EFFECT OF ENVIRONMENTAL REPORTING ON FIRM VALUE OF LISTED MANUFACTURING COMPANIES IN NIGERIA: MODERATING ROLE OF INFORMATION ASYMMETRY

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ABSTRACT

This study investigates the moderating role of information asymmetry in shaping the effect of environmental sustainability reporting on the firm value of listed manufacturing companies in Nigeria. Utilizing an ex-post facto research design, the study draws on a stratified sample of 29 manufacturing firms from a population of 43 listed on the Nigerian Exchange as of December 31, 2022. Spanning from 2007 to 2022, the study collects secondary data from annual reports, Nigerian All Share Index reports, meristem securities and register platform Admin platform and sustainability reports. Employing descriptive and inferential statistics, along with multiple regression techniques, the analysis considers Firm value as the dependent variable, Environmental sustainability reporting as independent variables, Information asymmetry (IA) as the moderating variable and Equity ratio, return on asset and Leverage as control variables. Results indicate that information asymmetry shows a negative and significant effect on the relationship between environmental sustainability reporting and firm value. The study concluded that information

asymmetry impacts firm value despite environmental disclosure efforts. The study recommends that Nigerian manufacturing companies should engage in comprehensive disclosure practices to enhance transparency and address information asymmetry through adequate stakeholder engagement. The study's findings emphasized the need for Nigerian policy makers to enhance regulations on environmental sustainability reporting. By implementing stricter disclosure laws and standards, policy can reduce information asymmetry and foster a more transparent business environment. This could attract foreign investment and demonstrate Nigeria's commitment to sustainable practices. Furthermore, the study also highlights the importance of transparency in maintaining stakeholder trust. Improved disclosure practices can increase public trust in the manufacturing sector, promoting corporate responsibility. This heightened transparency benefits investors and the broader community, ensuring companies are accountable for their environmental impacts, ultimately leading to better environmental stewardship and community welfare.

KEYWORDS: Firm Value, Social sustainability reporting, Information asymmetry, Manufacturing Companies.

1. INTRODUCTION

In the ever-evolving landscape of business and finance, the interest in non-financial aspects of corporate performance among investment professionals reflects a profound realization. This realization emerges from the understanding that sole reliance on profitability proves inadequate for fostering a firm's sustained growth over the long term. Consequently, the business ecosystem undergoes a metamorphosis, challenging a conventional norm that predominantly equates success with only financial profitability.

Firm value is perceived not merely as a numerical outcome on financial statements but as a dynamic reflection of a company's ethos, resilience, and adaptability in the face of evolving challenges. It involves a delicate balance between tangible and intangible assets, blending financial prosperity with societal contributions and environmental stewardship. Striving for an increase in firm value allows a company's strategic vision to go beyond maximizing profits; allows the integration of sustainable practices in line with the growing expectations of the market. In the evaluation of firm value, various metrics such as asset market value, liability market value, management efficiency, profit growth, and stock price fluctuations have conventionally been employed. However, this study adopts the quoted market price per share as the primary metric, given its ability to promptly capture investor and market sentiments.

The evolving landscape underscores the importance of recognizing the interconnectedness between economic growth, environmental preservation, and social welfare, emphasizing this paradigm shift. Environmental Sustainability Reporting (ESR) has emerged as a vital means for companies to communicate their environmental endeavors to stakeholders. While profitability and shareholder wealth remain primary objectives, they come with associated costs such as environmental degradation and safety concerns. Stakeholder concerns have prompted businesses to adopt more responsible practices. However, the extent of information disclosure for corporate social and environmental reporting remains a topic of debate. This paradigm shift emphasizes that a firm's value hinges on its ability to navigate a globalized world while meeting stakeholders' demands for transparency and responsibility. Investment professionals advocate for a broader approach to corporate success, where firm value serves as a guiding principle towards lasting prosperity and positive societal and environmental impact.

Within this transformative context, information asymmetry emerges as a critical consideration. Information asymmetry refers to the condition caused by the imperfection of information, where uncertainty, inconsistency, and imprecision prevail. In the realm of corporate valuation, it represents a pivotal challenge as stakeholders, including investors, contend with an uneven distribution of information. The adoption of sustainability reporting as a tool becomes paramount to mitigating information asymmetry. Sustainability reporting, defined as a transparent and accountable means for organizations to communicate their economic, environmental, and social impacts to stakeholders, plays a pivotal role in this paradigm shift. It not only enhances corporate transparency but also fortifies risk management, facilitates stakeholder engagement, and refines communications with diverse stakeholders. The integration of sustainability reporting serves as a strategic response to the imperative of addressing information asymmetry, fostering a more informed and equitable landscape for evaluating firm value in the contemporary business environment.

In the Nigerian context, manufacturing companies play a pivotal role in the nation's economic landscape, contributing significantly to employment, industrial growth, and overall economic development. As these companies navigate the global shift towards sustainable business practices, the intersection of sustainability, information asymmetry, and firm value becomes particularly noteworthy. Consequently, this study focuses on the environmental aspects of sustainability reporting and its effect on the firm value of listed manufacturing companies in Nigeria in the presence of information asymmetry.

In Nigeria, the discussion surrounding environmental sustainability in business has surged in relevance, particularly within its rapidly expanding manufacturing sector. As Africa's largest economy and most populous nation, Nigeria relies heavily on manufacturing for economic growth and job creation. However, the sector grapples with significant environmental challenges like pollution, resource depletion, and climate change. Thus, the urgency for Nigerian manufacturing firms to adopt sustainable practices to mitigate environmental impacts is critical. Understanding the factors affecting firm value in this context is crucial for ensuring the sector's long-term economic growth and sustainability.

Laville (2023) in a report illustrated how 14,000 Nigerians have taken Shell Corporation an oil company in Nigeria to court over pollution. This dealt a serious and severe damage to the firm value of shell corporation between the months of January and February with shell reporting lower increase in share price of 5.5% in comparison to the previous year of 13% around the same months (Bloomberg, 2023). The negative media coverage tarnishing the firm's reputation and the resultant financial losses underscores how environmental issues can directly impact firm value. Similarly,Toni (2022) reported that Oil and gas companies operating in the upstream sector in Nigeria are to blame, for the country's catastrophic environmental and ecological conditions. This has left the oil-producing community with serious health challenges which have affected their social, economic and environmental structures. In the same vein, Daily Post (2022) also reported that from 2010 to 2015, lead poisoning caused by artisanal gold mining in Zamfara state, Nigeria, resulted in numerous deaths and health issues. This environmental disaster led to international scrutiny and potential reputational damage for companies involved in the gold supply chain, potentially impacting their market value. Thus, the urgency for Nigerian manufacturing firms to adopt sustainable practices to mitigate environmental impacts is critical. Understanding the factors affecting firm value in this context is crucial for ensuring the sector's long-term economic growth and sustainability.

