NATIONAL INNOVATION AND RESEARCH ACADEMIA
International Journal of Economics, Finance & Entrepreneurship (NIRA-IJEFE)
ISSN: 2713-4679. Volume 9, Issue 8. Pages 281-304. February, 2025
OTL: 6472-208-9-125-38-999-1
Double Blind Peer Reviewed International Research Journal
https://arcnjournals.org
arcnjournals@gmail.com

EVALUATING THE DETERMINANTS OF PROFITABILITY OF QUOTED INDUSTRIAL GOODS FIRMS ON NIGERIAN EXCHANGE GROUP

Adudu, Chiangi Adudu (PhD)
Department of Business Administration and Management, Yaba College of Technology, Lagos-Nigeria
Dawodu, Olatunji Musa
Department of Accountancy, Yaba C ollege of Technology, Lagos-Nigeria
Taiwo, Lateef Ajao
Department of Accountancy, Yaba College of Technology, Lagos-Nigeria

Abstract: *Profitable businesses have the ability to provide investors with a high return on their investment while also promoting the well-being of other societal groups. In contrast, unprofitable businesses cannot withstand market competition, which may result in liquidation. The factors influencing the profitability of quoted industrial goods companies on the Nigerian exchange group are evaluated in this study. With a population of fifteen carefully chosen industrial items that were quoted on NGX Group between 2017 and 2024, a correlational research approach was used. The study used panel data for the Multiple Regression Analysis and a supplementary technique of data collecting. From the websites of each company, including the Nigerian Exchange Group Fact Book 2024, the secondary data was developed and sourced from the annual financial statements of the sampled companies for the eight-year period from 2017 to 2024. Descriptive and inferential statistics were used to study and interpret the acquired data. The mean and standard deviation were descriptive statistics. The most common data analysis tool is multiple regression analysis, which is performed with STATA statistical software. Stepwise regression is used for variable selection using SPSS software. The results showed that the profitability of quoted industrial products companies on the Nigerian exchange group was significantly impacted negatively by leverage and liquidity. Thus, it may be said that if quoted industrial products companies on the Nigerian exchange group reduce their degree of leverage, their profitability will rise. The study comes to the conclusion that industrial goods companies listed on the Nigerian Exchange Group are less profitable when there is a high volume of liquidity. However, it was discovered that the profitability of quoted industrial products companies on the Nigerian exchange group was positively and significantly influenced by firm size and cash flow. This is because business size has the power to predict profitability, and the two factors have a positive and significant link. Therefore, it may be said that larger industrial goods companies tend to generate more profits than smaller manufacturing organizations. The study also comes to the conclusion that industrial goods companies on the Nigerian exchange group can become more profitable by increasing their level of cash flows. The solvency, adaptability, and financial stability of industrial products companies listed on the Nigerian exchange group are determined by their cash flows. Among other things, the report suggested that industrial goods companies listed on the Nigerian Exchange Group should always keep a minimal level of liquidity in order to lower the additional expenses associated with holding superfluous liquid assets. This can be accomplished by highlighting the benefits of just-in-time, a theory that supports keeping as little inventory as possible. Additionally, excess funds should never be left idle but rather used for short-term investments.*

Keywords: *Profitability, Size, Leverage, Cashflow Liquidity.*

1.0 INTRODUCTION

1.1 Background to the Study

Performance is seen as a crucial component of corporate success in the current competitive world. Every business entity's ability to survive in the face of growing global competition is a crucial question in the business world. In the business sector, companies strive to turn a profit, and a company's ability to be profitable is essential to its expansion and continued existence. Profitable businesses have the ability to provide investors with a high return on their investment while also promoting the well-being of other societal groups. In contrast, unprofitable businesses cannot withstand market competition, which may result in liquidation. Any business's primary goal is to turn a profit for its shareholders. One of the main concerns of management experts, investors, and researchers has been the profitability of corporate organizations. Since profitability provides a comprehensive indication of a company's potential to increase its income level, it is the most significant and trustworthy indicator of corporate growth. A business cannot endure over the long term if it does not make enough money. As a result, shareholders are concerned about and interested in profitability. Regardless of industry, profitability is essential to organizations and is thought to be a prerequisite for a larger capital base, business expansion, and business success (Diriyai & Korolo, 2023).

Management is tasked with managing an organization's operations, and they strive to reduce expenses in order to boost returns on investments (Zraiq & Fadzil, 2018). Business owners utilize profitability to forecast their company's future. A company's profitability demonstrates its capacity to turn a profit through the use of its resources or assets. Due to fierce competition, most businesses struggle to reach the targeted level of profitability. Researchers have been looking for factors that influence profitability in various businesses for a long time (Ezechukwu & Amahalu, 2017). Numerous factors, including the percentage of leverage, which influences the firm's expenses for interest payments, firm size, liquidity, cash flows, and corporate governance mechanisms like board size and audit committee meetings, are said to have an impact on profitability, according to existing literature (Awodiran & Ogundele, 2022). The management of the company is responsible for occasionally implementing the best plans while keeping in mind these elements that could have a significant impact on the company's profitability (Agbaeze & Ogosi, 2018). Understanding the factors that affect profitability is essential since it aids managers in creating a profitable plan for their business. These elements are significant because they provide information on changes in profitability. Management receives feedback from this understanding of the factors that affect a company's profitability. After that, management can come up with a list of tactics that should be used to raise overall performance and profitability in particular. Businesses that produce industrial goods can also use this procedure. Businesses in the industrial products sector, or industrial goods enterprises, have been thought to have the ability to speed up economic development (Omabu et al., 2021).

Because they provide things that are still useful to industries, industrial goods companies drive industrialization. The industrial products industry is currently given respect despite declining fuel prices. Internal drivers of profitability must be evaluated because these businesses exist to produce money and their survival is heavily reliant on their capacity to do so. Research on the factors that influence a company's profitability has been accelerating. According to these research, factors including business size, cash flows,

board size, liquidity, and leverage have a big impact on how profitable a company is (Rabbani & Bunagan, 2021; Abubakar & Garba, 2019). One of the most crucial factors in determining a company's profitability is its size. The size of a firm can influence its worth; a huge company will show how quickly it is developing, meaning that the larger the company, the higher its earnings will be. Because it may have a big impact on profitability, firm size is a very important component for a business's success. Profitability and firm size are predicted to positively correlate when larger companies utilize economies of scale. Because their average unit cost decreases over a range of production, large enterprises have the advantage of being able to explore the benefits of economies of scale. Because it guarantees the daily functioning of corporate activities and the payment of recurrent commitments, liquidity is an essential component of working capital management (Awodiran & Ogundele, 2022). An important component of a commercial firm's successful operation is liquidity. Reaching the intended trade-off between liquidity and profitability is a crucial conundrum in liquidity management (Ismail, 2016).

Leverage is an investing strategy that makes use of borrowed resources, specifically the use of various financial tools or borrowed funds to increase the expected return on an investment (Abdullah, 2020). Another problematic factor that influences a company's profitability is cash flow. For businesses to meet their daily financial commitments, cash flows are necessary. The lifeblood of any commercial endeavor is the inflow and outflow of cash. In their pursuit of efficient possibilities to invest their excess resources in the market, investors are mostly drawn to enterprises with free cash flow. Because of its considerable GDP contribution, the industrial products sector has a significant impact on the economic sustainability, growth, and development of the Nigerian exchange group (Diriyai & Korolo, 2023). The industrial sector may be seen as a pillar for defining a country's economic efficiency in the modern, developed world. Given the importance of the industrial goods sector to Nigeria's economy, it is critical for stakeholders to comprehend the factors that influence the profitability of industrial goods companies listed on the Nigerian exchange group.

1.2 Statement of the Problem

The nature of a business's operations, which determines the risks associated with it, has a major impact on its financial success in terms of profitability. Business size, liquidity, board size, leverage, and cash flows all have a substantial impact on business profitability, according to studies on the factors that determine it. However, the findings have been conflicting. The results of these investigations have been divided into two different categories. A collection of research on one side of the divide indicate that firm profitability is positively correlated with business size, liquidity, board size, and debt. (Abubakar & Garba, 2019; Kumar & Nanda, 2020) On the opposite end of the spectrum, however, are a number of studies that contend that firm profitability is negatively correlated with firm size, liquidity, board size, leverage, cash flows, and audit committee meetings (Rabbani & Bubagan, 2021; Badu & Appiah, 2017). In the context of growing economies like Nigeria, these contradictory findings have made it challenging to formulate effective policies.

