

# Assessing the Role of Sustainability Disclosures and Credit Availability in Shaping Fiscal and Monetary Policies in Sub-Saharan Africa

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## Abstract

*This dissertation sought to enhance understanding of the impact of sustainability reporting and private sector credit on fiscal and monetary policy within selected sub-Saharan countries. This comprehensive study evaluates the effects of monetary and fiscal policies and sustainability reporting on the financial performance of Ghana's listed commercial banks and how those effects influence the country's economy. The study used a contemporaneous, deductive, explanatory, and case study technique, utilising primary sources (questionnaires) and secondary sources (document analysis) in a cross-sectional inquiry. The data was statistically analysed using the SPSS software, utilising thematic, descriptive, and inferential statistical analyses. Using the correlation matrix to analyse inferential statistics data shows that government spending, taxes, inflation rate, and ROA and ROE have a statistically significant positive correlation with earnings quality. The findings of this research are also expected to contribute to the existing literature on sustainability reporting, firm performance, and brand management.*

*The study further suggests that Central Banks should provide clear and transparent forward guidance regarding their future interest rate decisions. Commercial banks can better anticipate rate movements and adjust their strategies, reducing uncertainty and potential negative impacts. Management operational efficiency statistically and adversely correlates with ROA and ROE at a 95% confidence. On the other hand, GDP growth and liquidity measurements had a statistically negligible negative correlation with ROA and ROE. A positive and strong correlation exists between the adjusted R square of fiscal policy instruments and the internal control factors of 42.1%, 38.3%, 87.0%, and 68.1%, respectively.*

**Keywords:** Sustainability Reporting, Private Sector Credit, Fiscal Policy Tools, Monetary Policy Tools, Sub-Saharan Africa, Economic Impact, Financial Regulation, Corporate Governance, Sustainable Finance, Economic Growth, Public Policy, Central Banking, Interest Rates, Inflation Control, Government Spending, Taxation Policies, Credit Accessibility, Financial Stability, Green Finance, ESG (Environmental, Social, and Governance)

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## 1.0 INTRODUCTION

The consumer goods industry plays a pivotal role in the global economy, providing essential products and services to consumers worldwide. In recent years, this industry has increasingly emphasised sustainability reporting, driven by growing consumer awareness, regulatory pressures, and stakeholder demands for responsible business practices. As a result, many consumer goods companies have adopted sustainability reporting to communicate their environmental, social, and governance (ESG) performance to stakeholders. Sustainability

reporting involves the disclosure of non-financial information related to a company's environmental and social impacts and its governance practices. This reporting form is intended to provide transparency and accountability regarding a company's sustainability efforts, which can influence stakeholders' perceptions of the firm and its products.

Moreover, a growing body of research suggests that sustainability reporting can create value for companies by enhancing their reputation, reducing risks, and improving their access to capital. At the same time, brand equity has emerged as a critical factor in the success of consumer goods companies. A strong brand can differentiate a company's products in the marketplace, create customer loyalty, and command premium prices. Consumers are increasingly making purchasing decisions based on a company's reputation for sustainability and ethical business practices, making brand quality closely linked to sustainability performance.

The study examines the relationship between sustainability reporting, firm value, and brand quality in the consumer goods industry. This study also focuses on private sector credit and monetary and fiscal policies. It is significant for several reasons. First, it contributes to the existing literature on sustainability reporting and firm value by focusing on the consumer goods industry, which has unique characteristics and challenges compared to other sectors. Second, by examining the mediating role of brand quality, the study provides insights into how sustainability initiatives can create value for consumer goods companies.

Further, the study was also steered to assess the influence of financial policies on Ghana's monetary performance. The study employed secondary data spanning 2012 to 2022. A quantitative research approach and an explanatory research design stayed engaged. According to the research, the viable financial institution standing is positively and expressively influenced by the financial institution's open market operation. The open market operation for selling portrays a substantial negative impact on the financial institution's performance. The bank of Ghana rate likewise had a negative and statistically substantial effect on the profitability of viable financial institutions. The reserve requirement proportion has a statistically significant adverse impact on profitability. The study recommended that central banks should consider adjusting their OMO strategies accordingly and should consider doing so in a timely and gradual manner.

Also, Central Banks should consider implementing counter-cyclical measures alongside their OMO strategies. Central Banks should provide clear and transparent forward guidance regarding their future interest rate decisions. Commercial banks can better anticipate rate movements and adjust their strategy accordingly, reducing uncertainty and potential negative impacts. Finally, central banks can use reserve requirement ratios as a countercyclical tool. During periods of economic expansion, they could raise the ratios to curb excessive lending and prevent overheating. Conversely, they could lower the ratios during economic downturns to encourage lending and stimulate economic activity.

To crown it all, the study addressed this deficiency by inquiring into the ramifications of monetary strategies on private credit in sub-Saharan African (SSA) countries. The study will contribute to the existing literature on the association between economic policy and private sector credit. Also, the findings will have implications for financial supervisors, venture capitalists, investors, and academics as they will illuminate the affinity between microeconomic indicators and private credit and increase our understanding of the responses of changes in private sector credit to changes in monetary policy. The study will also guide policymakers in developing strategies to distribute credit evenly between the government and private sector to enhance economic advancement.

Beyond the realm of inflationary calculus, central banks' adoption of monetary policy casts a discerning eye on its ripple effects on employment dynamics. A judicious approach to stimulating economic growth becomes an instrument of job creation, intertwining the dual imperatives of economic vitality and gainful employment. The study assesses the effect of fiscal and monetary policies on the financial performance of listed commercial banks in Ghana and their impact on the economy, using GCB BANK. Ltd. as a case study. The study adopted a deductive, descriptive and explanatory approach to obtaining an in-depth understanding of the

research problem in advocating for the implementation of stable fiscal and monetary policies in the economy to revamp the financial performance and the banks' profitability (Johnson et al., 2020). The study applies descriptive and inferential statistics of correlation, regression, other statistical tools, and thematic analysis to evaluate the data collected. (Saunders et al., 2009). Collecting data from respondents depended on a case study and purposive sampling techniques, with primary and secondary data collection techniques as the main sources.

The primary data collection technique depended on an interview guide and questionnaire. The secondary data originated from external and internal records relating to the research study, as the industry is an essential source of economic growth. Various research shows a diverse relationship between theoretical and empirical research, using fiscal and monetary policies, macroeconomic variables, the banks' internal control variables or a combination of both. These factors simultaneously, positively or negatively, significantly affect the financial performance of commercial banks. Fiscal and monetary policy tools functioning as macroeconomic factors for sustainable economic stability and bank financial performance are essential for future research as they look at how these policies affect the financial performance of listed commercial banks in Ghana and the country's economic growth and development.

The study simultaneously assesses the over-increasing trend of the independent variables and their effects on the financial performance (ROA and ROE) of the universal banks in Ghana from 2006 to 2021. The significance of the study is to reveal the critical effect of the fiscal and monetary policy instruments as factors affecting the financial performance and profitability of banks in terms of their lending, borrowing, and investment characteristics.

## 2.0 MATERIALS & METHODS

Before the sustainability reporting standard emerged, many financial institutions, such as insurance firms and banks, mainly focused on traditional business metrics and financial performance (Khalifaturafi'ah, 2023; Singh & Milan, 2023). The primary concern of these organisations was compliance with applicable regulations and shareholder value. However, times have changed, and due to the increasing number of people aware of the issues related to the environment and social conditions, various stakeholder groups, such as regulators and investors, demanded more transparency from companies (Friedman & Heinle, 2021; Park & Jang, 2021). For instance, BP (British Petroleum) faced a significant sustainability challenge following the 2010 Deepwater Horizon oil spill (McGuire, Holtmaat, & Prakash, 2021).

During the 1990s, Nike was criticised for its labor practices (Knight & Greenberg, 2020). The Enron scandal during the 2000s (Khan et al., 2022) highlighted the importance of ethical behavior, transparency, and accountability in corporate reporting. These incidents resulted in the call for better reporting standards in various industries. It made it legal for companies to reveal their social and environmental performance. Sustainability reporting is also important today because of its impact on firm value. Firms have realised that profit-making alone cannot drive consumers or maintain sustainable growth.

According to the Global Reporting Initiative (GRI), sustainability reports serve as comprehensive documents delineating an organisation's operations' social, environmental, and economic impacts (Whetman, 2018). Kamela and Alam (2021) posit that these reports are crucial in econometric analyses, acting as proxies for assessing corporate social responsibility (CSR). This concept is challenging to measure directly. While sustainability reports are instrumental in providing a holistic view of a company's non-financial performance, the reliance on them as proxies for CSR introduces specific challenges. The inherent subjectivity in the selection and presentation of data in these reports may influence the econometric analysis results. Through these reports, companies aim to enhance transparency and bolster their corporate image by offering detailed insights into their non-financial operations. The emphasis on transparency is commendable, aligning with the growing demand for corporate accountability. However, it is crucial to recognise that the voluntary nature of sustainability reporting may lead to variances in the depth and quality of information disclosed. This discrepancy can affect the reliability and comparability of such reports across different organisations.

The Global Reporting Initiative (GRI) has played a pivotal role in advancing sustainability reporting standards, contributing to the global conversation on corporate responsibility. Nevertheless, it is essential to consider the evolving nature of reporting frameworks and their adaptability to emerging sustainability challenges. As reporting standards continue to evolve, researchers and stakeholders must remain vigilant in assessing the relevance and adequacy of these frameworks.

Sustainability is engulfed with intricate challenges. According to Friske, Hoelscher, and Nikolov (2023), the costs associated with sustainability reporting, coupled with opportunity costs and investor apprehensions regarding greenwashing, raise the question of whether such reporting could potentially diminish firm value rather than enhance it. An initial argument against sustainability reporting is grounded in the Friedman doctrine, asserting that management's primary obligation is to act in the interest of stockholders, typically entailing the augmentation of stockholders' wealth (Friske, Hoelscher, and Nikolov, 2023). While the Friedman doctrine emphasises shareholder wealth maximisation, it is important to note the evolving landscape of investor preferences. Today's investors exhibit heightened concerns about environmental and social performance compared to Friedman's era.