It is important to note that numerous studies have been carried out on the effect of sustainability reporting and firm value which have yielded varying results with some results from researchers like Bose et al. (2018); Khan et al. (2020); Sobhani et al. (2012) showing a positive and significant relationship between sustainability reporting and firm value while some showing negative relationship or no relationship (Lopez et al., 2007; Murray et al., 2006). In this regard, this study seeks to use information asymmetry as a moderator to examine the underlying mechanisms and conditions that affect the effect of sustainability reporting on firm value of listed manufacturing companies in Nigeria. This to best of the researcher's knowledge has not been used in the Nigerian context. As a result, the main objective of this study is to examine whether information asymmetry moderates the effect of environmental sustainability reporting on firm value of manufacturing companies in Nigeria.

In line with the above research objective the following hypotheses were stated in the null form and tested

H_{O1}:   Environmental sustainability reporting has no significant effect on firm value of listed manufacturing companies in Nigeria.

H_{O2}:   Information asymmetry has no significant effect on firm value of listed manufacturing companies in Nigeria.

H_{O3}:   The moderating role of information asymmetry has no significant effect on the effect of environmental sustainability reporting and firm value of listed manufacturing companies in Nigeria.

The study's findings have significant implications for various stakeholders. Policymakers could use them to craft regulations promoting transparency and accountability in environmental reporting, thus fostering sustainable practices in the manufacturing sector. Environmentalists could benefit from insights into how sustainability reporting affects firm value, enabling them to advocate for stronger environmental standards and corporate responsibility. Government entities could shape policies based on the study's results to incentivize companies to prioritize environmental sustainability, thereby contributing to national environmental goals and fostering a more resilient economy. For management teams of manufacturing companies, the study offers actionable insights into the potential benefits of robust sustainability reporting practices, guiding strategic decisions to enhance firm value while minimizing information asymmetry risks. Overall, the study serves as a valuable resource for driving positive change towards sustainable development in Nigeria's manufacturing sector. It spans a 15-year period from 2007 to 2022 and comprises six sections: introduction, literature review, methodology, data presentation and analysis, conclusion, and recommendations.

2. LITERATURE REVIEW
This section discusses conceptual definitions, theoretical issues, and relevant empirical literature. This would allow for a creation of in-depth understanding of the independent, dependent, and moderating variables related to the study. These issues are discussed below.

Conceptual Review
Firm value, a central concept in corporate finance and strategic management, encompasses the overall worth of a company in the eyes of investors and stakeholders. Various authors have offered definitions and conceptual frameworks to capture the multifaceted nature of firm value. According to Ehrhardt and Brigham (2011), firm value refers to the present worth of all future cash flows generated by a company, discounted at an appropriate rate to reflect the time value of money.

Similarly, Kirani and Wijayanti (2023) define firm value as the market capitalization of a company, calculated by multiplying the current stock price by the total number of shares outstanding. In contrast, Jensen and Meckling (1976) emphasize the agency theory perspective, viewing firm value as the maximization of shareholders' wealth, achieved through effective corporate governance and alignment of interests between principals and agents. Building upon this notion, Berle and Means (1932) as cited by Gathoni (2023)defined firm value as the influence of ownership concentration and control mechanisms on shareholder value within organizational frameworks.

From a stakeholder perspective, Freeman (1984) as cited byKivits and Sawang (2021)argues that firm value extends beyond shareholders to include all parties affected by the company's actions, emphasizing the importance of balancing the interests of various stakeholders for long-term value creation. In the context of financial markets, Alsayegh et al. (2023) define firm value as the market value of a company's assets minus its liabilities, representing the residual claim to the company's earnings available to equity holders. Furthermore, Ohlson (1995)as cited by Gerged et al. (2023) proposes an accounting-based approach to firm value, suggesting that it can be inferred from a company's financial statements by analyzing the relationship between accounting information and stock prices. Finally, Kim and Koo (2023) introduces the concept of contingent claims valuation, which views firm value as the sum of the market values of all financial claims on the company, including equity, debt, and options. Collectively, these diverse perspectives offer a comprehensive understanding of firm value, encompassing both quantitative and qualitative dimensions of corporate performance and stakeholder relations. This study therefore adopts the definition of Kirani and Wijayanti (2023) as its definition of firm value.

In academic literature, firm value is assessed through various metrics, such as Tobin's q (Aondoakaa & Isaac, 2019; Onumoh et al., 2024), market capitalization (Yulianingsih et al., 2018), discounted cash flow analysis (Harymawan et al., 2020), price-to-earnings ratio (Sanusi & Sanusi, 2019), enterprise value (Syder et al., 2020), and market value per share (Gitahi et al., 2018). This study adopts quoted market price per share as the measure of firm value. This choice is based on its ability to offer real-time insights into the market's assessment of firm value, distinguishing it from other metrics.

The Global Reporting Initiative (GRI, 2022) defines environmental reporting as the process of disclosing an organization's environmental performance and impacts, including its use of natural resources, energy and water efficiency, greenhouse gas emissions, waste management practices, and other environmental risks and opportunities. Also, British Columbia (2020) defines environmental reporting as the presentation of unbiased scientific data and information relating to the environment. According to Burritt (2005), environmental reporting takes scientific information and makes it accessible to non-technical audiences. This provides the basis for informed decision making so that individuals, agencies and policymakers can take positive action. In the same vein, Welbeck (2017) defines environmental sustainability reporting as the process of measuring, disclosing, and communicating an organization's environmental performance and impact, including its use of natural resources, greenhouse gas emissions, and waste management practices. The purpose of such reporting is to provide transparency to stakeholders, including shareholders, customers, and the public, regarding an organization's environmental impact and its efforts to promote sustainability (Chu & Karr, 2017; David Uyagu et al., 2017; Kolawole et al., 2021).