A clear relationship between liquidity, business size, board size, and leverage must be studied in light of the aforementioned considerations. This is required because the majority of recent research on this topic has been conducted elsewhere. Even though there are a lot of studies conducted in Nigeria, they are insufficient for current reliance

because they fall into a number of methodological pitfalls. These include using primary data when secondary data would have been more appropriate, using scope whose coverage period is years behind schedule, selecting variables abruptly without using scientific methods like stepwise regression, and choosing a small number of firms from which it may be difficult to draw general conclusions. A questionnaire given to a small number of respondents served as the basis for primary data used in studies like Siyanbola, Olaoye, and Olurin (2015). The study's conclusions may therefore be subject to subjectivity. The current period is not covered by, among others, Akinmulegun (2012), Aqsa and Ghulam (2014), Kidtmat and Rehman (2014), Marozva (2015), Johl, Kaur, and Cooper (2015), Bulan, Sanyal and Yan (2009), Niresh and Velnampy (2014), and Dogan (2013). Furthermore, there is currently a dearth of research on the effects of firm size, liquidity, board size, and leverage in the context of industrial products companies. The scant research that is now accessible (Mutuku & Kyalo, 2015; Magaretha & Supertika, 2016; Aparna, 2015; Devi & Devi, 2014; Bashar & Islam, 2014) Studies like Siyanbola, Olaoye, and Olurin (2015) employed primary data from a questionnaire that was given to a small number of respondents. The results of the investigation may therefore be subject to subjectivity. Several works, including Bulan, Sanyal and Yan (2009), Niresh and Velnampy (2014), Dogan (2013), Kidtmat and Rehman (2014), Marozva (2015), Johl, Kaur and Cooper (2015), Akinmulegun (2012), and Aqsa and Ghulam (2014), do not address the current era. Furthermore, research on the effects of firm size, liquidity, board size, and debt is still lacking in the context of industrial goods companies. Aparna (2015), Devi & Devi (2014), Mutuku & Kyalo (2015), Magaretha & Supertika (2016), and Bashar & Islam (2014) are some of the limited studies that are currently available.

1.3 Objectives of the Study

The main objective of this study is to evaluate the determinants of profitability of quoted industrial goods firms on Nigerian exchange group. The specific objectives are to:

i. determine the effect of firm size on profitability of quoted industrial goods firms on Nigerian exchange group.
ii. ascertain the effect of leverage on profitability of quoted industrial goods firms on Nigerian exchange group.
iii. examine the effect of cash flows on profitability of quoted industrial goods firms on Nigerian exchange group.
iv. assess the effect of liquidity on profitability of quoted industrial goods firms on Nigerian exchange group.

1.4 Research Hypotheses

In line with the objectives of the study, the following hypotheses have been formulated in null form:

$H0_1$: Firm size has no significant effect on profitability of quoted industrial goods firms on Nigerian exchange group.
$H0_2$: Leverage has no significant effect on profitability of quoted industrial goods firms on Nigerian exchange group.
$H0_3$: Cash flows has no significant effect on profitability of quoted industrial goods firms on Nigerian exchange group.
$H0_4$: Liquidity has no significant effect on profitability of quoted industrial goods firms on Nigerian exchange group.

1.5 Significance of the Study

The results of this study are significant because they will broaden our understanding of the factors that influence profitability. Current and prospective academics, the government, regulators, and managers of organizations—particularly industrial goods enterprises on the Nigerian Exchange Group—will all benefit from the study. The study will be extremely beneficial to the management of industrial enterprises on the Nigerian exchange group. When the study's conclusions are used appropriately, managerial decision-making improves. Management will be able to determine the appropriate ratio of liquid assets to hold with the help of an understanding of the relationship between profitability and liquidity. In light of the study's findings, the management of industrial products companies also benefits from this research when it comes to determining the size of their boards. Similarly, the findings of this study would help management choose the ideal amount of leverage by offering valuable insights into the connection between profitability and leverage.

Since the study uncovered the relationship between company size and profitability, management of other organizations can likewise utilize the findings to plan their sizes. Management can choose an organization's size that won't negatively impact profitability based on the direction of the connection. Additionally, managers of quoted industrial commodities on the Nigerian exchange group would benefit from knowing the direction of the link between cash flows and profitability in order to determine the level of cash flows that need to be maintained. The study's conclusions would be extremely helpful to the government and the Nigerian Exchange Group's regulators since they would offer a helpful framework for formulating judgments and policies that would increase the industrial products sector's profitability. Regulators like the Securities and Exchange Commission (SEC) and Central Bank of Nigeria (CBN), among others, could use the study's empirical data to support current regulations that would increase the profitability of industrial goods companies listed on the Nigerian exchange group.

2.0 REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

The concepts discussed here include profitability, firm leverage, firm size, and cash flows firm liquidity.

Profitability

The measure of an organization's efficiency is its profitability. Stated differently, it serves as a gauge of efficiency and directs management to attain even higher levels of efficiency. According to Agbaeze and Ogosi (2018), a company's profit or performance is the result of effectively managing its various financial resources and utilizing them for financing, investment, and operations. Most organizations are usually evaluated based on their performance, either in comparison to their past performance or in reference to their competitors. Typically, ratios are employed to calculate a company's profitability. In its broadest sense, profitability ratios are a group of financial measurements that, using data from a particular point in time, assess a company's capacity to generate profit over time in comparison to its revenue and operating expenses. According to Awodiran and Ogundele (2022), the profitability ratio is a gauge of the business's performance and operational efficiency. The gross profit margin, operational profit margin, and net profit margin are often used ratios to assess profitability. Return on assets (ROA) and return on equity (ROE) are also relevant, though. ROA was utilized as the profitability metric in the

analysis of several researchers that looked at the connection between capital structure and profitability (Abiodun, 2014; Chechet & Olayiwola, 2014). Because it considers a company's debt in comparison to other metrics like ROE, return on assets is possibly of paramount importance to managers, analysts, and investors. When comparing a company's performance to its historical performance or to a company with comparable characteristics, ROA is also most effective when employed as a comparison metric. A corporation that makes more from less speculation may have a greater ROA.

Firm Size

One of the factors that investors take into account while developing their investment plans is the company's size; that is, they look at the company's size before making an investment. A company's size is determined by its total assets (Olaoye & Olarewaju, 2015). According to IAS 1: Presentation of Financial Statements, an asset is a resource that an entity controls as a result of previous transactions and from which the entity may get future financial advantages. Current and non-current assets make up a company's total assets (Cekrezi, 2015). Assets that are easily convertible into cash during a single accounting period are known as current assets. Fixed assets that are utilized by an organization to produce revenue over an extended period of time are known as non-current assets. According to Abubakar, Sulaiman, and Haruna (2018), every entity is a going concern, which means that they continue to invest and acquire additional assets in order to maintain their continuing existence. By doing this, the size is also increasing steadily. A company's ability to acquire additional assets is determined by its level of profitability. This is because business management keeps investing the available funds and acquiring additional assets as profits rise.

Leverage

Leverage is taken into account when a company plans its financial strategy. Leverage allows the business to raise its rate of return. This is accomplished by producing a higher return on borrowed funds than the expense of using them. It is implied that leverage is good when the firm's assets exceed the interest paid on debt before taxes are paid. Leverage may also be negative in situations where the firm's assets are smaller than the interest rate before taxes. Suhaila (2014). The use of borrowed funds (debt) to finance the acquisition of assets with the hope that the revenue will or the new asset's capital gain will be more than the borrowing cost (Ezechukwu & Amahalu, 2017). Using borrowed funds, or more precisely, a variety of financial instruments or borrowed resources, to boost an investment's prospective return is known as leverage. The amount of debt a company employs to finance its assets is another way to define leverage. When investing to increase the firm's asset base and produce returns on risk capital, leverage is the outcome of using borrowed cash as a funding source. Financial leverage, sometimes referred to as trading on equity or leverage, is the process of using debt to purchase more assets (Hayes, 2021).

Cash flows

The quantity of cash or cash equivalent that a business gets or disburses as payment to its debtors is referred to as cash flow. A company's liquidity condition is frequently examined using cash flow analysis. It provides an overview of how much money is going into the company, where it is coming from, and how much is leaving it (Danson, David & Riro, 2017). Organizations typically have two types of cash flow: input and outflow. Cash flow is the outcome of the distinction between these two ideas (Akinloye, 2013). According

to Adegbie and Fakile (2018), cash flows from operating activities are the financial results of trade-related transactions and other events that are included in profit and loss to determine operating profit. As an alternative, cash flows from financing activities include cash inflows and outflows related to acquiring funds from outside sources to finance the business and its operations, whereas cash flows from investing activities include cash inflows and outflows related to the acquisition and sale of productive facilities utilized by the business as well as investments in the securities of other businesses (Adedeji & Oboh, 2017). An organization's overall cash inflows from ongoing operations and external investment sources are detailed in a cash flow report. It also covers any cash outflows for investments and business expenses done during a given time frame.