However, the concern about the considerable expenses associated with sustainability reporting is valid. The argument touches on the opportunity costs of diverting resources toward sustainability reporting, which might not be viewed favorably by conventional investors focused solely on financial gains. Moving on to firm value, a company's value indicates its financial and economic success (Onoh, Biradawa, & Ndubuisi, 2022). It can be used to determine a firm's long-term survival. The company's performance is also influenced by its ability to maintain profitability through its various operations. Financial statements can provide valuable insight into a company's activities. The various financial measures commonly used to evaluate a company's performance are the Market value and the Firm value.

The former refers to the company's efficiency in its operations, while the latter is its return on invested capital. The profit-after-tax relationship between a company's earnings and its capital employed is shown in these ratios. A company's intrinsic value can be determined by the public's confidence in its ability to perform and its success rate over time following a rigorous process that spans several years. Increasing the company's value is an accomplishment that aligns with the organisation's mission to improve the welfare of its stakeholders. The market price of a company's shares is computed by considering the various decisions that its management and investors make. It also takes into account the number of outstanding shares. An organisation must regularly report sustainability data to maintain its relationship with its stakeholders.

The relationship between sustainability reporting and firm value is a subject of considerable interest and debate. Whetman (2018) observed a favorable and notable impact of sustainability reporting on a company's return on equity, return on assets, and profit margin in the following year. Importantly, this correlation is evident specifically among companies with lower institutional ownership. These findings imply that dedicating corporate resources to sustainability reporting is a valuable investment for firms falling within this subset. Moreover, Whetman (2018) suggests that, for these particular firms, sustainability reporting is an effective alternative to oversight by institutional investors.

Karaman, Kilic, and Uyar (2018) focused on GRI-based sustainability reports, revealing that firm size and leverage were positively associated with sustainability reporting, contrary to expectations. Ownership, on the other hand, showed a negative association. Notably, free cash flow per share, growth, and profitability did not significantly affect sustainability reporting, contrary to anticipated outcomes (Karaman, Kilic, & Uyar, 2018). Subsequent examinations based on report count and application levels did not yield surprising results compared to the initial analysis. Interestingly, evidence indicated a negative association between growth and application levels of reports. However, when testing the impact of sustainability reporting on firm performance, no significant results were observed, suggesting that in the aviation industry, sustainability reporting does not significantly contribute to enhancing firm performance.



(Karaman, Kilic, & Uyar, 2018). However, there is a contrasting negative link between sustainability reporting and accounting performance, stemming from challenges in aligning diverse legitimacy expectations of stakeholders within these emerging markets (Liou, Ting, & Chen, 2023).

Brand equity is vital to an organisation's strategy, particularly in a complex market environment (Ahmad et al., 2021; Safeer et al., 2021). This is especially pertinent in the consumer goods sector, where brand recognition and image substantially impact consumer loyalty and purchasing choices. To adapt to changing consumer behavior and heightened competition, it is imperative to prioritise brand management and advertising to uphold a captivating brand image (Reitsamer & Brunner-Sperdin, 2021). Wang et al. (2015) revealed that the economic and prestige elements of brand equity play a significant role in shaping firm's overall performance. The brand extension component also provides a substantial boost to the company's performance at the higher levels (Wang et al., 2015). The results indicate that the brand loyalty component of the firm's performance is harmful. Wang et al. (2015) revealed that the performance of the organisation is positively affected by its brand equity and social responsibility.

Moving away from sustainability reporting, the study further evaluated an economy's robustness and efficiency to necessitate a comprehensive analysis, with particular emphasis on the financial outcome of its banks, as pointed out by Lotto in 2019. Consequently, the banking and financial sector has garnered significant attention in modern accounting and finance surveys. This heightened notice is because of the sector's growth in the number of institutions and the magnitude of assets managed through their various activities. Despite these financial institutions' notable progress and successes, they still face challenges that demand persistent efforts. These efforts aim to enhance product and service quality, diversify offerings, and adapt quickly to global improvements.

Klaassen, in 2020, highlights` the multitude of threats facing financial institutions, including globalisation, competition from nonbanking entities, stringent banking regulations, and the volatility of market dynamics. Various banks and financial institutions have developed novel methods to improve their services. Assessing entity performance involves employing various ratios, with return on total assets and return on total equity being standard metrics banks apply to evaluate performance. Analysts widely employ these measures to forecast trends and corporate failures, as noted by Arkan in 2016. Research emphasises accounting ratios rather than simple ones like ROE or ROA. Accounting ratios serve as valuable tools for assessing banks' performance across various dimensions, including assets, revenue, profit, market value, workforce size, investments, and customer base, as stated by Al-Busaidi and Al-Muharrami in 2021.

However, during the past few years, the connection between monetary policy and private sector credit has been a focal point in policy circles and academic conversations, driven by the significance of money supply in maintaining price stability. The fundamental objectives of monetary policy usually involve preserving price stability, managing inflation, fostering economic growth, and ensuring stability in employment (Onaga et al., 2023)

Monetary authorities in Sub-Saharan Africa employ a sophisticated arsenal of monetary policy tools to manage inflation meticulously, with a focal point on interest rates. By intricately adjusting interest rates, they deftly mold the cost of borrowing and spending, defusing inflationary pressures and orchestrating equilibrium in overall demand and price levels (Berg & Portillo, 2018) The overarching goal is to maintain inflation within a predefined target range, a strategic imperative for upholding the purchasing power of a currency and nurturing a resilient foundation for economic stability. In wielding the lever of interest rates and other nuanced instruments, central banks deftly navigate the intricate dance of stimulating or tempering economic activity (Ndikumana, 2016). The symphony of lowering interest rates orchestrates an environment that propels borrowing and spending, fostering a milieu conducive to robust economic growth. Conversely, the measured elevation of interest rates acts as a prophylactic shield, preemptively averting the specters of overheating and asset bubbles.

Beyond the realm of inflationary calculus, central banks cast a discerning eye on the ripple effects of their policies on employment dynamics. A judicious approach to stimulating economic growth becomes an instrument of job creation, intertwining the dual imperatives of economic vitality and gainful employment (Jelilov & Onder, 2016). Simultaneously, the calibrated measures designed to rein in inflation can reverberate in employment, sculpting the intricate contours of workforce dynamics. Thus, the orchestration of monetary policy emerges as a finely tuned symphony, harmonising the intricacies of inflation control, economic vitality, and employment stability on the global economic stage (Pattillo, Portillo and Unsal 2020). Globally, with a particular emphasis on developing countries, individuals are actively devising strategies and policies to enhance and sustain economic development. Consequently, governments and stakeholders in these economies, particularly in Sub-Saharan Africa, have devised and implemented diverse initiatives to foster development. Economic growth in a nation is propelled by either the private sector or the public sector but not both concurrently (Mwankemwa & Mlamka, 2022)

Dana (2019) contends that nurturing the private sector's advancement is imperative for Africa's economic advancement. The reliance on the public sector for growth in many African nations is attributed to the underdeveloped nature of the private sector (Austin, 2020). Consequently, the limited contribution of the private sector in economically challenged countries hinders their capacity to drive overall economic development. The accessibility of loan provisions for private companies assumes a pivotal involvement in fostering economic expansion, serving as a crucial financial conduit for businesses to engage in expansive endeavors, innovation, and advancements in productivity (Obeng-Amponsah et al., 2019). With access to credit, businesses can embark on capital-intensive initiatives, employ skilled personnel, and procure essential resources, thereby augmenting overall economic productivity. Furthermore, credit acts as a catalyst for entrepreneurship, affording individuals the financial capability to initiate and sustain businesses. In essence, a resilient and competitive economy is fortified through a flourishing private sector, sustained by adequate credit accessibility (Katusiime, 2017)

The fundamental role of credit availability is deeply intertwined with its multifaceted impacts on businesses and entrepreneurial activities. First and foremost, access to credit empowers businesses to undertake ambitious and capital-intensive projects, fostering innovation and improvements in productivity (Adeleke et al., 2015). This financial support enables businesses to invest in cutting-edge technologies, expand operations, and enhance efficiency. Moreover, credit availability is instrumental in facilitating the employment of skilled personnel, creating a positive feedback loop as increased business activities lead to job creation and a more dynamic labor market. (Were, Nzomoi and Rutto 2012). The ability to hire and retain skilled workers contributes to the individual businesses' success and the broader economic landscape.

In entrepreneurship, credit is a catalyst, providing aspiring individuals with the financial means to initiate and sustain new ventures. This, in turn, cultivates a vibrant and diverse private sector characterised by many innovative and competitive enterprises (Loloh & Amoah, 2014). Fostering entrepreneurship also contributes to economic resilience, as a diverse private sector can better weather economic challenges and adapt to changing circumstances. A flourishing private sector, underpinned by adequate credit accessibility, becomes a driving force for economic development. It stimulates economic activities, encourages competition, and contributes to economic resilience (Mamman & Hashim, 2013). Therefore, policies and strategies to ensure a conducive environment for credit availability to the non-government industry are paramount for sustaining and enhancing economic progress in a given region (Ali et al., 2021).

Access to credit empowers businesses in African countries to undertake capital-intensive projects crucial for infrastructural development. Whether investing in transportation networks, energy infrastructure, or technological advancements, credit is the financial backbone for these initiatives, contributing to overall economic productivity (Adu-Asare, Agyei and Bainn 2020). Credit availability supports businesses in African countries in expanding their operations and increasing employment opportunities. As businesses grow, they can hire and train skilled personnel, addressing issues related to unemployment and contributing to developing a capable

and competitive workforce. Credit accessibility is a key driver of entrepreneurship in African countries. It provides aspiring individuals, especially those from underprivileged backgrounds, the financial means to initiate and sustain their businesses (Nampewo et al., 2021).

Central banks employ interest rates as a primary instrument within their monetary policy toolkit. Through adjustments to policy rates, such as the benchmark interest rate, central banks wield influence over the overall cost of borrowing (Ellingsen & Söderström, 2021). Reducing interest rates enhances affordability, incentivising businesses to secure loans for expansion, investment, and innovation, thereby fostering economic growth through increased private sector activity (Mohsen, Hoang and Tariq 2022). Central banks shape the amount of money available for lending. Optimal liquidity ensures that financial institutions possess the necessary resources to extend credit to the private sector, facilitating business development and contributing to economic expansion. An accommodative monetary policy, characterised by lower interest rates and sufficient liquidity, catalyses private sector investment. In such an environment, businesses are more inclined to undertake projects, initiate new ventures, and engage in capital-intensive activities, leveraging readily available and affordable credit. This stimulation of investment becomes a significant driver of economic upswing (Brima & Brima, 2017)

While not forming a direct linkage, the involvement of monetary strategies in handling inflation indirectly supports credit availability. In pursuit of price stability, central banks create a predictable economic environment for businesses. Moderate inflation levels, as targeted by central banks, establish a conducive backdrop for businesses' decision-making regarding borrowing and investment (Pattillo, Portillo and Unsal 2015). Financial stability ensures the smooth functioning of banks and financial institutions, fostering confidence among lenders and borrowers and ultimately enhancing credit availability to support the growth initiatives of the private sector. (Namewo et al., 2016).