According to Gray (2005), the term "environmental reporting" refers to the gathering, presentation and dissemination of information on an organization's interactions with the natural environment. Such reporting can apply to any organization, but it is mostly linked with (generally large)

corporations. Similarly, Andania and Yadnya (2020) identified that environmental reporting is most frequently linked with organization self-reporting; however, it is important to note that the influence of external bodies like governmental agencies, environmentalists, and other independent bodies helps to exert pressure on organizations to be environmentally accountable. This ability to exert pressure on an organization to force its adherence to environmentally positive operations is further explained through the theory of legitimacy, which will be discussed later under theoretical review. This study will adopt the definition provided by the Global Reporting Initiative (GRI), as the GRI is a widely recognized framework for sustainability reporting and its guidelines provide a standardized way for organizations to report their environmental performance. The GRI's framework for environmental reporting also provides transparency to stakeholders and helps organizations identify and manage their environmental impacts while also promoting sustainable practices and creating a more sustainable future. Environmental reporting will be measured using reports on activities such as recycling, alternative energy usage, biodiversity, emissions, water, complaints and grievances (Joshua Selven et al., 2022; Mahmood et al., 2018; Mokhtar et al., 2015).

Information asymmetry, a fundamental concept in economics and finance, refers to a situation where one party in a transaction possesses more or better information than another party. Various authors have contributed definitions and conceptual frameworks to elucidate this phenomenon. According to Stiglitz (2002), information asymmetry occurs when one party has access to information that is not available to others, leading to market inefficiencies and potential exploitation. Building upon this notion, Akerlof (1970) introduced the concept of adverse selection, highlighting how information asymmetry can result in the market being flooded with low-quality goods or services due to the inability of buyers to distinguish between high and low-quality offerings. Similarly, in the context of financial markets, Santra et al. (2023) discusses the implications of information asymmetry for stock prices, arguing that asset prices reflect all available information but may not fully incorporate asymmetrical information, leading to mispricing and market inefficiencies. In the realm of corporate finance, Abeywardhana (2017) emphasize the impact of information asymmetry on capital structure decisions, suggesting that companies may face difficulty raising external capital if investors perceive them to possess superior information about their financial health. Furthermore, Spence (1973) as cited by Kurlat and Scheuer (2021) introduces the concept of signaling, proposing that parties with superior information may use certain actions or signals to convey their private information to others and mitigate the adverse effects of information asymmetry. From a regulatory perspective, Newbery (2002) discusses the role of government intervention in mitigating information asymmetry, highlighting the importance of disclosure requirements and transparency initiatives to level the playing field for market participants. For the purpose of this study, the definition of Akerlof (1970) is adopted as information asymmetry encompasses the unequal distribution of information in economic transactions, leading to market inefficiencies and challenges for decision-making. The insights provided by these various authors contribute to a nuanced understanding of this pervasive phenomenon across different domains of economics and finance.

Theoretical Review
Legitimacy theory
The notion of corporate citizenship is central to the concept of sustainability reporting. It is also because of this logic majority of studies on sustainability reporting have argued legitimacy theory as an integral element that motivates companies to engage in the act of providing reports that goes beyond the traditional reports on financial performance and profit generation (Andania & Yadnya,

2020; Ango & Aliyu, 2020; Ghazali, 2007; Jitaree, 2015; Loh et al., 2017; Nguyen, 2020; Wiwik, 2020).

Legitimacy theory is a sociological theory that aims to explain how groups and institutions achieve and maintain public support. According to Deegan (2002), legitimacy can be gained when a match exists between the existence of a non-disruptive or congruent company and the existence of a value system in society and the environment. The legitimacy theory emphasizes the need of societal acceptance in ensuring a company's long-term viability. This is reinforced by the assumption that a company's actions can have an effect on the environment in which it works. If a company's operations are seen or perceived as having a negative impact on the community, the public may respond by boycotting the company's products or putting pressure on the government to intervene (Newson & Deegan, 2002; Yusoff & Adamu, 2016).

On the other hand, Suchman (1995) postulated that legitimacy is an operational resource that an organization extracts from their surroundings, which, end of the day, is being used to pursue their goals. He also marked this strategic understanding of legitimacy as "pragmatic legitimacy". Similarly, Pfeffer (1981) as cited by Mahmud (2019) also focused on the point of attaining goals and mentioned that managers utilize legitimacy associated with culture, social norms and ethical values to reach their tangible goals, such as, sales, revenue and profits. In the same vein as Pfeffer (1981), Dowling and Pfeffer (1975) as cited Banku et al. (2023) also focused on the competition issue and viewed legitimacy as a sort of mechanism used by companies to strengthen their competitive standing and to distinguish themselves from others in the same industry. This is because organizations that are perceived as legitimate are more likely to receive support from stakeholders, such as customers, employees, and investors, and are less likely to face opposition or resistance (Branco & Rodrigues, 2008). Moreover, pursuing legitimacy may benefit firms by improving their reputation, lowering their risk of regulatory interference, and expanding their access to resources.

Legitimacy theory serves as a pivot in understanding the relationship between sustainability reporting and firm value in the sense that sustainability reporting is a way for organizations to communicate their social, environmental, and economic performance to stakeholders and to demonstrate their commitment to sustainable practices (Ammer et al., 2020; Syder et al., 2020). Legitimacy theory suggests that such reporting can help organizations gain legitimacy in the eyes of their stakeholders by demonstrating their commitment to social responsibility and environmental sustainability. Therefore, sustainability reporting enhances an organization's legitimacy by demonstrating its transparency, accountability, and commitment to societal issues, which in turn will raise the confidence of stakeholders in the organization. The resultant effect of this will be an increase in confidence in the organization's activities and a creation of goodwill in the minds of the stakeholders, which will translate into an increase in sales and the availability of resources (capital and investment opportunities) for the organization, which will in turn increase the firm value of the organization (Harymawan et al., 2020; Purwanti, 2018).

Logically, it is expected that the provision of sustainability reports will act as a catalyst for legitimacy within the business environment of a company, which will in turn result in a higher firm value. This is because legitimacy theory and sustainability reporting are particularly relevant in today's business environment, where there is increasing pressure on organizations to act in a socially and environmentally responsible manner (Haidar & Sohail, 2021). As all stakeholders, including customers, employees, investors, and regulators, become more aware of the importance of

sustainability, organizations that can demonstrate their commitment to sustainability through transparent and credible reporting are more likely to maintain their legitimacy over the long term.