Liquidity

The degree to which current liabilities that will mature within the upcoming fiscal year can be settled with the company's entire current assets without affecting its operational procedures is known as liquidity. Inventory, accounts receivable, cash and bank balance, payments made in advance, and marketable securities (Treasury bill) are examples of a company's current assets (Ejike & Agha, 2018). Assets that are easily convertible into cash during a single accounting period are known as current assets. Conversely, current liabilities include, among other things, trade payable, bank overdrafts, unpaid bills, and income tax obligations. Present-day debts that are anticipated to be settled within a single fiscal year are known as current liabilities. The current ratio, which is the ratio of current assets to current liabilities, can be used to quantify it. When a company's total current assets exceed its entire current liabilities at a given point in time, it is said to be highly liquid (Batchimeg, 2017). Increased liquidity enables a business to handle unanticipated risk factors and meet its obligations, even in the face of low earnings. An entity's liquidity demonstrates its short-term solvency. The financial success of a corporation can be positively impacted by effectively managing its liquidity. Businesses that maintain their liquidity are probably flexible enough to quickly adjust to shifting conditions. This flexibility appears to have a positive impact on business profitability.

2.2 Theoretical Review

This study is anchored on the Agency Costs Theory developed by Jensen and Meckling (1976).

2.2.1 Agency Costs Theory

Jensen and Meckling (1976) developed the idea of agency costs. Conflicts of interest between agents and principals, as well as the separation of ownership and control, increase agency expenses. It consists of the expenses that result from the differences between the firm's principals and agents, each of whom tries to further their own specific objectives at the expense of the others (Jensen & Meckilng, 1976). The hypothesis is based on the idea that managers will not always operate in the best interests of the shareholders since they must act in the best interests of the shareholders, not necessarily in their own best interests. When it comes to agency costs, the principals want to encourage the agents to take the most advantageous course of action. The costs ensuing from the attempt to make agents act this way, inclusive of bankruptcy costs, establishes the agency costs. Agency theory asserts that shareholders have a preferred choice for leveraged companies for the reason that debt level can be used as a monitoring tool for managers. This way, an increased company performance can be attained by lowering agency costs. Furthermore, agency costs become more economically significant when a

firm is having difficulties meeting its obligations to creditors (Bradley, Jarrel & Kim 1984). Firm worth in such an instance will be heavily dependent on its potentiality to carry out its long-term revenue generating projects. Unluckily, the rise of these agency costs could literally lead to underinvestment issues (Miller, 1977).

The costs ensuing from the attempt to make agents act this way, inclusive of bankruptcy costs, establishes the agency costs. Agency theory asserts that shareholders have a preferred choice for leveraged companies for the reason that debt level can be used as a monitoring tool for managers. This way, an increased company performance can be attained by lowering agency costs. Furthermore, agency costs become more economically significant when a firm is having difficulties meeting its obligations to creditors (Bradley, Jarrel & Kim 1984). Firm worth in such an instance will be heavily dependent on its potentiality to carry out its long-term revenue generating projects. Unluckily, the rise of these agency costs could literally lead to underinvestment issues (Miller, 1977).

Osuji and Odita (2012), Onalapo and Kajola (2010), and Chechet and Olayiwola (2014) supported the agency cost theory's assertion that increased leverage will lower agency costs and inefficiencies, leading to increased efficiency and an improvement in a firm's performance. Thus, the use of debt capital will minimize the agency cost since the payment of debt interest reduces the surplus cash. In essence, the agency costs theory states that an ideal capital structure will be achieved by minimizing the costs arising from conflicts between the principals (shareholders) and the agents (managers). However, it is still unclear how different agency conflicts affect capital structure (Frank & Goyal, 2009).

2.3 Empirical Review

Effiong and Ukpong (2024) investigated the effect of firm characteristics on financial leverage using industrial goods firms quoted on Nigerian Exchange Group. The study's dependent variable was financial leverage, whereas the independent variables were firm characteristics, which were represented by firm size, firm profitability, asset tangibility, market value, and the composite effect of firm characteristics. The research design used was ex-post-facto. Thirteen (13) quoted industrial products companies listed on the Nigerian Exchange Group made up the study's population, and twelve (12) firms were included in the sample after the firms that did not fit the inclusion criteria were removed. The study's data came from the 2013–2022 annual reports and accounts of the companies that were sampled. Descriptive statistics, panel regression, and correlation were used to analyze the data. The data was analyzed using version 10 of the E-view statistical software. According to the Haussmann test findings, the financial leverage of industrial goods firms on the Nigerian exchange group was negatively and non-significantly impacted by firm size. Moreover, market value had a negative and nonsignificant impact on the financial leverage of industrial goods firms on the Nigerian exchange group, firm profitability had a positive and significant effect on that financial leverage, firm asset tangibility had a positive non-significant effect, and the composite effect of firm characteristics had a significant impact on that financial leverage.

Awodiran and Ogundele (2022) investigated the determinants of financial reporting quality among quoted industrial goods firms on Nigerian exchange group. The analysis covered all 14 industrial goods companies that were listed on the Nigerian stock exchange between 2010 and 2019. The data gathered through content analysis of the annual report and accounts of the sampled firms was analyzed in this study using both descriptive and

inferential statistical approaches. Firm size and asset tangibility have a favorable and significant impact on the quality of financial reporting, according to the panel least square regression results. While business growth has no statistically significant impact on the quality of financial reporting, profitability and financial crisis have a negative impact. The outcome of the study indicates that financial strain has a negative impact on the quality of financial reporting.

Ofulue, Ezeagba, Amahalu and Obi (2021) examined the relationship between financial leverage and financial performance of quoted industrial goods firms on Nigerian exchange group for a thirteen (13) year period covering from 2008-2020. This study specifically determined how the debt-to-equity ratio, short-term debt ratio, long-term debt ratio, and cash value added relate to one another. This study used panel data, which came from the 2008–2020 annual reports and accounts of fourteen (14) industrial products companies that were sampled and quoted. The research design used was ex-post facto. To assess the study's hypotheses, inferential statistics such as the Pearson correlation coefficient, the Multicollinearity test, and Panel Least Square (PLS) regression analysis were used. The findings showed that, at the 5% level of significance, the short-term debt ratio significantly and favorably correlates with the cash value added of quoted industrial products firms on the Nigerian exchange group, while the debt-to-equity ratio and long-term debt ratio have a significant negative association with cash value added.

Senan, Ahmad, Anagreh, Tabash and Al-Homaidi, (2021) investigated the determinants of financial performance, firm liquidity and leverage ratio of Indian quoted firms of Indian quoted firms on the Bombay Stock Exchange. Balanced panel data for 1,333 Indian enterprises gathered over a 12-year span from 2007 to 2018 was the study's main emphasis. The Generalized Moment Method (GMM) and static models (pooled, fixed, and random effects) were both employed in the study. The financial leverage of Indian listed corporations is shown to be significantly influenced by the quick and current ratios.

Abdulrahman and Musa (2020) conducted a study to assess the determinants of financial performance of firms quoted in the consumer goods sector of Nigerian economy. The study covered the period, 2013 to 2018 using a sample of nine firms. Panel data was used which consists of 54 firm year observations analyzed using multiple regression model. The impact of business size, liquidity, board size, and audit committee size on firm performance as measured by Returns on Assets (ROA) was examined using the Ordinary Least Square model. Board size has a coefficient of 0.011, which is significant at 5% (p=0.031), liquidity is likewise significant at 1% (p=0.000) with a value of 0.15, and firm size has a coefficient of -0.08, which is significant at 1% (p=0.008), according to the analysis's findings. Nevertheless, the audit committee size coefficient (p=0.131) is completely non-significant. These findings indicate that while firm size, liquidity, and board size all affect a company's performance, liquidity has the greatest impact on the performance of consumer products companies that are traded on the Nigerian exchange group.

Rafiuddin and Rafiqul (2020) examined firm level characteristics and firm performance (or profitability) of service sector firms quoted in the Australian Stock Exchange (ASX). The impact of leverage and capital structure was investigated using a panel regression technique on data gathered over an eleven-year span (2009–2019). The operating margin ratio, return on equity, return on assets, and return on capital employed were the four

metrics used to assess the performance of the company. Data study showed a strong correlation between leverage levels and return on equity.

