-step process of discussing the literature (i.e., what the theory tells us); discussing the data analysis (i.e., what the analysis infers) and concluding remarks which will either prove or disprove the research propositions. The chapter is broken down in terms of the relevant research questions that the research seeks to answer:

5.1 Research question 1: What is the relationship between company financial performance and corporate sustainability disclosures relating to governance factors?

Corporate governance's goal is to align managerial and business activity with the goals, aims, and objectives of the company (Hendrikse & Hefer-Hendrikse, 2012). Some researchers have found that governance disclosures are positively associated with financial performance (Azzam, AlQudah, & Haija, 2020) (Darmawati, Khomsiyah, & Rahayu, 2005) (Dzingai & Fakoya, 2017). This study found that there are positive correlations between internal company financial performance measures (ROE; ROI and ROA and governance scores, albeit these are weak and also found that there are negative correlations between the governance scores and Tobin’s Q, which is largely external to the company and measures the market value of a company.

In considering the results of the regression analysis, the relationship between governance and financial performance indicators was largely found to be positive but not significant,

thus illustrating that there is no statistically significant relationship between corporate governance and financial performance. These results were also found to be true by Sharma (2014) whose study focussed on the governance practices of firm performance in Indian and South Korean companies.

From a theoretical perspective, it is noted that companies can attract investment, raise capital and strengthen the foundations for their success through transparent and effective corporate governance (Fung, 2014). According to Fung (2014), “transparency is related to ongoing dissemination through accessible media of firm-specific information aimed at ensuring stakeholders are kept abreast of developments within the firm”.

“Evidence shows that corporate transparency regarding ESG information has a positive association with corporate efficiency” (Xie, Nozawa, Yagi, & Fujii, 2019). Governance information disclosure has the strongest positive linkage with corporate efficiency (Xie, Nozawa, Yagi, & Fujii, 2019). This agrees with the finding on the positive linkages between corporate governance disclosures and firm financial performance and the lack of correlation to Tobin’s Q, which represents market perceptions of firm value.

In conclusion, compliance to corporate governance reforms may have the effect of legitimising the actions of companies to their stakeholders, help build rapport and may also ultimately result in the company reaping financial rewards. From this perspective, companies should invest more in corporate governance initiatives and transparently and consistently disclose these to the communities in which they operate in hopes of garnering sufficient support by the communities to increase their performance.

5.2 Research question 2: What is the relationship between company financial performance and corporate sustainability disclosures relating to the social factors?

Ordinarily, corporate sustainability disclosures relating to social factors include indicators such as diversity, health and safety working conditions, human rights and impacts on local

communities (World Economic Forum, 2021). According to Ernst and Young (2022), “organizations with strong social credentials are likely to be better positioned to weather challenging times and commercial conditions, social issues are anticipated to become more significant to investors and stakeholders”.

Some researchers have found that the “social performance disclosure signficantly influence company performance” (Burhan & Rahmanti, 2012) (Micah, Ofurum, & Ihendinihu, 2012) (Nwidobile, 2014). Wasara and Ganda (2019) further found strong correlations of social disclosures to ROI in JSE mining companies. According to Nwidobile (2014), this shows that businesses are investing more in their products, which attracts more people and boosts their bottom line, which in turn has the ripple effect of causing companies to behave honourably in the societies in which they operate with a view of securing afforable community support, maintaining uninterrupted operations and increasing profitability.

This study found to the contrary of the above in that there is a negative correlation and a negative and significant relationship between social disclosures and the performance measures. Whilst this implies that there is no correlation beween social disclosures and company performance, it also infers that social disclosures have a negative effect on financial performance. From a practical perspective, spend on social factors has the effect of reducing company profits, which would explain why there is a negative correlation with ROI, ROE and ROA. This result is consistent with the shareholder theory, which generally holds that a company is only established for the benefit of its shareholders through maximizing their wealth. Milton Friedman (1970) argues on the above by stating that carrying out CSR imposes an unfair and fundamentally undemocratic tax on shareholders, that its implementation costs far outweigh any potential tangible benefits, and that as a result, it results in the misallocation and misappropriation of valuable company resources. Ahmad et al, 2021 found that “institutional and legitimacy theory suggests that regardless of size, investment in corporate social performance enhances financial performance”, in their study, they found positive correlations between social disclosure and performance.

Wasara and Ganda (2019) allude to there being mixed results between social disclosures and performance with some researchers having found definitive positive relations whilst others concluded on negative relationships.

To summise, based on results of this research, there are negative correlations between social indicators and ROA, ROE, and Tobin's Q whilst we also found no correlation to ROI. The relationship between the two variables (i.e. performance measures and social indicators) also proved negative and statistically signficant for all the dependent and independent variables. From this, we may deduce that companies should rather reduce focus on the societal aspects of ESG and communication of same and divert attention, effort and resources towards the activities which are likely to increase their financial performance.

5.3 Research question 3: What is the relationship between company financial performance and corporate sustainability disclosures relating to the environmental factors?