Signaling theory

Signaling theory explores how one party (the sender) credibly conveys information to another party (the receiver) in situations where information asymmetry exists. This theory has profound implications in various fields, including economics, management, and finance. Spence (1973), an American economist, first articulated signaling theory in his seminal work "Job Market Signaling." He used the job market as an example to demonstrate how potential employees send signals (like educational qualifications) to potential employers to indicate their productivity or ability.

Various authors have defined signaling theory in different ways. Spence (1973) described it as the idea that one party credibly conveys some information about itself to another party. For example, in the job market, potential employees signal their ability level to the employer by acquiring certain education credentials. Gitahi et al. (2018) defined signaling as actions taken by an informed party to reveal private information to an uninformed party. Ellili and Nobanee (2022) stated that signaling theory suggests that in the context of information asymmetry, signals are actions taken by the more informed party to communicate information to the less informed party.

Signaling theory addresses the issue of information asymmetry, where one party possesses more or better information than the other. In such situations, the informed party (the sender) uses signals to communicate essential information to the less informed party (the receiver). These signals need to be credible and costly, ensuring that only genuine senders can afford to send them. For example, in the labor market, education serves as a signal of a candidate's capability. The cost and effort required to attain education ensure that only those who possess the required abilities will invest in it, making it a credible signal to employers(Kurlat & Scheuer, 2021).

Sustainability reporting acts as a signal from the company to its stakeholders, indicating its commitment to sustainable practices and transparency. By providing detailed ESG information, companies reduce information asymmetry, allowing investors to make more informed decisions. Investors increasingly value sustainability as a component of a company's long-term success and risk management. Transparent sustainability reporting signals to investors that the company is managing its ESG risks effectively, leading to enhanced investor confidence and potentially higher firm value. According to signaling theory, for sustainability reporting to be an effective signal, it must be credible and involve some cost. Companies that invest in thorough and honest sustainability reporting demonstrate their genuine commitment to sustainable practices, thereby distinguishing themselves from those that do not. Credible sustainability reports can enhance stakeholder trust and reputation, which are vital for long-term success. Trust from stakeholders, including customers, employees, and investors, can translate into increased loyalty, reduced cost of capital, and better overall firm performance.

For the purpose of achieving the objectives of this study, the study has been anchored using both legitimacy theory and Signaling theory.

Review of empirical studies

Reddy and Lucus (2010) investigated the effect of environmental sustainability reporting on company's abnormal returns within a 31-day event window in Australia and New Zealand. The study adopted a cross-country analysis method in which samples were drawn from two different countries. Australia had a sample size of 51 firms, while New Zealand had a sample size of 17.

Secondary data was gathered from both the New Zealand Stock Exchange and the Australian Stock Exchange in order to carry out the study. Multiple regression analysis was used as the technique for analyzing the data set derived from the samples. The researchers found that sustainability reporting, especially environmental reporting had a statistically significant relationship with abnormal returns. Hence, it was concluded that environmental sustainability reporting is statistically significant in explaining abnormal returns.

In opposition, Anlesinya et al. (2014) examined whether environmental sustainability reporting has a significant positive effect on the financial performance of MTN Ghana Limited within a time period of one fiscal year. The study used cross-sectional research design and primary data, with 35 participants out of a total of 40 management staff receiving questionnaires. The findings showed that environmental sustainability reporting had a significant negative effect on the financial performance of MTN Ghana.

Robert et al. (2016) examined the influence of expenditure on environmental sustainability on the financial performance of industries listed on the Nairobi Securities Exchange, Kenya, from the period of 2010–2014. The study adopted a descriptive research design, and the purposive stratified random sampling technique was used to arrive at a sample size of 49 firms. Primary data using questionnaires and secondary data using the NSE handbook and financial statements were used as data sources for the study. The study made use of the Chi-square and Pearson correlation techniques in the analysis of the data set. The findings reveal a significant relationship between expenditure on environmental sustainability and financial performance metrics; specifically Return on Capital Employed (ROCE) and asset growth. In particular, firms that invested in environmental sustainability demonstrated significantly higher ROCE and asset growth, underscoring the positive impact of such expenditure on both profitability and firm growth.

It is critical to emphasize that the studies review here were carried out in different countries with Reddy and Lucus (2010) being conducted in a cross-country setting involving New Zealand and Australia while,Anlesinya et al. (2014)andRobert et al. (2016)were conducted in Ghana and kenya respectively which differs from the country domain being used in this study which is Nigeria. This study will invariably provide an insight into how the effect of sustainability reporting especially environmental sustainability reporting affects firm value in the Nigerian context.

Sampong et al. (2018) investigated the relationship between the extent of CSR disclosure performance and firm value in an emerging institutional setting within South Africa from the period of 2010 to 2016. The study used a sample size of 126 listed companies and extracted secondary data from their annual reports using content analysis. The multiple linear panel regression model was adopted, and the findings showed that there is a negative significant relationship between environmental disclosure performance and firm value of South African companies.

In contrast, Sanusi and Sanusi (2019) assessed the popularity and extent of environmental sustainability reporting practices among quoted manufacturing firms in Nigeria and their effects on their financial performances. The study was carried out over a period of 6 years (2010–2015), and a total sample size of 33 companies was used out of a total population of 68 manufacturing companies. The sample size was derived using the purposive sampling technique, while the study also made use of secondary data gotten from the annual reports of the companies. Descriptive and inferential statistics are used, along with multiple regression and product moment correlation, to analyze the data set. The results indicated a fair representation of the popularity of environmental sustainability reporting among manufacturing firms in Nigeria, though the majority of the

manufacturing firms reported very low levels of environmental disclosure. Environmental sustainability reporting indices have positive effects on the measures of financial performance (earnings per share, revenue growth, and return on assets).

Ammer et al. (2020) examined the association between environmental sustainability disclosures and firm value in Saudi Arabia from 2015 to 2019. The study used a sample size of 34 firms, and secondary data was derived from Bloomberg. The study used multiple regression analysis along with Breusech and a pagan lagrangian multiplier to identify the most appropriate model for the study. The result showed that reporting environmental sustainability practices has a significant impact on firm value, suggesting that enhanced responsibility and transparency in environmental dealings will improve stakeholder trust in the company, thus boosting market share vis-à-vis firm value. It is noteworthy to point out that Sanusi and Sanusi (2019) and Ammer et al. (2020)both had a study period of 6 years and 5 years respectively. This study improves upon that by extending the period to a 15-year time period which significantly differs from the two studies reviewed above.