Chukwunwike, Ofoegbu, Okoroiwu, and Kemdi (2018) analyzed the influence of cash flow statements and declared a profit (performance) while utilizing the equation they had developed to forecast future performance. In a quasi-experimental research design, a panel of data from the annual reports of banks listed on the Nigerian Stock Exchange over a ten-year period (2007-2016) was employed. Data from the study were analyzed using panel multiple regression techniques using STATA econometrics software. The findings indicated that cash flows (CF) had a positive effect on reported profits (RP), although a minor one. Furthermore, the associated cash flow variables (CFFOA, CFFIA, and CFFA) had a positive influence, albeit a slight one in comparison to the rating.

Ofumba and Onuegbu (2018) studied the effect of capital structure on firms' performance on Nigerian exchange group with special focus on only four firms quoted in consumer goods sector of the economy. Multiple regression of Ordinary Least Square (OLS) analytical technique was used. The study's findings showed that capital structure had a negative and negligible effect on the corporate performance of Nigerian consumer products companies. The study came to the conclusion that company performance is not significantly influenced by capital structure. However, other company variables, such firm size, were not included in the study. In addition, just four of the twenty-one mentioned consumer products companies were examined, with the remaining seventeen companies being dropped, making the sample extremely small. The outcome would have been different if additional firms and capital structure proxies had been employed.

Matar and Eneizan (2018) conducted a study to investigate factors that affect corporate financial performance of 23 manufacturing firms quoted in Jordan. The study employed secondary data gathered from the Amman Stock Exchange (ASE) and the companies' yearly financial statements, and it spanned an 11-year period from 2005 to 2015. The study's findings demonstrated that while leverage and firm size have a negative impact on ROA, liquidity has a positive effect.

Odusanya, Yinusa and Ilo (2018) examined the determinants of firm profitability on Nigerian exchange group. The study investigated the determinants of profitability of 114 firms quoted on the Nigerian Stock Exchange (NSE) from 1998 to 2012, using the system Generalized Method of Moments (GMM). According to the findings, lagged profitability significantly boosts contemporaneous business profitability. However, financial risk, interest rates, inflation, and short-term leverage can significantly reduce a company's profitability. In order to minimize production costs, increase productivity, and boost profitability, the study suggested that the cost of borrowing for the real sector of the economy be lowered. At the same time, the government should implement the necessary macroeconomic policies to reduce inflationary pressures in the economy.

Adebayo and Onyeiwu (2018) examined the determinants of profitability of manufacturing organizations on Nigerian exchange group. The findings demonstrated that lagged profitability significantly increases contemporaneous business profitability. However, the profitability of the company is significantly impacted negatively by short-term leverage, inflation, interest rates, and financial risk. According to the study, the government should implement the required macroeconomic policies to reduce inflationary pressure in the economy while lowering the cost of borrowing for the real sector of the economy in order to minimize production costs and increase productivity and profitability. Opportunities in

Nigeria's industrial sector, where the average return on equity can reach 27% with little volatility, are highlighted by this study. Because the agro-allied industries have promise for Nigeria's industrialization efforts, job creation, poverty reduction, and health promotion, the government of Nigeria must continue to make doing business easier and provide better support for these businesses.

Among these earlier studies, a number of scholars looked at the factors that influence a company's profitability. They did, however, produce conflicting findings; some revealed a negative association between the variables, others a positive one, some mixed results, and still others revealed no connection at all between capital structure and profitability. Nevertheless, a thorough critical analysis of these studies showed that, despite the industrial sector's critical role in the economy, the majority of national and international studies focused on other economic sectors, including manufacturing, consumer goods, banks, oil and gas, and others. Most significantly, the industrial sector is the second largest sector in Nigeria's economy, after the financial services industry. It has been acknowledged that the industrial sector plays a significant role in the growth and advancement of the Nigerian economy. In light of the aforementioned, this study believes it is essential to close the gap by assessing the factors that influence the profitability of industrial goods businesses that are traded on the Nigerian exchange group.

3.0 METHODOLOGY

In order to measure and evaluate the statistical link between the factors and the profitability of industrial goods companies listed on the Nigerian Exchange Group, a correlational study methodology was used. All industrial products companies listed on the Nigeria Exchange Group make up the study's population. Since it uses financial statements from various businesses in the same industry over a period of eight (8) years (2017–2024), a cross-sectional data collection method was used to gather information. The number of industrial products companies available on the Nigerian exchange group was used to estimate the population used for this study. The entire population was chosen as the sample size for this investigation. However, several businesses were excluded from the study by using census sampling because of the lack of complete data. Fifteen (15) companies were selected for the study, while other companies were not included since there were not enough financial data accessible for them. To obtain enough data for the Multiple Regression Analysis, the study used panel data, which consists of cross sections, and the secondary technique of data collecting. From the websites of each company, including the Nigerian Exchange Group Fact Book 2024, the secondary data was developed and sourced from the annual financial statements of the sampled companies for the eight-year period from 2017 to 2024. Descriptive and inferential statistics were used to study and interpret the acquired data. The mean and standard deviation were descriptive statistics. The panel data regression technique is used in the study to see whether there is an underlying link between the variables. The most common data analysis tool is multiple regression analysis, which is performed with STATA statistical software. Stepwise regression is used for variable selection using SPSS software. Several robustness tests, including multicollinearity, normalcy, and heteroscedasticity, are used to further examine the data. These are done to make sure the data is normally distributed, the error term variability is constant, and the independent variables are not affected by multicollinearity. Enhancing the validity of all the statistical conclusions drawn is the main goal of these analyses. Hausman specification tests are

used to determine if the study should utilize a fixed effect or a random effect because the data contains panel features.

4.0 RESULTS AND DISCUSSION

4.1 Data Presentation

This section contains analysis of descriptive statistics, correlation matrix, robustness tests, fixed and random effect tests and regression results.

4.2 Data Interpretation

This sub-section interprets the results of data analysis.

4.2.1 Descriptive Statistics

Table 1 presents the different descriptive statistics. Understanding the nature of the data being used is the goal. The study's variables' mean, standard deviation, skewness, kurtosis, and minimum and maximum values are all included in the descriptive statistics.

Table 1: Descriptive Statistics of the Variables

Variable	Min	Max	Mean	Std Dev.	Skewness	Kurtosis	N
ROA	-0.27	0.79	0.97	0.16	1.75	9.78	105
SIZ	13.26	20.84	15.74	1.97	0.90	2.97	105
LEV	0.04	0.93	0.45	0.18	0.35	3.08	105
CSF	-0.30	0.49	0.11	0.13	0.43	5.38	105
LIQ	0.33	0.98	0.68	0.15	-0.13	2.73	105

Source: STATA Output, 2025.

The dependent and independent variables' descriptive statistics are shown in Table 1. According to the table, the firms' minimal ROA value is roughly -0.27. This is explained by the losses incurred by a few of the companies over specific years. The highest rate of return obtained from assets used by the mentioned industrial products companies on the Nigerian exchange group is 0.79, which is the maximum value of ROA. The above table's mean value of roughly 7% indicates that the examined firms typically realize about 0.069 from the use of their assets. With a standard deviation of almost 0.16, this indicates a significant rate of variability in the firms' returns on assets (ROA).

SIZ has a minimum value of roughly 13.26, which describes the smallest size of the firms under investigation, and a maximum value of roughly 20.84, which shows the highest size that the firms under investigation might have. SIZ shows a relatively small degree of variation in the size of the enterprises under examination over the period, with a mean of roughly 15.74 and a standard deviation of 1.97. LEV, which shows the percentage of debt owed by the companies in relation to their total assets, has a minimum value of roughly 0.04 and a maximum value of roughly 0.93. With an average of roughly 0.45 (45%) and a standard deviation of roughly 0.15 (0.15%), this ratio indicates a high degree of variability in the firms' debt ratio. CSF has a minimum value of -0.30 and a high value of 0.49. Instances of negative cash flows are represented by the firms' minimum cash flow value of -0.30. The highest percentage of cash flows in relation to total assets held by the companies under investigation is represented by the maximum figure of 0.49. The firms' cash flows as a percentage of their total assets are, on average, 0.11. This indicates a relatively low degree of unpredictability in the firms' cash flows, with a standard deviation of 0.13. LIQ's lowest value, approximately 0.33, indicates the ratio of the firms' current assets to current liabilities; its maximum value, almost 0.98, with an average of roughly 0.68, represents the highest ratio. With a standard deviation of roughly 0.15, it indicates

that the firms' liquidity position varied little during the course of the study. Although some kurtosis values tend to be high, this will not significantly affect the conclusions drawn. The skewness values indicate that the explained variable and some of the explanatory variables are both positively and negatively skewed, indicating that the data is normally distributed.