However, it is worth noting that the fiscal discipline adopted by a country plays a pivotal function in shaping the financial operations of its financial institutions. Monetary policy can either stimulate or impede investment activities by determining the accessibility and affordability of credit. Most central banks view commercial banks as their primary means of carrying out monetary policy; hence, they find themselves susceptible to fluctuations in the macroeconomic environment. This mechanism by which central banks affect economic activity is the management of this rate. Lower rates lower borrowing costs, which promotes economic growth, whereas higher rates aid in managing inflation. The Cash Reserve Ratio (CRR) stipulates that a definite proportion of a bank's total deposits must be maintained in its current account with the central bank, rendering these funds inaccessible for commercial or economic activities.

Numerous studies have emphasised the significant contributions of financial institutions and the banking sector to a country's growth, as Park and Kim highlighted in 2020. Conversely, research by Abuka, Alinda, Minoiu, Peydró, and Presbitero in 2019 has underscored instances where banking and financial institutions have adversely affected individuals and businesses due to unforeseen monetary policies. Therefore, this research examines the impact of monetary policies on banks' Profitability in Ghana.

The operationalisation of the banking sector works within the framework of fiscal and monetary policy changes, economic growth, and development. This prompted the need to assess the impact of fiscal and monetary policies on the financial performance of the commercial banks in Ghana and their effect on the economy using GCB Ghana Ltd as a case study from 2006 to 2022. The monetary and fiscal policy adopted is a significant determinant in triggering or inhibiting investment activities relating to stabilising interest and lending rates, as well as inflationary and monetary policy rates and promoting economic stability and growth and ensuring financial performance in terms of commercial bank insolvency and liquidation (Bank of Ghana, 2018).

Most developing nations like Ghana currently have challenges implementing effective and efficient fiscal and monetary policies in their various economies regulating macroeconomic variables. The imperfection of some of the policy tools has contributed significantly to the abysmal and inefficient operation of the banking sector, with particular reference to service

delivery provision and cost management (ECB, 2020). There are problems in accessing credit and other portfolios from financial institutions, coupled with the high cost of borrowing hovering around 30%. Savings deposit rates are lingering below 8% per annum, serving as a source of revenue to individuals and corporations, militating against saving deposits and investments in the economy, hence the banks' profitability (Bank of Ghana, 2018).

According to Sarpong et al. (2019), the banking industry's role as an intermediary between borrowing and lending through savings and investments in the nation's economy is crucial in accelerating business expansion and economic growth. The banking industry has passed through a diverse series of transformations in Ghana as part of the restructuring activity to enhance the financial sector's performance to fit well into the globalised financial system. This has resulted in a paradigm shift from the central bank's control to the application of market-based policy instruments and market-based regimes. The banking sector's performance remained relatively strong through asset growth from banks' investment portfolios and foreign assets and liquidity growth, as banks' solvency by capital adequacy ratio showed no significant changes. To Segal (2021), the fiscal policies of government spending and taxation are strategies to influence and manipulate the nature of the economy. Monetary policy also deals with the central bank's operation to influence the nation's money supply to manage liquidity for economic growth through open market operations, reserve requirements, interest and discount rates, and the discount window.

Government expenditure has ascended from 2006 to 2022 by applying expansionary fiscal policy to build the economy by providing economic infrastructure. These infrastructures include transportation networks, educational and health facilities, and utility supplies, inter alia, to meet the shortfalls in the nation's developmental needs (Asiama et al., 2019). Coupled with unrestrained high spending on elections and weak administrative expenditure management processes and control, high demand for salaries through the single spine salary structure pay policy, the free educational policy, and worst of all, the COVID-19 pandemic (BoG, 2021).

It is against and based on this background that the researcher sees the need to undertake this research study. The study seeks convergence and corroboration of results by measuring and deducing relationships to portray meaning and insight into the data (Greene et al., 2019). The study employs quantitative and qualitative views of data as the bank's performance negatively or positively and significantly affects the nation's economy (Johnson et al., 2007). It involves the application of a deductive scientific research approach to analyse data using thematic, descriptive and inferential methods to obtain the breadth and depth of the study (Saunders et al., 2019).

### 3.0 METHODOLOGY

The purpose of this chapter is to describe the research methodology of this study. Since this study aimed to assess the relationship between sustainability reporting and firm value and the mediating effect on brand equity, the design of the methodology was based on prior research into these relationships. This chapter describes the research design and methods, the method of data collection and the variables used to test the statistical techniques employed to report the results. The study further elucidates the methods utilised in the study, delving into the study type and rationale behind selecting these research methods. It furnishes comprehensive insights into the research approach, design, the target population, data sources, sampling technique, and the rationale for its selection, as well as the data analysis approach adopted for the study. Furthermore, the study expounds upon the model specification, elucidating the chosen variables and the underlying rationale for their inclusion. Additionally, it provides a detailed account of the estimation strategy and the data collection process, encompassing data types and sources, data collection procedures, and the tools employed for data analysis.

The Study also adopted a deductive approach to a mixed method of quantitative and qualitative data collection techniques and analytical data collection and analysis procedures. By examining and reporting on the research problem to provide a holistic and complete understanding of the socio-economic nature of the research theory and hypotheses, the



enhancement of objectivity facilitates the minimisation of subjectivity. The outcomes of one method help in sharpening the results from another method. The essence is to expand the research's breadth, range and depth from different methods and lines of enquiry (Cresswell, 2022).

To Cresswell (2022), the purpose of the mixed data is to generate a good understanding of the study problem through more complete evidence collected concerning the quantitative and qualitative data, as a single method is insufficient in addressing the study's research problem and purpose. It combines statistical and thematic approaches to aid in acquiring balanced information. It helps gain in-depth and breadth data on views, experiences and subjective factors as necessities, elucidating complex situations to strengthen findings while avoiding over-reliance on one method. Thus, strengthening the study's findings yields solid research leading to triangulation (Saunders et al., 2009).

According to Saunders et al. (2007), mixed data helps the researcher combine practical and policy-related theories with hypothesis testing within a single study through inductive and deductive approaches. The mixed method is important as it helps to offset weaknesses with strengths, overcome the weaknesses of the methods, and use their strengths effectively to take advantage of their differences. The researcher can use both quantitative and qualitative methods to obtain more complete complementary results through complementarity. The outcomes from different facets of objective and subjective knowledge help the researcher enhance, elaborate on, and clarify results from another method. This leads to acknowledging outcomes through different methods (Cresswell, 2022).

The mixed-method facilitated the assessment and testing of the impact of the monetary and fiscal policy tools employed in the economy and their effect on the macroeconomic variables in the country and the internal factors through CAMELS analysis of the financial performance and profitability of Ecobank Ghana Ltd. and the whole economy come up with an empirical inquiry by comparing the results and describing situations thereby obtaining valid conclusions relevant to the contemporary phenomenon of the research questions with real-life practice and theoretical context (Saunders et al., 2019).

The mixed methods quantitative research approach is a systematic investigation of scientific mathematical properties and relationships employed by collecting numerical data to provide quantitative data with statistical analyses through logical and critical testing of hypotheses to theories (Cooper & Schindler, 2011). Allowing for measuring the relationship between the primary independent variables of the fiscal and monetary policy tools, such as government expenditure, taxation, discount and interest rates, bank reserve requirements and open market operations, the mediator macroeconomic variables and the criterion internal control variables, and the banks' financial performance indicators and the economy. The purpose is to generalise the findings by verifying, identifying, measuring and analysing the cause-and-effect relationships between the independent and dependent variables (Saunders et al., 2009).

The quantitative measurements were analysed using data analysis procedures based on statistical techniques producing designs, techniques, numerical discrete and quantifiable data, increasing the statistical reliability of the results generated (Kothari, 2004). For the mixed-method analysis, the study added a qualitative approach, which was about an in-depth description and understanding of the research study through an investigation based on subjective interpretation and involving the discovering of views and perception by observing, listening and interpreting opinions of group phenomena (Easterby-Smith et al., 2009). This enabled the gathering of data from the respondent's perspective, experiences, feelings and understanding of the impact of fiscal and monetary policy tools on the bank's performance coded into categories for analysis (Saunders et al., 2009).

### *3.1 Research Design*

To answer the research problem, it is paramount to technically disentangle the relationship between or among variables in a situation and analyse the relationship devoid of external influences (Nenty, 2019). Consequently, Nenty (2019) opines that research design

involves the procedures through which we can explore and analyse the relationship among the variables involved in our problem and consequently argue the preference of particular procedures over others. Thus, the research design is a master plan that shows how the research will be conducted. However, this research adopts a well-structured questionnaire to examine the innovative financing approaches to sustainability reporting. Explaining the direction of the researcher towards the conduct of research is imperative (Baiden, 2020). Bryman (2022) defines research strategy as the enquiry of research objectives. Accordingly, Baiden (2020) asserted that, the three main types of research strategies are quantitative, qualitative, and triangulation. However, the choice to adapt any particular strategy depends on the purpose of the study, the type, as well as availability of information for the research (Baiden, 2020). Hence, this research adapts a quantitative strategy.

### *3.2.1 Research Philosophy*

This study will adopt the positivist research philosophy. Positivism is a research philosophy rooted in the belief that scientific knowledge is derived from observable and measurable phenomena (Park, Konge, & Artino, 2020). It emphasizes the objective, systematic, and empirical exploration of the external reality to uncover universal laws and patterns (Alharahsheh & Pius, 2020). Through this, researchers seek to apply rigorous methods, often quantitative, to generate reliable and generalizable findings. Positivist research aims to discover objective truths by minimizing subjective biases and interpretations.