Owolabi and Samuel (2020) investigated the relationship between sustainability reporting, environmental reporting, and economic reporting on the performance of insurance companies in Nigeria using Mutual Benefit Assurance PLC as a case study. The study made use of secondary data from the annual reports and accounts of Mutual Benefit Assurance PLC. The research adopted an ex post facto research design, where content analysis was utilized in the extraction of data. The multiple regression technique was used in analyzing the data set, which revealed that environmental reporting has a small but positive effect on market value and performance of insurance companies.It is important to note that Owolabi and Samuel (2020) used assurance a domain of an Assurance company which differs from this study which dwells into manufacturing companies therefore providing insights into the effect of environmental sustainability reporting on firm value in the manufacturing context.

Also, Qureshi et al. (2020) assessed whether sustainability disclosure (environmental, social, and governance) and female representation on boards have an effect on firm value. The study covered 22 countries in Europe and 16 different industries. The study proposed the use of the benchmark Olhson model in its measurement of firm value. The data used was secondary data obtained from the Thomas Reuters Eikon database. The sample size used was a total of 812 firms for a period of 7 years (2011–2017), and multiple regression analysis was used as the data analysis technique. The study revealed that there is a positive association between environmental sustainability disclosures and the market value of European firms.

Alsahlawi et al. (2021) tested the effect of environmental sustainability disclosure on stock return in Saudi Arabia between the periods of 2015 and 2019. The study used secondary data accessed from the Bloomberg database on a sample of 37 companies, excluding finance and real estate companies. The multiple linear regression was used to determine the hypothesis of the study, and the results showed that environmental disclosure has a significant and negative effect on stock return, indicating that investors do not consider environmental disclosure when valuing the stocks.

Similarly, Banku et al. (2023) examined the effect environmental sustainability reporting on corporate survival of oil and gas companies in Nigeria. The study adopted the GRI content index to scrutinize oil and gas companies' financial statements for the availability of environmental sustainability reports for the study period between 2016 and 2020. The study population of the study comprised 10 oil and gas companies quoted on the Nigerian Stock exchange as of 2020 with complete financial statements for the study period. The multiple regression statistic served as data

analyses tool. The study found that environmental sustainability reporting has an inverse and insignificant effect on corporate survival.

Hassan and Musa (2023)investigated the effect of environmental sustainability reporting variable and the corporation's value in the non-financial sectors of the Nigerian stock market for a period spanning between 2013 and 2020. The study utilized the static model underpinned by legitimacy theory. Secondary data spanning between 2013 and 2020 were employed from the annual reports of 40 firms selected using stratified sample technique. The random effect post estimation regression technique was used to analyses the data gathered. The findings revealed that environmental sustainability reporting had a positive and insignificant effect on firm's value.

Okwudili et al. (2023) evaluated the effect of environmental sustainability reporting on economic value addition of Nigerian listed manufacturing companies from 2013 to 2020. The study adopted the es-post facto research design and secondary data were sourced from annual reports and accounts of 37 sampled companies out of 73 listed manufacturing companies in Nigeria as of 30th September 2019. The panel regression technique (random effect regression model) was used to carry out estimation. The result of the study showed that environmental sustainability reporting had a positive but insignificant effect on economic value added over the period.

Yulianingsih et al. (2018) tested the effect of information asymmetry on firm value in Indonesia between the time periods of 2012 and 2018. The study adopted a quantitative research design with secondary data collected from the annual reports of the firms as the source of data. The sample size was identified as 32 firms. The study made use of descriptive analysis and multiple regression analysis for estimating the dataset. The result of the study showed that there is a significant negative effect information asymmetry has on firm value.

Zhang et al. (2022)examined the effect of information asymmetry on firm value of listed Chinese firms over a 6-year period (2015 to 2020). The sample consists of 300 Chinese firms listed on the Hong Kong stock exchange. Information asymmetry is proxied by bid-ask spread and earning forecast, while firm value is measured using Tobin's q. The study utilizes panel data regression analysis and secondary data. Results indicate that higher levels of information asymmetry are associated with lower firm value, implying a negative and significant effect on firm value.

Similarly, S. Kim et al. (2023)investigated the effect of information asymmetry on corporate value within Korean listed firms from 2017 to 2022. The sample comprises 200 Korean listed firms. Information asymmetry is proxied by analyst forecast dispersion, while corporate value is proxied by market capitalization. The study utilizes secondary data from the Korean stock exchange live index system and employs one-step GMM for data analysis. Findings reveal a significant negative effect of information asymmetry on corporate value, with firm size and financial leverage moderating this relationship.

Cheng et al. (2024) examined the effect of information asymmetry events on firm value in the U.S. technology sector from 2018 to 2023. The sample consists of 100 U.S. technology sector firms, and secondary data is derived from the New York Stock Exchange's integrated information trading platform. Information asymmetry is measured using earnings surprise and management guidance, while firm value is measured using abnormal stock returns. The study employs event study methodology for data analysis. Results suggest that positive earnings surprises and accurate management guidance lead to increased firm value, while negative surprises result in decreased firm value, indicating a negative and significant effect of information asymmetry on firm value.

3. METHODOLOGY

This study employs an ex-post facto research design to investigate the moderating effect of information asymmetry on the effect of environmental sustainability reporting on the firm value of listed manufacturing companies in Nigeria. This design is suitable because it examines past events beyond the researcher's control. Secondary data on the variables are collected from financial statements of the companies published on the Nigerian Exchange (NGX), Nigerian All Share Index reports, meristem securities and register platform Admin platform. The study's population is drawn from manufacturing firms listed on the Nigerian Exchange (NGX). However, the NGX website lacks a specific classification for manufacturing firms. Instead, it categorizes Nigerian firms into agriculture, conglomerates, construction/real estate, consumer goods, financial services, healthcare, ICT, industrial goods, natural resources, oil and gas, and services.

To address this classification gap, this study adopts Shahin (2015) definition of manufacturing firms, which refers to organizations engaged in producing goods through the transformation of raw materials or components into finished products using physical and chemical processes. As a result, companies falling under the NGX classifications of agriculture, conglomerates, consumer goods, healthcare, industrial goods, and oil and gas were used to form the potential manufacturing population.