4.2.2 Normality Test

Regression analysis makes the assumption that data must be normal in order for statistical analysis to be trusted. Therefore, the Shapiro-Wilk normality test was used to perform the normalcy test. Given that three of the variables have negligible values, the findings demonstrate that the data for the majority of the variables is regularly distributed.

4.2.3 Correlation Matrix

It is necessary to know the correlation between the dependent variable and each of the independent variables as well as among the independent variables so as to ascertain the direction of movement. Therefore, the correlation matrix of the variable is presented in table 3.

Table 2: Correlation Analysis

	ROA	LEV	SIZ	LIQ	CSF
ROA	1.000				
SIZ	0.565**	1.000			
LEV	-0.239**	0.524	1.000		
CSF	0.550**	-0.449**	-0.268**	1.000	
LIQ	-0.520**	0.345**	-0.005	0.028	1.000

Source: Stata Output, 2025

Both the correlation between the independent variables and the dependent variable, as well as the correlation between the independent variables themselves, are shown in Table 2. The correlation matrix provides an explanation for the negative relationship between ROA and LEV. This implies that the two variables move in opposition to one another; that is, when one increases, the other decreases, and vice versa. However, there is a positive correlation between SIZ and ROA as well as between CSF and ROA. This indicates that the matched variables follow the same path. In a similar vein, the table shows a negative correlation between LEV and SIZ, LIQ and BS, and LEV and SIZ, and a positive correlation between LEV and LIQ, CSF, and SIZ. Regression analysis was used for additional analysis because correlation does not quantify causality.

4.2.4 Test for Multicollinearity

Multicollinearity is examined using tolerance and variance inflation factor (VIF) values. The test of multicollinearity is presented in Table 3.

Table 3: Tolerance and VIF Values

Variable	VIF	I/VIF
SIZ	2.05	0.4880
LEV	1.13	0.8847
CSF	1.17	0.8515
LIQ	1.30	0.7710

Source: STATA Output, 2025

According to Table 3, there is no multicollinearity issue with the variables employed. Their tolerance levels are higher than 0.10 (the general rule) and their VIF values are fewer

than 10, which makes this clear (Gujirati, 2005). Thus, this is consistent with the classical regression model's premise that the regressors in the model shouldn't be multicollinear.

4.2.5 Test for Heteroscedasticity

To determine whether the disturbances seen in the population regression function are homoscedastic (same variance), the heteroscedatiscity test is used. To check for heteroscedasticity, the Breusch-Pagan test is used. At 1% significance, the result shown in Appendix (C) yields a chi square value of 44.22 with a probability of 0.0000. This suggests that heteroscedasticity is present. A robustness test is conducted to remedy this. The test's outcome, which is presented in appendix (C), shows that the model is reliable for making statistical deductions.

4.2.6 Hausman Test

Both fixed effect and random effect regressions were performed, taking into account the study's panel features. Appendix (B) presents the findings from these. The Hausman specification test was then performed to provide guidance on which option (fixed or random) to select. A chi-square of 3.11, which is not significant, is revealed by the result. The random effect model was chosen as a result. The results of the random effect robust test, which are shown in appendix (B), indicate that the random effect is dependable. Additionally, to determine whether to utilize pooled OLS or random effects, the Breusch and Pagan Lagrangian Multiplier Test for Random Effects was performed. According to appendix B, the outcome yielded a chi-square of 21.54, which is significant at 1%. The outcome of the random effect test is used in light of this evidence.

4.2.7 Regression Results (Random Effect)

The result of the random effect is presented in table 5 below (see details in appendix C).

Table 4: Summary of Regression Result

VAR	COEFF	Z	P>(Z)
SIZ	0.0138635	4.08	0.000
LEV	-0.1363726	-2.66	0.008
CSF	0.2492138	3.05	0.002
LIQ	-0.3488432	-3.38	0.001
C	0.3698303	3.92	0.000
R-Square	0.5813		
Wald Chi^2	79.38		
Prob	0.0000		

Source: STATA Output, 2025

The percentage or proportion of the total variance in the dependent variable (ROA) that is jointly explained by the independent variables is roughly 58%, according to the regression result shown in Table 5's R2, or multiple coefficient of determination. This indicates that changes in LEV, SIZ, LIQ, and CSF account for 58% of the overall variance in ROA of quoted industrial products businesses on the Nigerian exchange group, with other factors not included in the model accounting for the other 42%. These variables may be macroeconomic (such as inflation rate and governmental policies), non-financial (such as managerial skill), or financial (such as stock turnover rate and size). Since the Wald Chi2 has a high value of 79.38, which is significant at 1%, the cumulative outcome is in control. This indicates that the variables chosen can fit the model well. It also

indicates that the key factors influencing the profitability of industrial goods companies listed on the Nigerian exchange group are the variables that were chosen.

4.3 Discussion of the Results

The linear relationships among the independent variables with the dependent variable are discussed hereunder.

4.3.1 Firm Size and Profitability

According to the regression result, SIZ has a p-value of 0.000, a Z value of 4.08, and a positive coefficient of 0.0138635. Therefore, the profitability of the enterprises under study rises in tandem with their firm size. This is to the degree that a one-point rise in the company's assets will result in a 0.14-point improvement in its profitability. Thus, SIZ significantly influences the profitability of quoted industrial products firms on the Nigerian exchange group, as indicated by the p-value of 0.000, which is significant at 1%. This result is consistent with the study's a priori hypothesis, which holds that business size and profitability are positively correlated. As a result, the fourth hypothesis—that business size has no discernible impact on the profitability of industrial goods companies traded on the Nigerian exchange group—is disproved. Therefore, it can be argued that business size has a considerable impact on the profitability of quoted industrial goods firms on the Nigerian exchange group, which is relevant to the study's fourth goal. The results are in line with those of Asgari, Pour, Zadeh, and Pahlavan (2015) and Baloch, Ihsan, Kakakhel, and Sethi (2015). However, it runs counter to Kumar and Kaur's (2016) conclusions. The results contradict the structural inertia theory's postulate, which holds that size and profitability are negatively correlated.

4.3.2 Leverage and Profitability

Table 4 shows that LEV's beta value is -0.1363726. This indicates that the profitability of industrial products companies mentioned on the Nigerian Exchange Group is negatively correlated with LEV. It also suggests that the profitability of industrial goods companies listed on the Nigerian Exchange Group will decrease by roughly 0.14 for every point increase in leverage. As a result, profitability and leverage move against each other. This analysis backs up the claim that using debt lowers a company's profitability since it incurs interest costs. This contradicts the study's a priori hypothesis, which holds that leverage and business profitability are positively correlated. With a probability of 0.008 and a z-value of -2.66, LEV is significant at 1%. This suggests that there is a negative and substantial association between leverage and profitability. The study's first hypothesis, according to which leverage has no discernible impact on the profitability of quoted industrial goods companies on the Nigerian exchange group, is thus rejected. Regarding the study's primary goal, it can be said that leverage has a major impact on the profitability of industrial goods companies that are traded on the Nigerian exchange group. Although they found a positive correlation, this conclusion supports the findings of Mohammad (2018), Aqsa and Ghulam (2019), and Enekwe, Agu, and Eziedo (2018) that leverage has a major impact on profitability. Leverage and profitability have a negative association, which can be explained by the drawbacks of employing indebtedness, such as the imposition of stringent debt covenants that limit the firm's flexibility and the payment of costs in the form of interest payments, which lower profitability.

4.3.3 Cash Flows and Profitability

According to quantitative analysis, CSF has a p-value of 0.002, a Z value of 3.05, and a positive coefficient of 0.2492138. This suggests that the analyzed enterprises' profitability

rises in tandem with their cash flows. This is to the degree that a one-point rise in the company's assets will result in a 0.25-point improvement in its profitability. The profitability of quoted industrial products firms on the Nigerian exchange group is highly influenced by the CFO, as indicated by the p-value of 0.002, which is significant at 1%. This result defies the study's a priori prediction, which held that cash flows and business profitability would be negatively correlated. The fifth hypothesis, according to which cash flows have no discernible impact on the profitability of quoted industrial goods companies on the Nigerian exchange group, is rejected by the study based on the information presented above. Therefore, with regard to the fifth study goal, it can be said that cash flows have a major impact on the profitability of industrial goods companies that are mentioned on the Nigerian exchange group. This result is consistent with Okpe, Duru, and Alor's (2015) findings. The results, however, run counter to the agency theory's claim that financial flows raise agency costs and, as a result, lower profitability.