The application of the positivism philosophy will be integral to this research, the positivist philosophy, characterized by its emphasis on objective, empirical exploration of observable phenomena, aligns seamlessly with the study's quantitative nature. As the research unfolds, the focus will be on objectively measuring sustainability reporting, firm value, and brand equity through quantifiable indicators and standardized metrics. Surveys, and archival data is involve and systematically employed to collect quantitative data, allowing for the application of statistical methods to test hypotheses related to the impact of sustainability reporting on firm value, with brand equity serving as a mediator.

Furthermore, the research will adhere to the positivist principle of replicability. The structured methods and quantitative measures employed will facilitate the replication of the study by other scholars, contributing to the credibility and generalizability of the findings. The study aims to generate generalizable knowledge by uncovering patterns and relationships between sustainability reporting, firm value, and brand equity within the specific context of the Ghanaian consumer goods industry.

The positivism philosophy's emphasis on minimizing subjective biases which serves as a guiding principle throughout the research process. Researchers will strive for objectivity in data collection and analysis, reducing the impact of personal interpretations on study outcomes. However, it is important to acknowledge the inherent limitations of positivism, particularly its potential oversimplification of social phenomena and its exclusive focus on quantifiable aspects. To address these limitations and ensure a comprehensive understanding, the study may incorporate supplementary qualitative approaches, providing a more holistic perspective on sustainability reporting and brand equity in the consumer goods industry in Ghana.

### *3.2.2 Research approach*

The study will use the quantitative research approach. Quantitative research is a systematic empirical investigation employing statistical, mathematical, or computational techniques to collect, analyze, and interpret numerical data (Alharahsheh & Pius, 2020). It aims to quantify relationships, patterns, and phenomena to generate objective and generalizable findings. This approach often involves the use of surveys, experiments, structured observations, and statistical analyses to uncover patterns and test hypotheses. Quantitative research emphasizes objectivity, minimizing the influence of researcher biases (Queirós, Faria, & Almeida, 2017). The structured nature of data collection and statistical analysis enhances the replicability of studies, allowing other researchers to validate findings. Quantitative research provides

statistical precision. The use of statistical tests allows researchers to measure the degree of confidence in their findings, providing a level of certainty about the observed relationships. The quantitative research approach is justified for these reasons; Firstly, the study aims to measure and quantify relationships between key variables such as sustainability reporting, firm value, and brand equity. By utilizing quantitative methods, numerical data will be systematically collected and analyzed, allowing for statistical techniques to measure the strength and direction of associations between these constructs.

Hypothesis testing will be a key aspect of the study, and the quantitative approach aligns seamlessly with this objective. Through statistical analyses, the research will empirically test hypotheses related to the impact of sustainability reporting on firm value and the mediating role of brand equity, providing numerical evidence to support or refute these hypotheses. Large-scale data collection will be a priority, involving the examination of sustainability reporting practices across a representative sample of companies in the consumer goods sector in Ghana. Quantitative methods are particularly well-suited for handling extensive datasets, contributing to the comprehensiveness and robustness of the research.

### *3.3 Ethical Consideration*

This research was compiled with principles which aimed at protecting the privacy of every individual who, in the course of the research work was requested to provide personal or commercially valuable information about themselves (hereinafter referred to as a subject of the research). Before an individual becomes a subject, the person was notified of, the aims, methods, anticipated benefits and potential hazards of the research. No person becomes a subject unless the person is fully abreast or cognizant of the notice referred to in the preceding paragraph.

### *3.4 Research Methods*

Researchers around the world have employed two main research approaches, namely the quantitative and the qualitative research methods (Adams et al., 2017). The qualitative method presents a descriptive and non-numerical approach to collect the information in order to present understanding of the phenomenon (Berg 2020). Adams et al., (2020) argue that qualitative method employs methods of data collection and analysis that are non-quantitative, aims towards the exploration of social relations, and describes reality as experienced by the respondents. Babbie (2020) points out that qualitative method is an active and flexible method that can study subtle nuances in the attitudes and behaviors for investigating the social processes over time. On the other hand, Adams et al., (2017); and Bryman (2022) point that the quantitative approach uses different types of statistical analysis and provides stronger forms of measurement, reliability and ability to generalize. Quantitative approaches refer to the research that is based on the methodology principles of positivism and neo-positivism and adheres to the standards of a strict research design developed prior to the actual research (Adam et al., 2017). Moreover, Berg (2020) argues that the quantitative method can deal with longer time periods with larger number of samples increasing the generalization capacity. Quantitative research design is used in this study.

The quantitative method of data collection was adopted because of the availability of data, convenience as well as the nature of the research design which required past and documented facts as basis for performance evaluation. The justification for adopting a quantitative method in this study stems from three plausible reasons (i) the fact that existing theories make it easier to formulate hypotheses that can be tested using statistical tools; (ii) provides a framework for addressing the relationship among variables in the study; and (iii) useful for dealing a cause and effect relationship.

Furthermore, this study applied deductive positivism approach whereby the pre-existing theoretical basis is identified and relied upon in developing the hypotheses, the empirical findings demonstrate whether the tested hypotheses are accepted or rejected. To achieve this objective, this study used multiple regression as the main tool of analysis in which the researcher pursued

the positivist understanding of the conduct of methodological processes that are “unaffected by the individual perceptual differences (Ardalan, 2022). Hair, (2019) stated that “the appropriate method of analysis when the research problem involves a single metric variable presumed to be related to two or more independent variables”. Therefore multiple regression analysis is chosen as the main tool of analysis in this study. Multiple regression models is one of the most common methods of analysis that have been used by previous researchers (Cheng, E. W. (2021).

#### *3.4.1 Population, Sampling and Sampling Technique*

Population in research methodology is understood to be objects, subjects, phenomena, cases, events or activities specified for the purpose of sampling (Bayat, M. S. (2018). Consequently, this research focused on the sustainability reporting with a spotlight on firm value. The population in this study consisted of 10 listed consumer base firms on the Ghana stock exchange. Sample refers to using a part to represent a whole. Notwithstanding, owing to the nature and kind of information needed; and also the resources available for this research, surveying the entire consumer industry is not feasible. Accordingly, only 10 listed companies on the Ghana Stock Exchange were targeted.

Purposive sampling was used to select the sample within the population. Purposive sampling is a sampling technique whereby the researcher decides who to be engaged in the research. This was selected because it allows information-rich issues that are important to the study to be added and also focus on specifics rather than general (Tuuli et al., 2017). The choice was based on brand equity experience sustainability reporting, specifically those in the consumer industry.

#### *3.4.2 Sources of Data and Data Collection*

Primary (questionnaire) data were employed for the study. The data is collected to cover every aspect of the research. Neville (2017) argued that research should contain empirical research data. Thus primary data are indispensable in the conduct of any research endeavor. The primary data sources in this research included the population aforementioned. Data were collected through a questionnaire survey targeting consumers. The response structure on the questionnaire was basically close-ended questions. Closed-ended questions were adopted because of its simplicity and ease in analysis. The questionnaire was divided into four thematic areas consistent with the research objectives.



**Table 1: Selected consumer base Firms and their categories**

Institutions	Industry
1. FunMilk	Manufacturing
2. Aluworks	Manufacturing
3. Camelot	Manufacturing
4. Benso Oil Plantation	Manufacturing
5. Guinness Ghana	Manufacturing
6. Goil plc	Manufacturing
7. Ashanti-Gold Limited	Extraction Industry
8. Total Petroleum	Oil and Gas Industry
9. Unilever Ghana PLC	Manufacturing
10. Produce Buying Company Ltd.	Manufacturing

Source: Kwakye (2024)

### 3.4.3 Descriptive Statistics

Descriptive statistics have been widely used in academic research (Abdullah 2020). Descriptive statistics measure central tendency and dispersion. The most commonly used measures of central tendency are mean, mode and median. The mean is the most important measure of central tendency (Veal, 2017). The descriptive statistics used were the mean, maximum and minimum. The mean was calculated to measure the central tendency of the variables in 2020 and 2021. Descriptive statistics are also useful to make general observations about data collected. They report on the trends and patterns of data and provide the basis for comparisons between variables. In this study, descriptive statistics provided a comparison of changes in the data. They show the extent to which sustainability reporting influence and the trends of brand performance.

### 3.4.4 Regression Analysis

In analyzing the relationship between Sustainability reporting and firm performance in Ghana, the panel data methodology was adopted. The use of panel data regression methodology in this study is based on three fundamental justifications (i) The data collected had time and cross sectional attributes and this will enable us to study the essence sustainability reporting over time as well as across the sampled listed companies (cross-section). (ii) Panel data regression provide better results since it increases sample size and reduces the problem of degree of freedom. (iii) The use of panel data would avoid the problem of multicollinearity, aggregation bias and endogeneity problems (Hsiao, 2020). Panel data analysis is an important method of longitudinal data analysis because it allows for a number of regression analyses in both spatial (units) and temporal (time) dimensions. Especially since the technique incorporates both cross-sectional and time-series data, it gives more insightful results with greater variation, less collinearity and a higher degree of freedom (Hsiao, 2015). Besides, panel regression is a potent tool for identifying and evaluating results that cannot usually be obtained in mere cross-sectional or time-series analyses.

The regression model is presented as follows:

Module 1

$$Y_i = \beta_0 + \beta_i X_i + \varepsilon_i$$

Where:  $i = 1, \dots, n$  = the cross-sectional unit

$t = 1, \dots, T$  = time index

$Y_{it}$  = dependent variable

$\alpha$  = constant or intercept.

$\beta_0$  = parameters/estimators or coefficients (if estimated)

$X$  = independent variables

$\varepsilon$  = individual (firm)-specific (fixed) effect.

## Module 2

The following empirical models were estimated based on the generic panel regression model to examine the relationship between sustainability reporting and firm value of selected consumer base companies:

$$ROE_{it} = \beta_0 + \beta_1 PPE + \beta_2 FININST + \beta_3 MARINOV + \beta_4 PROSTR + \varepsilon \dots \dots \dots 1$$

$$ROA_{it} = \beta_0 + \beta_1 PPE + \beta_2 FININST + \beta_3 MARINOV + \beta_4 PROSTR + \varepsilon \dots \dots \dots 2$$

**Table 2: Definition, Measurement and a Priori Expectation of Variables**

Variables	Measurement	A-priori Sign
Dependent Variable		
Return on Assets	Net-Income/Total-Assets	
Return on Equity (ROE)	Net Income/Equity	
Independent Variables		
Sustainability Reporting (CM)		Indeterminate
Brand Equity	Expenditure/Income	Indeterminate

Source: Kwakye (2024)

### 3.4.5 Model Diagnostic Test

Before arriving at the appropriate empirical model for testing the hypotheses, some model diagnostic tests were conducted to determine whether any of the assumptions of the panel regression model were not violated. Among the tests conducted were the Correlation test and multicollinearity test. The following are descriptions of the various model diagnostic tests conducted.