The Bloomberg ESG scores on environmental disclosures in sustainability reports cover amongst others indicators such as waste and pollution, climate risks, carbon dioxide emissions and natural resource management (Bloomberg, 2020). Environmental activities without proper controls will affect the triple bottom line of an organisation (El Akremi, Gond, Swaen, De Roeck, & Igalens, 2018). According to literature on environmental disclosures, disclosing environmental impacts can help improve a company's reputation and financial performance (Longoni & Cagliano, 2018).

In a study conducted on companies on the Borsa Istanbul, it was found that environmental scores do not have a signficant relationship with firm value (Aydogmus, Gulay, & Ergun, 2022) whilst some researchers have found environmental disclosures to not have any impact on financial performance (Elsayed & Paton, 2005). In this study, it was found that there is a positive correlation between environmental disclosures and company performance (ROA, ROE, ROI and Tobin's Q), moreover, this relationship was found to be

stratistically significant showing that there are definite causal and correlational features in the relationship. The finding may be supported by the stakeholder theory which advocates for firms to care for more than just shareholders but all other stakeholders with legitimate interest in the affairs of the company (Stakeholdertheory.org, 2018).

From the above it is understood that investments in environmental factors and awareness of these by impacted communities may help build a positive reputation for companies which may also assist in generating needed support for its activities and may ultimately lead to improved financial performance. Thus, it is recommended that companies invest in environmentally sound activities to help boster their profitability potential.

In conclusion, whilst the results illustrate ther are mixed relationships between the environmental, social and governance disclosures and financial performance, from a social responsibility perspective, performing ESG activities positively impact performance of companies in other ways such as fostering goodwill in comunities and improving company reputation (Kalia & Aggarwal, 2022) (Deswanto & Sirgar, 2018). Investors favorably perceive ESG investments due to being a good corporate citizen which in turn boost the stock market performance indicators of firms (Qureshi, Akbar, Akbar, & Poulova, 2021).

The above results are also supported by Buallay (2019) who argued that there is significant positive impact of ESG on the performance. However, the relationship between ESG disclosures is vary if measured individually; the environmental disclosure found positively affect the ROA and TQ. Whereas, the corporate social responsibility disclosure is negatively affect the three models. However, the corporate governance disclosure found negatively affects the ROA, ROE and positively affects the Tobin’s Q” (Buallay, 2019).

Chapter 6: Conclusion and Recommendations

This study sought to determine what the actual relationship between corporate sustainability reporting and company performance. Key to this was a determination of how the individual components (Environment, Social and Governance) impact company performance. Performance indicators measuring both internal (ROI, ROA and ROE) and external (TQ) efficiencies were considered with a view of having a non-singular consideration of the impact.

The paper is broken down into 5 parts: Part 1 introduced and defined the problem, whilst Part 2 explored the existing body of literature on the topic. Part 3 sought to explain the research methodology and Part 4 considered the data collected and Part 5 analysed same. This chapter presents the concluding remarks and makes recommendations for future research.

“A strong ESG proposition can create value” (McKinsey.com, 2019), and as King and Lessidrenska (2009) state companies must be accountable for how they impact on the environment and society, thus from this perspective, all companies must report on how they have impacted the local economies of the places in which they operate. The boards of companies should be able to provide stakeholders with advice on how they propose to enhance positive impacts and how they intend to eliminate or mitigate negative impacts in the years to come (King & Lessidrenska, 2009).

Most research in this area indicates that sustainability disclosure positively affects firm performance (Alareeni & Hamdan, 2020) (Ferri, Tron, Colantoni, & Savio, 2023) (Aydogmus, Gulay, & Ergun, 2022). Also notable is that when considering the individual impacts of the sustainability disclosure components (i.e. Environment, Societal and Governance), most researchers have found that these have varying impacts on performance measures (Alareeni & Hamdan, 2020) (Azzam, AlQudah, & Haija, 2020) (Darmawati, Khomsiyah, & Rahayu, 2005).

Whilst some previous research in this area has focussed on a consideration of one or two of the sustainability disclosure components and assessed impacts on either internal or external performance measures, this paper has sought to obtain a holistic view by considering all of the disclosure components, more so by also considering company-internal and external performance measures, with the hope of providing a body of work that is comprehensive in considering the relationship between disclosure and performance. Thus from this perspective, this research article is different from previous articles as it has brought new insight into the literature by providing a more holistic consideration of the different measures of profitability.

In addition to the above, this paper sought to help guide efforts by organisations on what components of the sustainability disclosure to focus on more to derive more value from sustainability activities. Future research in this area can cover consideration on the relationship between corporate sustainability disclosures and non-financial performance indicators (eg. Reputation). In addition, given that the Johannesburg Securities Exchange has in June 2022 published the final versions of its Sustainability Narrative Disclosures and Metrics (JSE, 2022), additional research can be conducted on the relationship between performance measures and sustainability disclosures following the standardisation of the corporate sustainability disclosures.

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