4.3.4 Liquidity and Profitability

According to Table 4, the profitability of quoted industrial goods companies on the Nigerian exchange group is negatively correlated with liquidity, as indicated by its coefficient of -0.3488432. This also implies that a 0.35-point decline in profitability will result from a one-point rise in liquidity. Further supporting the claim that liquidity funds are an expense to the company is the fact that they are unused funds that could have been used for profitable ventures that would yield favorable returns. With a p-value of 0.001 and a z-value of -3.38, LIQ is significant at 1%. It follows that the profitability of quoted industrial goods companies on the Nigerian exchange group is negatively correlated with LIQ. The study's a priori expectations were met by this negative and significant link, which also explains the development of innovative strategies like just-in-time to lower the amount of liquid assets maintained. As a result, the study disproves its second hypothesis, according to which the profitability of quoted industrial goods companies on the Nigerian exchange group is not substantially impacted by liquidity. Therefore, in relation to the study's second goal, it can be said that liquidity has a major impact on the profitability of industrial goods companies that are quoted on the Nigerian exchange group. The study's findings support those of Kidtmat and Rehman (2018), Saleem and Rehman (2021), and Ibe (2018), although they run counter to Marzova's (2015) findings. The agency theory is supported by this finding. According to the idea, there is a negative correlation between firm profitability and liquidity because liquid funds raise agency costs, which lower firm profitability. The results, however, contradict the resource-based theory's contention that liquidity and business profitability are positively correlated.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The following conclusions were drawn in light of the study's findings: The results showed that the profitability of quoted industrial goods companies on the Nigerian exchange group is significantly and negatively correlated with leverage. Thus, it may be said that if quoted industrial products companies on the Nigerian exchange group reduce their degree of leverage, their profitability will rise. Profitability was found to be positively and significantly influenced by firm size. This is because business size has the power to predict profitability, and the two factors have a positive and significant link. Therefore, it may be said that larger industrial goods companies tend to generate more profits than smaller manufacturing organizations. The study discovered a negative correlation between

industrial products companies mentioned on the Nigerian exchange group's profitability and liquidity. The study comes to the conclusion that industrial goods companies listed on the Nigerian Exchange Group are less profitable when there is a high volume of liquidity. The study also comes to the conclusion that industrial goods companies on the Nigerian exchange group can become more profitable by increasing their level of cash flows. The solvency, adaptability, and financial stability of industrial products companies listed on the Nigerian exchange group are determined by their cash flows.

5.2 Recommendations

Based on the findings of the study, the following recommendations are made:

i. To lower the additional expense associated with retaining superfluous liquid assets, industrial products companies listed on the Nigerian Exchange Group should always maintain a minimum level of liquidity. This can be accomplished by highlighting the benefits of just-in-time, a theory that supports keeping as little inventory as possible. Additionally, excess funds should never be left idle but rather used for short-term investments.

ii. ii. Before deciding on loan capital, industrial products companies listed on the Nigerian Exchange Group should consider the possible financial advantages of debt capital against its cost. When it is clear that taking on more debt will lower profitability, other funding options, such stock capital, ought to be considered.

iii. iii. To optimize profitability, industrial goods companies listed on the Nigerian exchange group must create an appropriate cash flow mix and implement it. Industrial goods companies on the Nigerian Exchange Group must come up with a number of strategies for choosing the best cash flow components to employ in their operations in order to increase their profitability. This is necessary for cash flows to be well-structured and efficiently utilized.

iv. Because larger industrial products companies tend to generate higher levels of profit, the government should make significant investments in their assets. These businesses may readily investigate the benefits of economies of scale in order to reduce expenses and eventually turn a profit.

5.3 Contributions to Knowledge

Variables were chosen suddenly in earlier research that looked at profitability drivers. Such variables have a propensity to not be the most important ones. This study adopted a new approach by filtering the variables that have a significant impact on the profitability of industrial goods companies traded on the Nigerian exchange group using stepwise regression. This study's primary contribution is the identification of important profitability drivers and how they relate to profitability utilizing available data. Because of this quality, the study's conclusions can be trusted for formulating policy and doing additional research. The suggestions made can also be implemented, and doing so will have a big influence on the Nigerian exchange group's efforts to revive the industrial products industry.

5.4 Suggested Areas for Further Study

There is a need for more research even if the study's conclusions offer a solid foundation for wise policymaking regarding the growth of the industrial goods sector on the Nigerian exchange group. As a result, the following topics are recommended for additional study. More external factors, such as industry type, external audit attributes, institutional ownership, competition, government policy, and customer desire, should be included in

a study on the factors that determine profitability. This will serve as the foundation for determining any more important elements that were overlooked in this investigation. Similar studies on the factors that influence profitability ought to be conducted in other economic sectors. The factors of profitability across the major economic sectors should be determined through sectoral comparisons, as many variables are industry specific.

REFERENCES

Abdullah, H. (2020). Capital structure, corporate governance and firm performance under IFRS implementation in Germany. PhD Thesis, Near East University, Cyprus.

Abdulrahman, B. S. & Musa, U. M. (2020). Determinants of financial performance of quoted consumer goods firms on Nigerian exchange group. AE-*FUNAI Journal of Accounting Business and Finance*, 6(1), 255-265

Abdur, R. (2015). Capital structure and firm performance of quoted non-financial companies in Bangladesh. *The International Journal of Applied Economics and Finance, 9*(1), 25-32.

Abiodun, B. Y. (2012). The effects of optimal capital structure on firms' performance on Nigerian exchange group. *Journal of Emerging Trends in Economics and Management Sciences, 3*(2), 131-133.

Abiodun, B. Y. (2014). Accounting analyses of capital structure and firms' performance: Stylized facts from Nigeria. *Journal of Emerging Trends in Economics and Management Sciences, 5*(7), 15-20.

Abubakar, A., & Garba, A. (2019). Financial leverage and financial performance of quoted services firms on Nigerian exchange group*. Nigerian Journal of Management Technology & Development*, 4(2), 8–13.

Abubakar, Y. & Olowe, G. J. (2019). Capital structure and financial performance of selected quoted firms on Nigerian exchange group. *International Journal of Research and Scientific Innovation*, *6*(2), 75-81.

Adebayo, S. I. & Onyeiwu, C. (2018). The determinants of profitability of manufacturing firms on Nigerian exchange group. *International Journal of Economics, Commerce and Management*, 5(4), 479-493.

Adedeji, A. (1998). Does the pecking order hypothesis explain the dividend payout ratios of firms in the UK? *Journal of Business Finance and Accounting, 25*(9), 1127-1155.

Adedeji, H. & Oboh, I. (2017). Effects of tax revenue on economic growth of Nigeria, *International Journal of Business and Social Science*, 5(2), 302-309.

Adegbie, E. & Fakile, A. (2018). The relationship between company income tax and Nigeria's economic development for the period 1981 – 2007. *Global Journal of Management and Business Research*, 11(96), 1-5.

Adewale, A.K., Muhammad, M.I., & Hanga, B.Y. (2019). Effect of Firm Attributes on Financial Reporting Quality: Evidence from Quoted Consumer Goods Companies on Nigerian exchange group. *Indian Journal of Commerce and Management Studies*, 10(1), 55-64.

Agbaeze, E.K. & Ogosi, C.D. (2018). Corporate Governance and Profitability of Nigerian Banks. *European Journal of Scientific Research*, 148(3), 358-367.

Akaji, O., Nwadialor E.O. & Agubata, N. (2021). Effect of debt-equity financing on firms performance on Nigerian exchange group. *Journal of Accounting and Financial Management*, 7(3), 73-81.

Akhgar, M.O., & Karami, A. (2014). Firm characteristics and financial reporting quality of quoted quoted companies in Tehran Stock Exchange. *Accounting Review,* 1(4), 1-22.

Al-Dmour, A.H., Abbod, M., & Al Qadi, N.S. (2018). The impact of the quality of financial reporting on nonfinancial business performance and the role of orgnaisation demographic attributes (type, size, and experience). *Academy of Accounting and Financial Studies*, 22(1), 1-18.

Akinloye, I. R (2013). Effect of capital structure on firm's performance: The Nigeria experience. *European Journal of Economics, Finance and Administrative Sciences,* 10(5), 233-243.