### 3.4.6 Correlation Test

The study adopted the Pearson correlation matrix to establish the existence of multicollinearity among the independent variables. In order to reduce the effect of outliers and to ensure a normal distribution of the data, a test for normality was conducted. In this study, the Skewness and Kurtosis test was conducted on the data to ascertain its normality. As a guideline, normal data are assumed to have skewness and kurtosis values near 0. Therefore, if the values are not near zero, then the data cannot be said to be distributed normally. For example, in Field (2019), the value of skewness (asymmetry) and kurtosis should be zero or close to zero if data normality is to be determined using skewness and kurtosis. He argues that once the value for skewness is greater than 1.96 and for kurtosis is greater than 3.29, it means that the data is not normally distributed.

### 3.4.7 Multicollinearity Test

A problem of multicollinearity is said to exist where the correlation coefficient of the two variable exceeds 0.7. (Ho & Wong, 2001). The Variance Inflation Factor (VIF) of the variables was used to ascertain if the independent variables presented a multicollinearity problem. VIF describes the extent to which an independent variable explains another independent variable within the model. As a basic rule, Field (2019) argues that if the correlations coefficient of

any independent variable exceeds 0.7 or its VIFs is greater than 10, there is a likely cause of multicollinearity.

### *3.4.5 Data Validity and Reliability*

The researcher carried out a pilot study to pretest the validity and reliability of data collected using the questionnaire. According to Berg (2020) validity is the degree by which the sample of test items represents the content the test is designed to measure. Content validity which was employed by this study is a measure of the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept. Mugenda and Mugenda (2019) contend that the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field. According to Shanghverzy (2020), reliability refers to the consistency of measurement and is frequently assessed using the test-relicts reliability method. Reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures.

The researcher selected a pilot group of 5 individuals each from the target population of the staff working in the selected companies listed on the Ghana Stock Exchange to test the reliability of the research instrument. The pilot data was not included in the actual study. The pilot study allowed for pre-testing of the research instrument. The clarity of the instrument items to the respondents necessary so as to enhance the instrument's validity and reliability. The aim was to correct inconsistencies arising from the instruments, which ensured that they measure what was intended.

### *3.5 Chapter Summary*

The chapter discussed the research design and research methods adopted for the present study. The research methods discussed included the population, sample and sampling techniques as well as the tools used for analyzing the data sources, primary (questionnaire) the diagnostic tests for assumptions of multiple linear regression including the Correlation and Multicollinearity test were presented. The validity and reliability of the data was also presented and discussed. The next chapter presented the data analysis and research results.

## **4.0 DATA ANALYSIS AND RESEARCH RESULTS**

### *4.1 Data and Information Description*

The purpose of this concurrent transformative mixed-method survey study is to assess the impact of fiscal and monetary policies on the financial performance of commercial banks in Ghana and their effect on the economy, using GCB bank Ghana Ltd, as a case study. The chapter adopted a deductive, pragmatic, and case study strategy by utilising both quantitative and qualitative data analysis based on a cross-sectional study. The chapter analysed and presents the case study sampled results and findings from the data collected in answering the research questions. This depended on the monetary and fiscal policy tools used and why and how they affect the financial performance of GCB bank. In addition, the monetary and fiscal policy tools impact the macroeconomic variables and the economy as a whole; and the internal control factors (CAMELS) used by GCB bank in determining its financial performance and profitability and the stakeholder's concern about the financial performance and the profitability of the bank.

The data collected was through the primary sources of the questionnaire and interview guides and secondary sources of the institutions' documents. The explanations and the findings presented are consistent with the research questions. The methodology of the study in analysing the data is discussed in the methodology chapter. The responses received numbered 66 made up of 61 questionnaires and 5 interviews out of an expected 88 potential respondents, which amounted to a 75% response rate for the survey. Out of the 66 respondents, 81.7% of the respondents were able to answer all the related questions, whereas the rest of the 18.3% of the respondents ended halfway, with some just completing the demographic aspect of the questionnaires and the interviews checklist. The responses obtained from the questionnaires,

the interviews and the secondary documents are statistically analysed with the application of the SPSS software version 22 program.

Furtherance to this, the chapter further discuss the results gathered from the fieldwork are presented. The fieldwork involved the administration of a well-structured questionnaire. From the 60 questionnaires distributed, all questionnaires were completed and retrieved. This represents a 100% response rate. Hence, the chapter is presented in five main sections. Section one presents information on the socio-demographic characteristics of respondents from the selected listed companies on the Ghana stock exchange in Ghana as well as the descriptive statistics on the age of respondents. Section two presented information on sustainability reporting and its effect on firm value among selected listed companies in Ghana. Section three showed the instruments used in improving the brand equity projects and their effect on firm value in today's market among selected companies in Ghana. Section four presented information on the relationship between sustainability reporting and firm value among selected commercial listed in Ghana and Section five presented information on product innovation strategies and its effect on brand equity among selected companies listed on the Ghana stock Exchange in Ghana.

The primary aim of the research was to delve into how monetary policies influence financial performance within the context of Ghana. In pursuit of our overarching goal, we embarked on a multifaceted approach. Initially, our investigation delved into the influence of the Central Bank's OMO on the financial well-being of Commercial Banks. Furthermore, it probed the repercussions of the CBR on financial performance. In addition, we endeavoured to scrutinize the effects of RRR on financial performance.

In this chapter, the study present and engages in a thorough discussion of our estimation results. We begin by showcasing descriptive statistics related to the variables, conducting normality tests, and performing ANOVA tests. Finally, the study provides a comprehensive presentation and discussion of the results obtained from both correlation and regression analyses, all in the context of our research objectives.

#### *4.2 Context of Research Sites*

The data was collected from ten listed companies on the Ghana Stock Exchange. The principal researcher with the help of three research assistants distributed the structured questionnaires to the selected companies. The questionnaires were initially dropped at the companies with respondents who showed interest in participating in the study. The essence of dropping the questionnaires was to ensure privacy and comfort so as to draw objective responses to the questions contained in the questionnaire. Again, the fast paced operations in the selected companies could have compromised the responses as respondents could have rushed through with responses and lastly, the presence of the researcher and the research assistants could have influenced the responses to the questions to please the researchers. Respondents were given 'enough' time (i.e. two days) to respond to the questionnaire.

That is, all the sixty (60) questionnaires were distributed. The study also collected data from The data was collected from the Bank of Ghana online database. It further collected the data from Bank of Ghana database as well the Ghana Stock Exchange. The fast paced operations in the selected data could have compromised the responses as respondents could have rushed through with responses and lastly, the presence of the researcher and the research assistants could have influenced the responses to the data to please the researchers.

#### *4.3 Analysis of Questionnaire*

Socio-demographic characteristics of respondents from the selected consumer base companies in Ghana are presented in Table 5.1. Majority of the respondents who agreed to participate in the study were females (55.0%). This implies that female workers were more accommodating during the administration of the questionnaire. Additionally and per my observation during the administration of the questionnaire, it was realized that most of the female workers were less inundated with lots of work, hence, had time to respond to the



questionnaire compared to their male counterparts. Also, most of the respondents were less than 30 years of age (66.7%).

The youthful respondents imply that the consumer industry is infusing the young with the experienced in order to devise of creating access. This is essentially important because of the many millennials who are technology driven and can easily apply such knowledge in gaining competitive advantage for their respective firms. Another observation during the administration of the questionnaire which has implications for the findings is that most of the respondents were 'fresh' recruits, hence the young ages of the respondents. Additionally, most of the respondents were first degree holders (60.0%). The finding suggests that the minimum level entry requirement to work in the selected consumer industry is an undergraduate degree. The consumer industry with a lot of sophisticated individuals and professionals with varying demands, hence, being a university graduate afford the stakeholders of companies the peace of mind to entrust the growth of the bank to their academic knowledge.

The respondents were sought from different departments of the selected consumer base companies. Among the departments from where respondents were recruited from include operations (53.3%); marketing (20.0%); sales (16.7%) and finance (6.0%). The choice to sought opinions from the various departments was to deduce the 'true' stance of the various companies on sustainability reporting methods adopted to improve brand equity in Ghana.

**Table 5.1 Socio-demographic Characteristics of Respondents**

Variables	Frequency	Percentage
Gender		
<b>Male</b>	27	45.0
<b>Female</b>	33	55.0
Age of Respondents		
<b>Less than 30 years</b>	40	66.7
<b>31-40 years</b>	20	33.3
Educational Level		
<b>First degree</b>	36	60.0
<b>Master's degree</b>	18	30.0
<b>Doctor of Philosophy (PhD)</b>	6	10.0
Department of Work		
<b>Operations</b>	32	53.3
<b>Marketing</b>	12	20.0
<b>Sales</b>	10	16.7
<b>Finance</b>	6	10.0

### 3.3.1 Descriptive Statistics

Details of the descriptive statistics are shown in Table 5.2. The mean value of the respondent is 0.36 and standard deviation of 0.09 and minimum and maximum values of 0.126 and 0.512 respectively. This implies that the selected companies have a positive return on firm value from the last decade (2009-2019). Additionally, the positive outlook of firm value suggests that the selected companies are more likely to improve brand equity and still make profits without running into bankruptcy.

**Table 5.2 Descriptive statistics of ROA**

Variables	Obs	Mean	Std. Dev.	Min	Max
ROA	60	0.36	0.09	0.126	0.512

ROA=Return on Asset

#### 4.3.2 Consumer Brand Equity Market

The various equity finance market adopted by the selected companies are presented in Table 5.3. From the selected companies listed on the Ghana stock exchange, only 3.4% of the respondents strongly agreed that their companies use sponsorship as a means of financing major equity brands in Ghana. The implication is that sponsorship normally has no 'legal' binding for repayment. In other words, when a firm sponsors a major project in the consumer industry, it pre-suggests that the companies forges a partnership agreement with the company undertaking the project; hence, paying back the monies and profits are not feasible. For the firms to make returns (profits) for financing projects, sponsorship is not a profitable venture.