The classifications of agriculture, conglomerates, consumer goods, healthcare, industrial goods, and oil and gas, were further subjected to specific selection criteria to determine the final study population of 43 firms. These criteria involved the use of identifying keywords such as "production" and "manufacturing" within the nature of the business section provided in each company's profile as published on the NGX website and also the completeness of their financial reports from the year 2007 to 2022. A stratified sample of 29 was selected based on industry representation and completeness of information for the period under consideration (2007 to 2022).Table 1 shows the population and stratified sample size after selection criteria at a glance.

Table 1
Population and Sample Size of the study

S/No	NGX classification	Population	Stratified Sample
1	Agriculture	5	3
2	Conglomerates	2	1
3	Consumer goods	16	11
4	Health care	6	4
5	Industrial goods	11	8
6	Oil and gas	3	2
	Total	43	29

Source: Field work 2024

Table 1 shows the stratified sample size of manufacturing firms as extracted from the Nigerian exchange group website as of December 31, 2022, is 29 listed manufacturing companies. The stratified sampling technique was used to ensure adequate representation across the subgroups, thereby enhancing the generalizability of findings within the manufacturing sector. By dividing population into homogeneous strata based on key characteristics, it minimizes sampling bias and increases precision. The final stratified sample of the study comprises 3 agriculture-based companies, 1 conglomerate, 11 consumer goods companies, 4 health care companies, 8 industrial

goods companies, and 2 oil and gas companies. The names of the companies that constitute the sample are provided in appendix A1.

Model specification.
The study adapts the model used by Yulianingsih et al. (2018). This is because the model used by Yulianingsih et al. (2018) is suitable for this study has it uses a moderation style type of modelling for its regression.

Model used by Yulianingsih et al. (2018)

$$Firmvalue_{it} = \alpha_1 + \beta_1 Sustainability\ reporting_1 + \beta_2 Good\ corporate\ governance_2 + \beta_3 Control\ variable_3 + \beta_4 Control\ variable_4 + \beta_5 Control\ variable_5 + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots$$
for the direct relationship

$$Y_{it} = \alpha_1 + \beta_1 Sustainability\ reporting_1 + \beta_2 Good\ corporate\ governance_2 + \beta_3 Control\ variable_3 + \beta_4 Control\ variable_4 + \beta_5 Control\ variable_5 + \beta_6 Information\ asymmetry * Sustainability\ reporting_1 + \beta_7 Information\ asymmetry * Good\ corporate\ governance_2 + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\ For\ the\ indirect\ relationship$$

In Yulianingsih et al. (2018) model,the study incorporated control variables in $\beta_3 X_3, \beta_4 X_4\ and\ \beta_5 X_5$. Y_{it} represented firm value, while $\beta_1 X_1\ and\ \beta_2 X_2$ denoted sustainability reporting disclosure and good corporate governance, respectively. Additionally, $\beta_6 ZX_1\ and\ \beta_7 ZX_2$ represented moderation with information asymmetry.

The model is modified to suit the variables of this study and the regression analysis. The element of environmental sustainability reporting is represented using (Env). Firm value (Fv) is the dependent variable, which is measured by market share price. The moderating variable is information asymmetry (IA) (bid-ask spread). The adapted regression model is presented below:

$$Fv_{it} = \alpha_0 + \beta_1 Env_{it} + \beta_2 IA_{it} + \beta_3 EFR_{it} + \beta_4 ROA_{it} + \beta_5 LEV_{it} + \varepsilon_{it} \dots\dots\ (1)$$
Depicting the direct relationship between the Variables

$$Fv_{it} = \alpha_0 + \beta_1 Env_{it} + \beta_2 IA_{it} + \beta_3 EFR_{it} + \beta_4 ROA_{it} + \beta_5 LEV_{it} + \beta_6(Env * IA) + \varepsilon_{it} \dots (2)$$
Depicting the moderated relationship between the variables

Where:
Fv = Firm value (Market share price)
Env = Environmental sustainability reporting
EFR = Equity Ratio (Control Variable)
ROA = Return on Asset (Control Variable)
LEV = Leverage (Control Variable)
IA = Information asymmetry
β_1 = Regression coefficient
α_0 = Constant
$_i$ = Cross sections
$_t$ = Time
$_\varepsilon$ = Stochastic error term

Variable definition, Measurements and Sources
Table 2
Variables Definition, Measurements and Sources

Variable	Symbol	Type	Measurement	Sources	Sign
Sustainability reporting					
Environmental sustainability reporting	Env	Independent variable	Number of Environmental disclosure index fulfilled by a company divided by Total Environmental disclosure index as per GRI guidelines	GRI (2022)	(+)
Firm Value					
Quoted market price/ share	Fv	Dependent variable	Quoted Market price per share	Nguyen, 2020; Reddy & Lucus, 2010	(+)
Moderating Variable:					
Information Asymmetry	IA	Moderating variable	Ask price minus bid price divided by closing price	Cho et al. (2013); Martínez-Ferrero et al. (2018)	(-)
Control Variable:					
Equity Ratio	EFR	Control variable	Log of book value of asset	Yulianingsih et al. (2018)	(+)
Return on Asset	ROA	Control variable	PBIT divided by total asset	David-Uyagu et al. (2017); Kolawole et al. (2021)	(+)
Leverage	Leverage	Control Variable	Total debt/ Total Equity	(Yulianingsih et al., 2018)	(-)

Post estimation Test
This study used post-estimation techniques to validate the results obtained from the regression analysis. Firstly, a normality test was conducted to assess the distribution of the residuals. The Shapiro-Wilk test was employed, with the decision rule set at a significance level of 0.05. A p-value

greater than 0.05 would indicate that the residuals are normally distributed, validating the assumption of normality (Field, 2013).

Secondly, a Hausman test was performed to determine the appropriate model specification between fixed effects and random effects. The decision rule for this test was based on the significance level of 0.05(Dahiru, 2016). A significant Hausman test suggests that the random effects model is inconsistent, and the fixed effects model should be preferred.

Additionally, multicollinearity was assessed using the Variance Inflation Factor (VIF). The VIF measures the extent to which the variance of an estimated regression coefficient is inflated due to multicollinearity. A VIF value greater than 10 indicates high multicollinearity, suggesting that the independent variables may be too highly correlated (Moreno & Casillas, 2008; Soares & Perin, 2019). In such cases, remedial actions such as dropping highly correlated variables or employing ridge regression may be warranted.