Akinyomi, O. J. (2013). Effect of capital structure on firm performance: Evidence from Nigerian manufacturing industry. *International Journal of Innovative Research and Studies, 2*(9), 468-480.

Akram, B. (2017). Dividend payment and its impact on the value of firms quoted on Istanbul stock exchange: A residual income approach. *International Journal of Economics and Financial Issues*, 2(2), 370-376.

Aliu, T. L. (2010). The impact of Nigerian business environment on the survival of small-scale: ceramic industries: Case Study, South-Western Nigeria. *Journal of Asian and African Studies, 43*(6), 663-679.

Amahalu, N.N., & Obi, J.C. (2020a). Effect of financial statement quality on investment decisions of quoted deposit money banks on Nigerian exchange group. *International Journal of Management Studies and Social Science Research*, 2(4), 99-109.

Amahalu, N.N., & Obi, J.C. (2020b). Effect of audit quality on financial performance of quoted conglomerates on Nigerian exchange group. *International Journal of Management Studies and Social Science Research,* 2(4), 87-98.

Amahalu, N.N., Okoye,E.I, Nweze, C.C & Okika, E.O. (2017). Effect of capital adequacy on financial performance of quoted deposit money banks on Nigerian exchange group. Proceedings of the 2017 Faculty of Management Sciences, International Conference on African Entrepreneurship and innovation for sustainable development, Nnamdi Azikiwe University, Awka, 26th-29th July, 2017, 841-862.

Anarfor, E. B. (2015). Capital structure and bank performance: Evidence from Sub-Sahara Africa. *European Journal of Accounting, Auditing and Finance Research*, *3*(3), 1-20.

Andow, H., Ango, Y.I. & Abdul, I.M. (2017). Determinants of Profitability in Quoted Consumer Good Firms on Nigerian exchange group. *Funai Journal of Accounting***,** 1(1), 272-278.

Appah, E., Okoroafor, E. O., & Bariweni, B. (2013). Capital structure and operating performance of quoted firms in the Nigerian Stock Exchange. *Research Journal of Finance and Accounting, 4*(5), 222-247.

Aransiola, S. Y., & Aransiola, O. (2015). Capital structure and profitability: A critical analysis of quoted manufacturing companies on Nigerian exchange group. *American Journal of Economics, Finance and Management, 1*(5), 369-376.

Awodiran, M.A., & Ogundele, A.T. (2022). Determinants of financial reporting quality: evidence from quoted industrial goods firms on Nigerian exchange group. *Academy of Accounting and Financial Studies Journal,* 26(5), 1-8.

Ayako, A., Githui, T. & Kungu, G. (2015). Determinants of the financial performance of firms quoted at the Nairobi Securities Exchange. *Perspectives of Innovations, Economics and Business*, 15(2), 84-94.

Babalola, Y.A. (2013). The effect of firm size on firms profitability on Nigerian exchange group. *Journal of Economics and Sustainable Development*, 4(5), 90-92.

Badu, E. A. & Appiah, K. O. (2017). The impact of corporate board size on firm performance: Evidence from Ghana and Nigeria. *Research in Business and Management,* 4(2), 102-102

Batchimeg, B. (2017). Financial performance determinants of organizations: the case of Mongolian companies. *Journal of Competitiveness*, 9(3), 22-33.

Bongoye, G. M. (2016). Effect of firm specific factors on financial performance of non-financial firms quoted at Nairobi Securities Exchange. *Imperial Journal of Interdisciplinary Research, 2*(12), 253-265.

Borg, W. R., Gall, J. P., & Gall, M. D. (2007). *Educational research: An introduction* (8th ed.). Utah State University, Utah: Longman.

Bradley, M., Jarrell, G. A., & Kim, E. H. (1984). On the existence of an optimal capital structure: Theory and evidence. *Journal of Finance, 39*(3), 857-878.

Brander, J., & Lewis, T. R. (1986). Oligopoly and financial structure: The limited liability effect. *The American Economic Review, 76*(5), 956-970.

Bryman, A., & Bell, E. (2007). *Business research methods*. USA: Oxford University Press.

Burja, V. (2011). Assessing performance of sustainable spatial development: Romanian case study. *Annales Universitatis Apulensis Series Oeconomica, 13*(2), 225-230.

Cassar, G., & Holmes, S. (2003). Capital structure and financing of SMEs: Australian evidence. *Journal of Accounting and Finance, 43*(2), 123-147.

Castanias, R. (1983). Bankruptcy Risk and Optimal Capital Structure. *Journal of Finance, 38*(5), 1617-1635.

Chandy, S. (2012). *Management Accounting.* New Delhi-India: Rajenda Ravindra printers.

Charles, D., Ahmed. M.N. & Joshua, O. (2018). Effect of Firm Characteristics on Profitability of Quoted Consumer Goods Companies on Nigerian exchange group. *Journal of Accounting, Finance and Auditing Studies*, 4(2), 14-31.

Chechet, I. L., & Olayiwola, A. B. (2014). Capital structure and profitability of Nigerian quoted firms: The agency cost theory perspective. *American Journal of Social Science, 3*(1), 139-158.

Chowdhury, A., & Chowdhury, S. P. (2010). Impact of capital structure on firm's value: Evidence from Bangladesh. *Business and Economic Horizons, 3*(3), 111–122.

Christi, K. A., Ali, K., & Sangmi, M. (2013). Impact of capital structure on profitability of quoted companies (evidence from India). *The USV Annuals of Economics and Public Administration, 13*(1), 183-191.

Chuke, E. N., Idam, O. I., Bamidele, O. A., & Sergius, N. U. (2016). The impact of debt structure on firm performance: Empirical evidence from Nigerian quoted firms. *Asian Economic and Financial Review, 6*(11), 647-660.

Chukwunwike, O. D., Ofoegbu, G. N., Okoroiwu, K. L., & Okafor, R. G. (2018). The potency of cash flow in predicting corporate performance. Account and Financial Management Journal, 3(6), 1591-1601.

Cyril, U.M. & Ifeyinwa, O.N. (2013). Firms specific factors that determine financial performance on Nigerian exchange groupn banking sector. *Journal of Theoretical & Applied Statistics*, 3(1), 17-21.

Dadson, A., & Jamil, B. (2012). Capital structure and performance of quoted banks in Ghana. *Global Journal of Human Social Science*, *12*(5), 57-62.

Danson, K. David, K. & Riro, K. (2017). Cash management practices on financial performance of small and medium enterprises in Nyeri town, Kenya. *Saudi Journal of Business and Management Studies*, 2(18), 111 – 152.

Dare, F. O., & Sola, O. (2010). Capital structure and corporate performance on Nigerian exchange group petroleum industry: Panel data analysis. *Journal of Mathematics and Statistics, 6*(2), 168-173.

Darush, Y., & Peter, O. (2015). Debt financing and firm performance: An empirical study based on Swedish data. *Journal of Risk Finance, 16*(1), 102-118.

Diriyai, A.S., & Korolo, E.O., (2023). Firm characteristics structure and financial reporting quality of quoted industrial goods companies on Nigerian exchange group. *Fuoye Journal of Management, Innovation and Entrepreneurship*, 2(1), 1-12

Effiong, S.T. & Ukpong, E.G. (2024). Firm characteristics and financial leverage of quoted industrial goods firms on Nigerian exchange group. *Iconic Research and Engineering Journals,* 7(7), 295-311.

Egbunike, C.F. & Okerekeoti, C.U. (2018). Macroeconomic factors firm characteristics and financial performance: A study of selected quoted manufacturing firms on Nigerian exchange group. *Asian Journal of Accounting,* 3(2), 142-168.

Egolum, P.U., Amahalu, N.N., & Obi, J.C. (2019). Effect of firm characteristics on environmental performance of quoted industrial goods firms on Nigerian exchange group. *International Journal of Research in Business, Economics and Management*, 3(6), 1-13.

Ezechukwu, B.O., & Amahalu, N.N. (2017). Effect of firm characteristics on financial performance of quoted deposit money banks on Nigerian exchange group. *Contemporary Issues in Business Management: A Multidisciplinary Approach, Book of Readings*, 1(1), 387-409.

Ezejiofor, R.A., Nwakoby, N.P. & Okoye, J.A. (2019). Financial leverage and shareholders' wealth: an empirical analysis of foods and beverages firms on Nigerian exchange group. *International Journal of Application or Innovation in Engineering & Management* (IJAIEM), 8(12), 329-371.

Innocent, E. C., Ikechukwu, A. C., & Nnagbogu, E. K. (2014). The effect of financial leverage on financial performance: Evidence of quoted pharmaceutical companies on Nigerian exchange group. *IOSR Journal of Economics and Finance, 5*(3), 17-25.