Similarly, only 6.7% of the respondents strongly agreed as opposed to the 40.0% who strongly disagreed that the selected companies do not use contractor and equipment suppliers as a means of improving brand equity. The result implies that paying for contractors and equipment has no financial gains for companies considering that firms live off the profits they make from financing major equity brands.

It was, however, strongly agreed by more than half of the respondents (83.4%) that insurance provisions is a profitable equity finance instrument used by the selected companies. This suggests that companies undertaking major projects that pose inherent risk are likely to 'buy' insurance packages for workers from companies. Undergoing such processes, documentation for the purchase of the insurance, coupled with the advantages inherent in such investment increases the profitability of the selected companies within the consumer industry.

**Table 5.3 Brand Equity Market Instrument by Listed consumer base Companies**

Variables	Strongly disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly agree n (%)
Sponsor (Sp)	41 (68.3)	17 (28.3)	-	-	2 (3.4)
Contractor and equipment supplier (CES)	24 (40.0)	27 (45.0)	3 (5.0)	2 (3.3)	4 (6.7)
Financial advisors (FA)	27 (45.0)	29 (48.4)	-	2 (3.3)	2 (3.3)
Technical advisors (TA)	18 (30.0)	38 (63.3)	-	-	4 (6.7)
Legal advisors (LA)	22 (36.7)	32 (53.3)	2 (3.3)	-	4 (6.7)
Equity advisors (EA)	11 (18.3)	13 (21.7)	15(25.0)	13(21.7)	8 (13.3)
Insurance providers (IP)	2 (3.3)	-	8 (13.3)	-	50 (83.4)

#### 5.3.3 Instruments used in Financing Brand Equity Projects by Listed consumer base Companies

The various instruments used in financing brand equity projects by the selected companies are presented in Table 5.4. From the selected commercial banks, 6.6% of the respondents agreed to a very great extent that their firms use capital structure as an instrument for improving equity projects in Ghana. The implication is that the selected companies use capital structure as a means of striking a balance between debt and equity in other to adequately finance the consumer goods, daily operations and future growth of the selected companies. Stated differently, though a minority of the respondents from the selected companies use capital structure, it inure to the growth and financial development of the selected companies.

However, majority of the respondents, 66.7%, to a little extent agreed that loans are used by the selected companies as an instrument in improving equity projects. The results suggest that advance loans to companies and individual contractors undertaking major equity projects as a means of making returns. That is, the selected companies advance a loan facility to the recipient who is liable to repay the loan with the interest as agreed between both parties as well as the principal. The tendency for recipients of the loan facility to repay is a 'threat' to the brands of the selected companies, hence, the reliance on such financial instrument is not wholly adopted by all the selected companies.

**Table 5.4 Market Innovations adopted by listed companies to Brand Equity Projects**

Variables	1, n (%)	2, n (%)	3, n (%)	4, n (%)	5, n (%)
<b>Creating value through pricing (CVP)</b>	50 (83.4)	6 (10.0)	2 (3.3)	-	2 (3.3)
<b>Availability of resources and capabilities (ARC)</b>	6 (10.0)	46 (76.7)	4 (6.7)	2 (3.3)	2 (3.3)
<b>Customer satisfaction and retention (CSR)</b>	54 (90.0)	6 (10.0)			
<b>Creating and nurturing strong products (CNS)</b>	52 (86.7)	4 (6.7)	2 (3.3)	-	2 (3.3)
<b>Aggressive anti-competitors marketing campaigns (AMC)</b>	8 (13.3)	2 (3.3)	46 (76.7)	-	4 (6.7)

1=No extent at all 2= Little extent 3= Moderate extent 4= Great extent 5= Very great extent

The market innovations used in improving equity brands by the selected companies are presented in Table 5.5. From the selected companies, 10.0% of the respondents agreed but to a little extent that their firms create value through pricing. The implication is that the selected companies use competitive pricing to court companies to borrow money from them to fund their Equity brand projects. Once the pricing, for instance, interest rate, is competitively lower there is the tendency for more companies to approach the companies for assistance. The effect of this approach is that the companies make profits and the companies also complete their projects while making gains.

It was agreed but to a little extent by 76.7% of the respondents that the availability of resources and capabilities by the selected companies are innovative ways of courting businesses. The result suggests that dedicating a makeshift research and development department through the provision of free consultation enlightens prospective business associates to appreciate the products being offered to them for them to make the 'right' choice. Nonetheless, majority of the respondents, 76.7%, agreed to a great extent that an aggressive anti-competitors marketing campaigns are innovative market approach used by the selected companies to 'poach' businesses. This implies that beating off competition by approaching businesses to offer them financial assistance is an approach the selected firms used to drive 'traffic' to their firms. Since most companies survive on the profits that accrued on the loans they give out to businesses and individuals, this approach is highly profitability to the selected firms.

#### 4.3.5 Product Innovations

The various instruments used in improving brand equity product by the selected companies are presented in Table 5.6. From the selected companies, 80.0% of the respondents agreed to a great extent that their companies' innovative product that attracts a lot of businesses is the quality of their operating systems. The implication is that the selected firms use up-to-date technology that does not falter to make transactions easier and faster. Technologies such as efficient and proactive social media pages that enhance easy communication is an innovative product that makes access to the firms easier. Another set of product innovation adopted for use by the selected companies are information intensity (76.7%) and specialization of business (76.7%). This suggests that the selected companies inundate the media space with lots of information on the products the selected firms offer. This way, the firms becomes the primary destination for most businesses that need money to roll out brand equity projects. Additionally, the firms while putting their products out there in the public are specific on the type of products they offer and their area of expertise.

**Table 5.4 Product Innovation Adopted by Selected Consumer base companies**

Variables	1, n (%)	2, n (%)	3, n (%)	4, n (%)	5, n (%)
<b>Quality of the systems (QS)</b>	-	-	8 (13.3)	48 (80.0)	4 (6.7)
<b>Information intensity (II)</b>	-	46 (76.7)	6 (10.0)	6 (10.0)	2 (3.3)
<b>Specialization of business (SB)</b>	4 (6.7)	46 (76.7)	6 (10.0)	4 (6.7)	-
<b>Management support of competitive strategies (MCS)</b>	11 (18.3)	12 (20.0)	16 (26.7)	11 (18.3)	10 (16.7)

1=Least affected 2= Little affected 3= Moderately affected 4= Greatly affected 5= Most affected

#### 4.3.6 Regression Analysis

Details of the correlation analysis showing the association between the dependent variable (Brand Equity) and independent variable (sustainability reporting, and firm value) are shown in Table 5.7. The importance of undertaking the correlation analysis was to determine the presence or absence of multicollinearity based on the magnitude of the correlation coefficient. According to Wooldridge (2015), a correlation coefficient above 0.8 between explanatory variables should be corrected for multicollinearity. Stated differently, when a variable has a co-efficient equal to or greater than 0.8, it is near perfect or highly correlated. The correlation between sustainability reporting and brand equity finance instrument is positive and significant ( $r = 0.348$ ). Similarly, there was a positive significant association between firm value and equity brand market innovation ( $r = 0.234$ ). However, the correlation between age of respondent and product innovation was positive but insignificant ( $r = 0.139$ ). From the correlation matrix, none of the variables was highly correlated with another.

**Table 5.5 Correlation Matrix between consumer base Innovations and Brand Equity Finance**

Variables		PFM	PFI	MI	PI
<b>ROA</b>	1.00				
<b>Equity brand Project market (EBP)</b>	0.138	1.00			
<b>Brand Equity instrument (BEI)</b>	0.348**	0.166	1.00		
<b>Market innovation (MI)</b>	0.234*	0.517**	0.075	1.00	
<b>Product innovation (PI)</b>	0.139	0.249**	0.039	0.039	1.00

\*\*= significance at 5% confidence interval (0.05)

\*=significance at 1% confidence interval (0.01)

In order to further ascertain the absence of issues of collinearity, the Variance Inflation Test (VIF) test was undertaken (Table 5.8). Findings from test proved that none of the variables had collinearity issues and as such all the variables were included in the regression model.

**Table 5.6 Multicollinearity Test of Study Variables**

Variables	VIF	1/VIF
<b>EBP</b>	1.73	0.576506
<b>BEI</b>	1.88	0.531752
<b>MI</b>	2.57	0.389283
<b>PI</b>	1.37	0.728332
<b>Mean VIF</b>	1.89	

#### 4.3.7 Normality Test



In order to reduce the effect of outliers and to ensure a normal distribution of the data, a test for normality was conducted (Figure 5.1). The model is well fitted, thus there is no pattern to the residuals plotted against the fitted values. Stated differently, there is homogeneity of the variance of the residuals.