Results and Discussions
This focuses on descriptive statistics, correlation matrix result and interpretation of the summarized regression results, policy implications and recommendations based on findings.

Descriptive statistics
This describes the characteristics of the data obtained based on the variables of the study. Below are the outcomes shown in the descriptive statistics table.

Table 3
Descriptive statistics

Variable	Obs	Mean	Std. dev.	Min	Max
FV	381	1.4392	0.2991	0.1001	1.996
Env	381	0.6998	0.2539	0.0652	1
IA	381	0.1238	0.1451	0.0003	0.9561
EFR	381	0.4814	0.2785	0.0033	0.9956
ROA	381	0.0976	0.1134	-0.3156	0.5186
LEV	381	0.0984	0.1698	0.0001	0.6098

Table 3 shows the descriptive statistics for the variables of the study comprising of the Firm value (FV), Environmental sustainability reporting (Env), Information asymmetry (IA), Equity ratio (EFR), Return on asset (ROA) and Leverage (LEV). In this dataset comprising 381 observations, the table shows Firm Value (Fv) with a mean value of approximately 1.4392, suggesting that, on average, the firm value falls close to this figure. The standard deviation of 0.29908 indicates a moderate level of dispersion in firm values across the dataset, and the range extends from a minimum of 0.1001 to a maximum of 1.996, underlining the variability in firm value within the sample.4 Similarly, Environmental Sustainability reporting (Env) displays a mean value of approximately 0.6998, signifying that, on average, environmental sustainability scores tend to cluster around this value. The standard deviation of 0.2539 indicates a moderate degree of dispersion, while the variable's range spans from the minimum value of 0.0652 to the maximum value of 1, emphasizing the presence of a wide range of environmental sustainability scores in the dataset.

The Information Asymmetry variable demonstrates a mean value of approximately 0.123763, indicating that, on average, information asymmetry levels are close to this value. The standard deviation of 0.145109 shows a moderate degree of dispersion in information asymmetry level. The variable's range spans from a minimum of 0.000328 to a maximum of 0.95604, signifying the presence of various levels of information asymmetry within the dataset. Equity ratio (EFR) displays a mean value of approximately 0.481indicating that equity constitutes 48.14% of the total asset on an average. The standard deviation of 0.2785 indicates difference in capital structure among the firms while the variable's range spans from the minimum value of 0.0033 to the maximum value of 0.9956. Return on asset (ROA) displays a mean value of 0.0976 suggesting a 9.76% return on asset. The standard deviation of 0.1134 indicates a level of dispersion in profitability amongst firms while the variable's range span from minimum value of -0.3156 showing losses to maximum value of 0.5186. Leverage (LEV) displays an average value of 0.0984 indicating low levels of debt relative to assets. The standard deviation of 0.1698 shows the variability in leverage level for the firms under observation while the variable's range shows a minimum value of 0.0001 to a maximum value of 0.6098 indicating substantial debt in some firms.

Regression Result
This shows the result of the effect of the independent variable on the dependent variable and the moderating effect of the moderator on the effect of the independent variable on the dependent variable. Below are the outcomes shown in the regression table.

Table 4
Summary of regression result for Direct relationship and Indirect relationship (Model 1&2).

Variables	Coefficient Model 1	t-values	P-values	Coefficient Model 2	t-values	P-values	VIF	Tolerance Value
ENV	-0.0739	-2.51	0.012	0.0507	1.75	0.079	1.05	0.9720
IA	-0.2637	-4.89	0.000	0.2116	2.05	0.040	1.03	0.9726
ENV*IA	***	***	***	-0.9796	-3.74	0.000	***	***
EFR	0.8622	34.53	0.000	0.8806	33.93	0.026	1.00	0.9976
ROA	-0.2407	-2.56	0.010	-0.2007	-2.23	0.000	1.02	0.9848
LEV	0.0832	4.11	0.000	0.0769	4.01	0.000	1.03	0.9756
R^2	0.68			0.69				
Adj R^2	0.66			0.68				
F-Sig	0.0000			0.0000				
F-Stat	153.12			137.67				
Hettest Chi^2	0.0000			0.0000				
Hausman Chi^2	0.0018			0.0000				

Source: STATA output (2024)

Table 4 presents the result of model 1 and 2.The direct relationship (Model 1) underwent post-regression analysis to identify the optimal model for interpreting the results, utilizing the Best Linear Unbiased Estimators (BLUE) to ensure valid inferences. A heteroskedasticity test was executed on the data, revealing a significant Chi2 value of 0.0000, indicating unequal data spread within the study model. Subsequently, the Hausman specification test, yielding a significant Chi2 of 0.0018, was employed to determine the best-fit model, resulting in the selection of the fixed effect model. Given the earlier identified heteroskedasticity, robust fixed effects were employed to address this issue during the interpretation of the study results.

Additionally, Variance Inflation Factor (VIF) and Tolerance Values were assessed following rule-of-thumb criteria. The VIF consistently exhibited values below ten (10), and corresponding Tolerance Values consistently remained below one (1), affirming the absence of multicollinearity among the independent variables. Furthermore, the Cumulative R-Squared, indicating the percentage of total variation in the dependent variable collectively explained by all independent and moderating variables, was found to be 0.68. This suggests that 68% of the variation in the dependent variable is jointly determined by the independent and moderating variables. This result is corroborated by the F-Stat and F-Sig values of 153.12 and 0.000, respectively, signifying the model's fitness at the 1% significance level.

The result of model 2 showing the indirect relationship also underwent post-regression analysis to identify the optimal model for interpreting the results, utilizing the Best Linear Unbiased Estimators (BLUE) to ensure valid inferences. A heteroskedasticity test was executed on the data, revealing a significant Chi2 value of 0.0000, indicating unequal data spread within the study model. Subsequently, the Hausman specification test, yielding a significant Chi2 of 0.0000, was employed to determine the best-fit model, resulting in the selection of the fixed effect model. Given the earlier identified heteroskedasticity, robust fixed effects were also employed to address this issue during the interpretation of the study results.

From the table 4, there is a change in the strength and direction of the independent variable from model 1 to model 2. While in the direct relationship the independent variable and moderating variable has a negative coefficient of -0.0739 and -0.2637 respectively, it changes in the in the indirect relationship to a positive coefficient of 0.0507 and 0.2116.This shows the effect of the addition of the moderated variable to the dataset. The table 4 also shows the changes in the P-value from the direct relationship (model 1) and the indirect relationship (model 2).