Kakanda, M. M., Bello, A. B. & Abba, M. (2016). Effect of capital structure on performance of quoted consumer goods companies. *AE-FUNAI Journal of Accounting Business and Finance* (FJABAF), 7(8), 211-219.

Khanh, H.T.M., & Khuong, N. (2018). Audit quality, firm characteristics and real earnings management: The case quoted Vietnamese companies. *International Journal of Economics and Financial Issues*, 8(4), 243-249.

Kirubel, A. (2016). Determinants of financial reporting quality: Evidence from large manufacturing share companies of Addis Ababa. *European Journal of Business and Strategic Management,* 2(2), 52-70.

Kumar, P.A., & Nanda, S. (2020). Determinants of capital structure; a sector-level analysis for Indian manufacturing firms. *International Journal of Productivity and Performance Management*, 69, 1033–60. 16.

Legon Matar, A. & Eneizan, B. (2018). Determinants of Financial Performance in the Industrial Firms: Evidence from Jordan. *Asian Journal of Agricultural Extension, Economics & Sociology,* 22(1), 1-10.

Mauwa, J. (2016). Determinants of financial performance of firms quoted on the Rwanda Stock Exchange. An unpublished thesis submitted in partial fulfillment for the Degree of Doctor of Philosophy in Business Administration (Finance) in the Jomo Kenyatta University of Agriculture and Technology.

Mbonu, C.M., & Amahalu, N.N. (2021a). Effect of firm characteristics on capital structure of insurance companies quoted on Nigeria stock exchange. *International Journal of Management Studies and Social Science Research*, 3(5), 217-228 17.

Mbonu, C.M., & Amahalu, N.N. (2021b). Effect of board diversity on borrowing cost of quoted conglomerates on Nigerian exchange group. *American Research Journal of Humanities Social Science (ARJHSS),* 4(10), 62-73.

Mubeen, M., & Kalsoom, A. (2014). Impact of capital structure on firms financial performance and shareholders wealth: Textile sector of Pakistan. International *Journal of Learning & Development*, *4*(2), 27-33.

Mule, R.K., Mukras, M.S. & Nzioka, O.M. (2015). Corporate size, profitability and market value: An econometric panel analysis of quoted firms in Kenya. *European Scientific Journal,* 11(13), 376-396.

Nwanyanwu, L. A. (2015). Cash flow and organizational performance on Nigerian exchange group: hospitality and print media industries perspectives. *European Journal of Business, Economics, and Accountancy*, 3(3), 66-72.

Obigbemi, I. F., Omolehinwa, E. O., Mukoro, D. O., & Obamiro, J. K. (2016). Earnings management and board structure: Evidence from Nigeria. *SAGE Open, 6*(3), 1-15.

Odalo, S.K. (2016). Liquidity and financial performance in Agricultural Firms quoted in the Nairobi Securities Exchange in Kenya. *International Journal of Business and Social Sciences*, 7(7), 57-65.

Odusanya, I. A., Yinusa, O. G. & Ilo, B. M. (2018). Determinants of Firm Profitability on Nigerian exchange group: Evidence from Dynamic Panel Models. *Journal Journal of Economics and Business*, 6(1), 43-58.

Ofoegbn, G. N., & Okoro, E. C. (2020). Effect of cash flow on performance of quoted deposit money banks on Nigerian exchange group. Unizik Journal of Business, 3(2), 34-45.

Ofulue, I., Ezeagba, C. E., Amahalu, N. N. & Obi, J. C. (2021). Financial leverage and financial performance of quoted industrial goods firms on Nigerian exchange group. *International Journal of Management Studies and Social Science Research*, 2(4), 172-181.

Ofumba, U. & Onuegbu, O (2018). The impact of capital structure on corporate performance on Nigerian exchange group: a quantitative study of consumer goods sector. *Current Investigations in Agriculture and Current Research*, 5(4), 697-705.

Ogbeide, S., & Akanji, B. (2017). A study on the relationship between cash-flow and financial performance of insurance companies: evidence from a developing economy.

Ogbodo O.C., Amahalu, N.N., & Abiahu, M.C. (2017). Effect of intellectual capital on financial performance of quoted deposit money banks on Nigerian exchange group. *Journal of Global Accounting*, 5(1), 114-125.

Oguna A. A. (2014). *Examining the effect of capital structure on financial performance: A study of firms quoted under manufacturing, construction and allied sector at the Nairobi Securities Exchange* (Master's thesis, University of Nairobi, North Kenya, Nairobi). Retrieved from http://erepository.uonbi.ac.ke/handle/11295/78432.

Okegbe, T.O., Eneh, O.M., & Amahalu, N.N. (2019). Effect of firm characteristics on capital structure of deposit money banks quoted on Nigeria stock. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 9(2), 198–210.

Oko, S.U. & Elemi, N. E. (2023). The effect of financial leverage on the financial performance of quoted industrial goods firms on Nigerian exchange group. *Global Scientific Journals*, 11(7), 1309-1322.

Okoye, E.I., Amahalu, N.N., Nweze, C.L., & Obi J.C. (2016). Effect of financial leverage on dividend policy of quoted conglomerates. Managing diversification for sustainable development in sub-saharan Africa, Faculty of Management Sciences, 2016 International Conference, 8-10, November, 2016.

Omabu, S.E., Okoye, Pius V.C., & Amahalu, N.N. (2021). Financial leverage and shareholders wealth creation of quoted industrial goods firms on Nigerian exchange group. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, 5(6), 673-681.

Onyekwelu, U. L Nwajei, N. B. & Ugwu, K. O. Effect of firms' characteristics on financial performance of oil and gas companies on Nigerian exchange group. *Asia Pacific Journal of Research in Business Management*, 8(3), 64-81.

Onyewe, E.I., & Glody, J.C. (2017). Effect of financial leverage on dividend policy of quoted conglomerates. Managing diversification for sustainable development in sub-Saharan Africa, Faculty of Management Sciences, 2017 International Conference, 8-10, November, 2017

Osuji, C. C., & Odita, A. (2012). Impact of capital structure on the financial performance of Nigerian firms. *Arabian Journal of Business and Management Review (OMAN Chapter), 1*(12), 43-61.

Rafiuddin, A. & Rafiqul, B. (2020). Capital structure and firm performance in Australian service sector firms: a panel data analysis. *Journal of Risk and Financial Management,* 13(214)1-16.

Rahman, A.A., Abdelrhman, M., Nurul, M.Z., Anwarul Islam, K.M., Rabbani, M.R. & Bunagan, V.D. (2021). Impact of leverage ratios on indicators of financial performance: evidence from Bahrain. *Academy of Strategic Management Journal,* 20(3), 1-12. 24.

Rasha, B. (2017). Main determinants of financial reporting quality in the Lebanese banking sector. *European Research Studies Journal*, 20(4), 706-726.

Senan, N.A., Ahmad, A., Anagreh, S., Tabash, M.I. & Al-Homaidi, E.A. (2021). An empirical analysis of financial leverage and financial performance: Empirical evidence from Indian quoted firms. *Investment Management and Financial Innovations*, 18(2), 322-334.

Swarnapalia, R.M.N.C (2015). Firm specific determinants and financial performance of licensed commercial banks in Sri Lanka. Reshaping Management and Economic Thinking through Integrating EcoFriendly and Ethical Practices Proceedings of the 3rd International Conference on Management and Economics.

Thomas, D., & Zechner, J. (2021). Debt maturity and the dynamics of leverage. *The Review of Financial Studies*, 2(4), 148-151.

Tifow, A. A., & Sayilir, O. (2015). Capital structure and firm performance: An analysis of manufacturing firms in Turkey. *Eurasian Journal of Business and Management, 3*(4), 12-22.

Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance, 43*(1), 1-19.

Tom-West, R., Okoye, P.V.C., & Amahalu, N.N. (2021). Intellectual capital and economic value added of quoted information communication and technology firms on Nigerian exchange group. *International Journal of Management Studies and Social Science Research*, 3(5), 281-294

Tudose, B. M. (2012). Corporate finance theories, challenges and trajectories. *Management and Marketing for the Knowledge Society. 7*(2), 277-294.

Uremadu, S.O. & Onyekachi, O. (2018). Current Investigations in Agriculture and Current Research, 5(4), 697-705.

Zraiq, M.A.A. & Fadzil, F.H. (2018). The impact of audit committee characteristics on firm performance: Evidence from Jordan. *Scholar Journal of Applied Sciences and Research*, 1(5), 39-42.