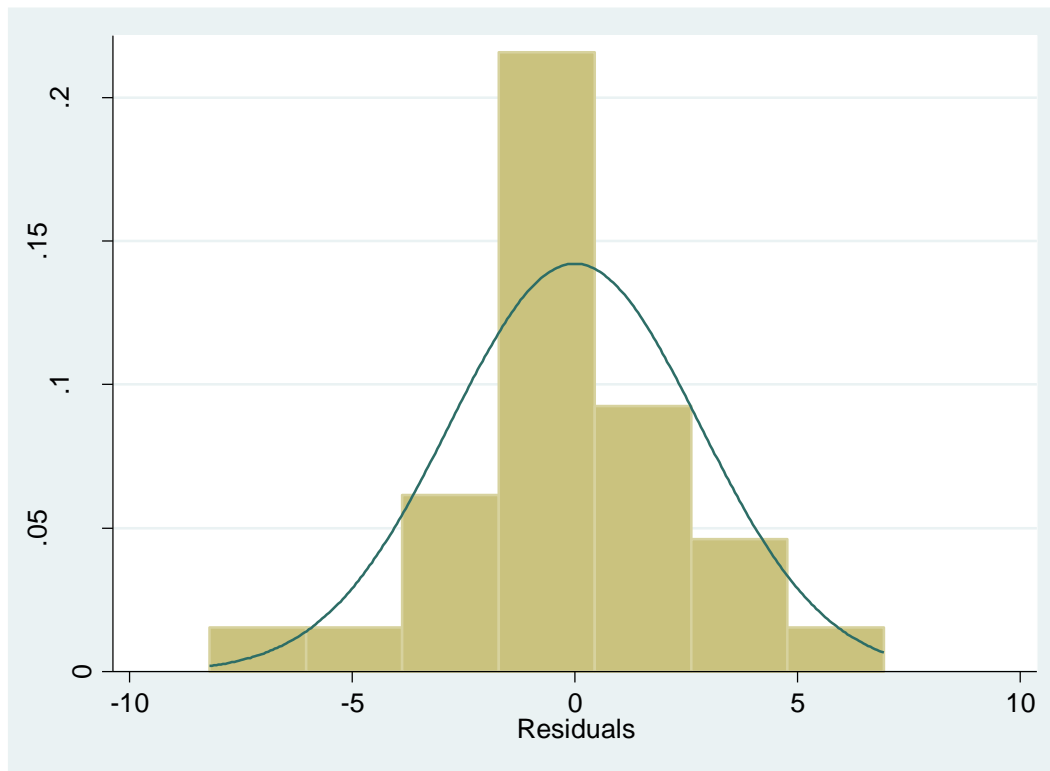


Figure 5.1 Test for normality

#### 4.3.8 Skewness/Kurtosis Tests for Normality

In this study, the Skewness and Kurtosis test was conducted on the data to ascertain its normality (Table 5.9). As a guideline, normal data are assumed to have skewness and kurtosis values near 0. Therefore, if the values are not near zero, then the data cannot be said to be distributed normally. According to Field (2009), the value of skewness (asymmetry) and kurtosis should be zero or close to zero if data normality is to be determined using skewness and kurtosis. He argues that once the value for skewness is greater than 1.96 and for kurtosis is greater than 3.29, it means that the data is not normally distributed. Hence, from the values obtained for Skewness and Kurtosis, the data is considered normally distributed.

**Table 5.7 Normality Test of Skewness and Kurtosis**

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	Joint	
				Adj chi <sup>2</sup> (2)	Prob>chi <sup>2</sup>
Resid	60	0.2428	0.0265	5.92	0.0518

#### 4.3.9 Homoscedasticity Test

Details of the homoscedastic test as part of the assumptions for the regression analysis is shown in Figure 5.1. The test was undertaken to determine whether standard errors in the model are homoscedastic so that they can be corrected. Subsequently, there was constant variance between the residuals and fitted values.

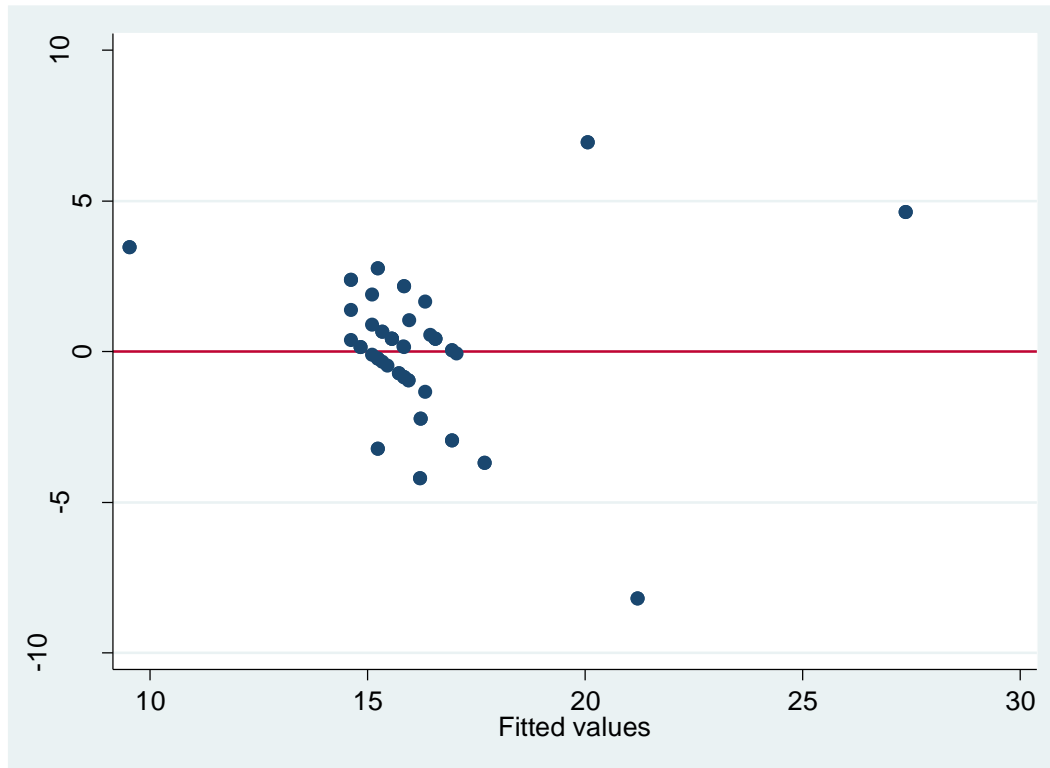


figure 5.2 Test of homoscedasticity

The regression model measured with multiple predictors (Equity Brand market, Brand Equity instrument, market innovation and product innovation) against the dependent variable was statistically significant ( $R^2 = 0.4941$ ; Adjusted  $R^2 = 0.4574$ ). The correlation of determination (Adjusted  $R^2$ ) value of 0.4574 meant that close to 46% of the total variability in brand equity is affected by the independent variables (Table 4.10). To determine whether the regression model was a good fit for the data, ANOVA was adopted (Table 4.10). The regression model is a good fit for the data as evidenced by F ration, which is  $F(4, 55) = 13.43$ ,  $P > 0.000$ . The F-statistics was used to establish whether the regression equation explained significantly a greater amount of the effect on factors that influence firm value that would be accounted for other than by chance. The brand Equity can be predicted using the independent variables since the significance level is less than 0.05. In other words, the study rejects the null hypothesis in favour of the alternate hypothesis that brand equity market, project instrument and market innovation has statistical significance on firm project.

There was a significant but negative association between brand equity market and firm value ( $\beta = -0.498$ ;  $\rho = 0.004$ ) holding all other variables constant. There is about 50.0% increase in equity brand for every unit decrease in sustainability reporting strategies such as equity brand market among the selected consumer base companies. Since the p-value is less than 0.05, the null hypothesis is rejected in favor of the alternate hypothesis that is equity brand market. Also, there was a significant but positive association between brand equity instrument and firm value among the selected consumer base companies ( $\beta = 1.059$ ;  $\rho = 0.000$ ) holding all other variables constant.

For every unit increase in brand equity instrument, there is about 94.0% increase in firm value among the selected consumer base companies. The null hypothesis is rejected in favour of the alternate hypothesis, since the p-value is less than 0.05 that brand equity project instrument such as aggressive anti-competitors marketing campaign, influence the intensity of the brand. Holding all other variables constant, market innovation was significantly associated with brand equity ( $\beta = 0.609$ ;  $\rho = 0.001$ ). That is, for every unit increase in market innovation, there are about

61.0% increases in brand equity project among the selected companies. Since the p-value is less than 0.05, the null hypothesis is rejected in favour of the alternate hypothesis that market innovation such as quality of the system instituted influence the brand equity project.

## 5.0 CONCLUSION

The study offered insightful knowledge on the process of sustainability reporting and firm value on the mediating effect of brand equity on the consumer goods industry. The purpose of undertaking this study was to facilitate the formulation of sustainability reporting and firm value based on the merits and suitability of the financial instruments available, and independent of bias that may arise from familiarity with certain package formats or from lack of understanding and experience. In order to answer the research problem, this research adopted a questionnaire survey design. This research was compiled with principles which aimed at protecting the privacy of every individual who, in the course of the research work was requested to provide personal or commercially valuable information about themselves. This research focused on the consumer goods industry with spotlight on listed firms on Ghana Stock Exchange with operations in the Accra Metropolitan Assembly only. Consequently, the population in this study was the management and staff in the consumer goods.

Purposive sampling was used to select the sample within the population. Primary (questionnaire) is employed for the study. The data were collected to cover every aspect of the research. The questionnaire was divided into four thematic areas consistent with the research objectives. Descriptive statistics was used to analysis the individual variables that collectively formed the main sustainability reporting variables. Additionally, inferential statistics, specifically multiple linear regressions, was undertaken to assess the relationship between sustainability reportig and firm value Prior to the multiple linear regressions, the assumptions that necessitate this type of analysis were undertaken so as to ascertain the 'authenticity' of the final results.

Furthermore, the purpose of the study also looks at how monetary policy affects Ghana's financial performance. The study's particular goals were to: (1) assess how open market operations affect banks' financial performance; (2) examine how the Central Bank Rate (CBR) affects financial results; and (3) closely examine how the Reserve Requirement Ratio affects financial performance. The development of the research aim and research questions was predicated upon the theories of loanable funds, credit market theory, and new keynes model theory. An explanatory research design and a quantitative research technique were used in the study. The commercial banks' annual reports served as the source of the data. and the Bank of Ghana report from the period of 2015 to 2021. Multiple and simple linear regression were used to analyze the research objectives.

### 5.1 Findings

The maiden goal was to ascertain the bearing of money supply on private sector credit within Sub-Saharan African nations. The study revealed a robust correlation, indicating that M2 significantly and positively influences private sector credit. This underscores the integral role of the money supply in determining the availability of credit for the private sector. An augmentation in the money supply has the potential to stimulate credit expansion, fostering a heightened propensity of banks and financial institutions to lend.

The study underscores the critical role of the money supply in shaping the overall liquidity landscape of the financial system. A heightened money supply endows banks with increased liquidity, thereby enabling a more substantial provision of credit to businesses and individuals within the private sector. Our findings affirm a significant and direct relationship between money supply and lending available to the private industry, facilitating meaningful investments for business expansion and growth. The accessibility of credit to the private industry is pivotal in fostering economic success.

### 5.2 Conclusion

The study concludes that listed firms in Ghana have adopted various sustainability reporting strategies aimed at improving brand equity and by extension of firm value. Specifically, the study found out that brand equity project by the selected companies is negative but significantly associated with equity finance market. Also, a positive significant association was observed between brand equity and firm value. Similarly, market innovation was positive and significantly associated with brand equity among the selected firms. Though there was a positive association between product innovation and brand equity finance, this association was statistically insignificant. These findings are significant to the consumer industry, which has a need to remain abreast of profitable alternatives in the equity finance market as it reviews the practices adopted by firms.