Furthermore, the Cumulative R-Squared, indicating the percentage of total variation in the dependent variable collectively explained by all independent and moderating variables, was found to have increased after moderation to 0.69. This suggests that 69% of the variation in the dependent variable is jointly determined by the independent and moderating variables. This result is corroborated by the F-Stat and F-Sig values of 137.67 and 0.000, respectively, signifying the model's fitness at the 1% significance level.

Hypothesis one (Environmental sustainability reporting and Firm value of listed manufacturing companies in Nigeria)
From table 4, ENV with a negative coefficient value of -0.0739 with a P- value of 0.012 which is significant at 5% shows that environmental sustainability reporting has a negative and significant effect on firm value of listed manufacturing companies in Nigeria. This shows that for every one unit increase in ENV there will be a decrease in firm value of listed manufacturing firms in Nigeria. This serves as evidence for rejecting the null hypothesis which states that environmental

sustainability reporting has no significant effect on firm value of listed manufacturing companies in Nigeria. This result supports the assertions of Qureshi et al. (2020), Owolabi and Samuel (2020), and Ammer et al. (2020) while contradicting the assertion of Hassan and Musa (2023) and Okwudili et al. (2023).

Hypothesis Two (Information asymmetry and Firm value of listed manufacturing companies in Nigeria)
Based on the result in table 4, IA with a negative coefficient value of -0.2637 and a P- value of 0.000 which is significant at 5% shows that information asymmetry has a negative and significant effect on firm value of listed manufacturing companies in Nigeria. Thus, showing that for every 1 unit increase in information asymmetry there will be a significant decrease in the firm value of listed manufacturing companies in Nigeria. Therefore, the null hypothesis is rejected, and the alternate is accepted. This finding confirms with the assertion of Cheng et al. (2024); S. Kim et al. (2023); and Zhang et al. (2022).

Hypothesis 3 (Information asymmetry Moderating the effect of Environmental sustainability reporting on firm value)
The outcome in Table 4indicates a statistically significant negative effect of environmental sustainability reporting on firm value in the presence of information asymmetry. This is shown through a coefficient of -0.9796 and a P- value of 0.000 which is significant at 5%. This means that there is an inverse relationship between environmental sustainability reporting and firm value when information asymmetry is considered. In other words, as environmental sustainability reporting increases, firm value decreases, albeit marginally. Therefore, the study rejects the null hypothesis and accepts the alternate.

4. CONCLUSION
The main objective of this study is to investigate the effect of environmental sustainability reporting on firm value of listed manufacturing companies in Nigeria, considering information asymmetry as a moderating variable over the time period between 2007 to 2022. The outcomes of the multiple regression analysis indicates that information asymmetry exhibits a negative and significant effect on the relationship between environmental sustainability reporting and firm value among listed manufacturing companies in Nigeria. This study therefore concludes that the inverse relationship could be attributed to various factors including potential investors perception, market dynamics and regulatory environments. It further implies that despite efforts to disclose environmental sustainability initiatives, if stakeholders perceive a lack of transparency or trustworthiness due to information asymmetry, it could lead to a reduction in firm value.

5. RECOMMENDATION(S)
From the forgoing, the following recommendations have been made in order to enhance the firm value of manufacturing companies in Nigeria. Firstly, Nigerian manufacturing companies should prioritize enhancing transparency and disclosure practices regarding their environmental sustainability efforts. This could involve providing comprehensive and accurate information through sustainability reports, annual disclosures, and other communication channels to reduce information asymmetry and build trust among stakeholders.

Secondly, Nigerian manufacturing companies should implement measures to address information asymmetry by improving access to relevant information for all stakeholders. This could include adopting standardized reporting frameworks, engaging in regular stakeholder dialogues, and leveraging technology platforms to disseminate timely and accurate data.Additionally,Nigerian

manufacturing companies should engage with stakeholders, including investors, regulators, local communities, and environmental groups, to understand their expectations, concerns, and perceptions regarding environmental sustainability. By fostering open communication and collaboration, companies can build credibility and demonstrate their commitment to environmental responsibility and finally, Continuous Improvement: Continuously monitor and evaluate the effectiveness of environmental sustainability initiatives and reporting practices. Regularly review feedback from stakeholders, value and impact of sustainability efforts on firm value, and adjust strategies accordingly to ensure alignment with business goals and stakeholder expectations.

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APPENDIX

S/n	Name of company	Classification on NGX webiste	Year of Listing
1	Conoil PLC	Oil and Gas	1970
2	Eterna PLC	Oil and Gas	1970
3	Beta Glass PLC	Industrial Goods	1986
4	Austin laz and company PLC	Industrial Goods	1970
5	Cutix PLC	Industrial Goods	1987
6	Dangote cement PLC	Industrial Goods	2010
7	Greif Nigeria PLC	Industrial Goods	1970
8	Lafarge Africa PLC	Industrial Goods	1979
9	Berger paints PLC	Industrial Goods	1970
10	Cap Plc	Industrial Goods	1978
11	Fidson Healthcare PLC	Health care	2008
12	May and Baker Nigeria PLC	Health care	1994
13	Morison Industries PLC	Health care	1970
14	Pharma-Deko PLC	Health care	1970
15	CADBURY NIGERIA PLC.	Consumer Goods	1970
16	DANGOTE SUGAR REFINERY PLC [CG+]	Consumer Goods	2007
17	GUINNESS NIG PLC [CG+]	Consumer Goods	1965
18	HONEYWELL FLOUR MILL PLC [CG+]	Consumer Goods	2009
19	INTERNATIONAL BREWERIES PLC. [BMF]	Consumer Goods	1970
20	NESTLE NIGERIA PLC. [CG+]	Consumer Goods	1970
21	NIGERIAN BREW. PLC. [CG+]	Consumer Goods	1973

22	FLOUR MILLS NIG. PLC. [CG+]	Consumer Goods	1970
23	P Z CUSSONS NIGERIA PLC. [CG+]	Consumer Goods	1970
24	UNILEVER NIGERIA PLC. [CG+]	Consumer Goods	1973
25	VITAFOAM NIG PLC.	Consumer Goods	1970
26	Chellarams PLC	Conglomerates	1977
27	FTN COCOA PROCESSORS PLC [RST]	Agriculture	1970
28	LIVESTOCK FEEDS PLC.	Agriculture	1978
29	PRESCO PLC	Agriculture	2002