Furtherance to this, it will serve as a source of assessment for further research into issues of brand equity and assist other countries to be more responsive to the improvement of brands. The purpose of conducting this study will help policy makers such as Government agencies to enhance developmental project by providing appropriate services to suit changes contemporary to improvement of brand equity projects. The study leave further inroads for future researchers in another discipline of finance, economics and management regarding the progressive growth of financing of different brands in the Ghanaian economy. The findings fill the gap in the literature in Ghana where there is dearth of studies that concentrated on firm value and sustainability reporting in the consumer goods industry.

Moving further, when analyzing the influence of the OMO on the financial outcome of banks, it becomes evident that these operations have distinct effects. The central bank's practice of buying securities has a positive impact on banks' financial outcomes. This occurs because when the central bank purchases securities from banks, it adds credits to their accounts, thereby increasing their reserves. This augmented reserve balance enhances the capacity of commercial banks to extend loans to both consumers and businesses, ultimately bolstering their financial performance. Conversely, the central bank's OMO involving the sale of securities have a negative impact on the financial outcomes of banks. This phenomenon is observed as, when the central bank sells securities to commercial banks, it debits the accounts of these banks, consequently reducing their reserves. This decrease in reserve balances potentially constrains the funds available for lending, leading to a decline in the financial outcome of banks.

In relation to the impact of the CBR on financial outcome, it can be concluded that there is a negative and statistically significant effect of the central bank rate on the financial outcomes of banks. It is suggested that higher central bank rates can lead to negative market sentiment, affecting investor confidence in the economy and financial institutions. This can impact stock prices and investor perception of the bank's financial health. Additionally, as central bank rates rise, the value of fixed-income assets such as bonds and mortgage-backed securities can decrease. This can lead to potential losses on the bank's investment portfolio leading to poor performance of banks in Ghana.

When examining the influence of the reserve requirement ratio on financial outcomes, we can draw the conclusion that there exists a notable and adverse impact of this ratio on the financial performance of banks. The implication is that as the central bank elevates the reserve requirement ratio, banks find themselves compelled to allocate a greater proportion of their deposits into reserves, thereby constricting the pool of funds available for lending. Consequently, this restriction can diminish the bank's capacity to generate interest income from loans, which ultimately affects its profitability and overall financial performance. Moreover, a heightened reserve requirement ratio results in a larger share of a bank's funds being locked in low- or non-interest-bearing reserves held with the central bank.

The Synopsis of the chapter relates to enormous statistical and related analysis. It described in detail the demographic background of the respondents in terms of participants' profile rate of response and gender status, the level of education and length of service and position of the participants. The study results are described per the study questions, with the application of descriptive statistical analysis based on distribution and graphical analysis and measures of central tendency and variability and inferential statistics. Thus, in terms of

regression analysis relating to regression goodness of fit, analysis of variance, regression coefficients and correlation analysis in terms of strength and directions and the significant nature among the variables.

The results are based on answering the research questions in terms of what are monetary and fiscal policy tools used and why and how do these affect the financial performance of Ecobank Gh. Ltd? What effect do the monetary and fiscal policy tools have on the macroeconomic variables and their impact on the financial performance of Ecobank Gh. Ltd.? What are the internal control factors used by Ecobank to determine its financial performance and profitability and why?

The outcome revealed some specific statistical test validations, controversies, and critical information. The outcome revealed that the fiscal policy tools through the p-values of 0.015 and 0.022 at a 95% confidence level there is a positive correlation between the fiscal policy tools and ROA and ROE with an adjusted R-squared value of 0.421 and 0.383. As the fiscal policy tools, predicted 42.1% and 38.3% of the bank's profitability of ROA and ROE. Shows the existence of a positive and significant relationship between the fiscal policy tools and the profitability of the bank. The p-value of 0.015 and 0.022 at a 95% confidence level revealed that the study model provides a better fit, leading to the acceptance of the alternative hypothesis.

The correlation result revealed that there exists a strong positive correlation between government spending and the bank's profitability of ROA and ROE, reporting high correlation values of 0.639 and 0.643 at p-values of 0.010 and 0.010, which were less than 0.050 level of significance, were statistically significant at 95% confidence interval. It shows that a unit increase in government spending leads to a 0.639 and 0.643 rise in return on assets and equity. An increase in government spending by a unit leads to a 63.9% and 64.3% increase in return on assets and equity.

The correlation result of taxation revealed that there exists a strong positive correlation between taxation and the bank's profitability of ROA and ROE, recording high correlation values of 0.660 and 0.612. The level of significance of the p-values of 0.007 and 0.015 less than the significance level of 0.050 was found to be statistically significant at a 95% confidence level. The outcome demonstrates that a unit increase in taxation leads to a 0.660 and 0.612 increase in return on assets and equity respectively. Implying that an increase in tax leads to a proportional increase in banks' profitability of return on assets and equity by 66.0% and 61.2% respectively.

The overall macroeconomic variables with an adjusted R-squared value of 0.478 reveals that there was a positive relationship between the macroeconomic variables of GDP growth and inflation rate as it predicted (0.478) 47.8% of the variation in the bank's profitability (ROE), showing that the result was 47.8% significantly reliable. However, the p-value of 0.008 at a 95% confidence level reveals that there was a statistically significant relationship between the macroeconomic variables and the profitability of the bank leading to the rejection of the null hypothesis. The result was that the model provides a better fit. Therefore, able to meet the expectation of the study by showing that there was a positive and statistical important relationship between the macroeconomic variables and the bank's profitability (ROE).

The correlation matrix indicates a diverse relationship between the individual independent variables and the dependent variables. The GDP growth outcome signifies that GDP growth correlated inversely to the bank's profitability of return on assets and equity recording coefficient values of -0.164 and -0.026. This shows that an increase in GDP growth leads to a decrease of 16.4% and 2.6% in return on assets and return on equity respectively. Thus, a unit increase in GDP growth leads to a decrease of (-0.164) 16.4% and (-0.026) 2.6% in return on assets and equity. However, the level of significance of 0.559 and 0.926 are statistically not significant.

Inflation rate (INFR) values of 0.441 and 0.694 concerning return on assets and return on equity indicates a strong positive correlation between the inflation rate and return on assets and equity. This shows that a unit increase in the inflation rate leads to an increase in return on assets and return on equity by 0.441 and 0.694 respectively. A rise in the inflation rate leads to a rise in the return on assets and return on equity by 44.1% and 69.4%. Proving that increasing inflation rates causes return on assets and return on equity to increase and falling inflation rates



decrease universal banks' profitability. The p-values of 0.100 and 0.004 were statistically not significant and significant at a 95% confidence level respectively.

The internal control variables with an adjusted R-squared value of 0.870 and 0.681 were an indication that 87.0% and 68.1% of the variance in the bank's profitability of return on the assets and equity predicted and accounted for by the explanatory internal control variables. The result confirmed that there exists a positive and statistically significant relationship between the internal control variables and the bank's profitability (ROA and ROE). This led to the acceptance of the alternative hypothesis, as there were positive and statistically significant correlations and statistical importance between the variables.

The outcome recorded significance level p-values of 0.000 and 0.012, which fall below the critical value of 0.025 at a 5% significance level, showing that the predictor variables were statistically significant at a 95% confidence level and meaningful to the model. There was a statistical and significant relationship between the internal control variables and the bank's profitability of ROA and ROE. As the independent variables possess the capability to predict the bank's profitability and the model provides a better fit.

The correlation results for the individual internal control variables show a diverse outcome. The capital adequacy result of 0.084 and -0.306 indicates the existence of a positive and negative correlation between capital adequacy and return on assets and equity. A unit increase in capital adequacy ratio leads to 0.498 and -0.306 increases and decreases in return on assets and equity. The p-values of 0.767 and 0.267 recorded are statistically no significant correlations at a 5% significance level, leading to the support of the null hypothesis.

The correlation result of assets quality recording coefficient values of 0.020 and -0.136 shows that there was a positive and negative correlation between asset quality and return on assets and equity. Demonstrating that a unit increase in asset quality leads to a 0.020 and -0.136 increase and decrease in return on assets and equity. An indication that efficient mobilization of banks asserts improves asset quality, which leads to an increase and decrease in return on assets and equity and the bank's profitability of ROA and ROE. The p-values of 0.944 and 0.629 are statistically nonsignificant at a 95% confidence level, thus supporting the null hypothesis. The correlation outcome of the operational efficiency recorded values of -0.719 and -0.558 to return on assets and equity indicating that operational efficiency and return on assets and equity negatively correlated. A unit rise in operational efficiency through a decrease in operational cost leads to a -0.719 and -0.558 fall in return on assets and equity respectively. The outcome reveals that in periods of an increase in the expenditure patterns of the bank's resulting in bad operational efficiency the bank's profit falls. The p-values of 0.003 and 0.030 were found to be statistically significant at a 5% significance level, thus accepting the alternative hypothesis.

The correlation result of the earnings quality recorded values of 0.844 and 0.729 to return on assets and return on equity, the outcome indicated that there was a strong positive correlation between earnings quality and return on assets and return on equity. Signifying that a unit increase in earnings quality leads to a 0.844 and 0.729 increase in return on assets and equity. The higher the earnings quality the higher the bank's profitability. The level of significance of the p-values of 0.000 and 0.002 was found to have a statistical and significant correlation at a 95% confidence level, affirming the acceptance of the alternative hypothesis.

The liquidity measurement outcome recorded values of -0.240 and -0.339, which signifies that liquidity measurement and return on asset and return on equity negatively correlated. A unit increase in the bank's liquidity leads to a decrease in return on assets and equity by -0.240 and 0.339 respectively. Thus, an increase in liquidity level affects negatively on return on assets resulting in an inverse correlation between the bank's liquidity and profitability. At the level of significance of 0.389 and 0.141, there is no significant correlation at a 5% significance level, leading to the support of the null hypothesis.

The sensitivity to market risk recorded correlation results of 0.252 and 0.040 to return on assets and equity, showing that sensitivity to market risk and return on assets and equity positively and negatively correlates. A unit increase in sensitivity to market risk leads to a 0.252

and 0.040 increase in return on assets and equity, respectively. The significance levels of 0.365 and 0.888 were nonsignificant at a 95% confidence level, thus supporting the null hypothesis

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