

Corporate Financial Indicators and Operational Performance of Listed Manufacturing Companies in Nigeria

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Abstract

The study examined the relationship between corporate financial indicators and operational performance of firms. The study specifically covered manufacturing firms that are listed on the Nigerian Exchange Group. The proxies of corporate financial indicators are liquidity ratio, leverage ratio and activity ratio. The time period that was covered in the study was a ten-year period that spans from 2010 to 2019 financial years. The sample size of the study is seven (7) Industrial Goods Firms which were obtained using purposive sampling technique from a population of thirteen (13) listed Industrial Goods Firms in Nigeria. The test of hypotheses was conducted using Ordinary Least Square technique at 5% level of significance. The findings revealed that there was no significant relationship between activity ratio and return on equity of listed manufacturing firms in Nigeria at 5% level of significance; there was a statistically significant negative relationship between leverage ratio and return on equity of listed manufacturing firms in Nigeria at 5% level of significance level; liquidity ratio has no significant relationship with return on equity of listed manufacturing firms in Nigeria at 5% level of significance level. The study recommended that firms in the manufacturing sector should pay much attention to their level of asset management so that the assets used in production and distribution of goods will be optimised for an improved financial result.

Keywords: *Corporate financial indicators, operational performance, listed manufacturing companies in Nigeria*

1.1 Introduction

The connection between firm operational performance and corporate financial indicators has been paid great attention in financial areas in recent years and various academic studies have been done in this line to uncover the extent to which the use of corporate financial indicators influences the operational profitability or performance of firms. The interest in this area of research is informed by the need to protect the interest of investors who put in their stake into businesses in expectation for a return on their investment (Sarkodie, Addai & Asiedu, 2015). While investors invest on the firms, by the help of stocks, they tend to measure the risk level of the firms through corporate financial indicators. However, the need for the analyses of corporate financial indicators is not just concentrated on the investors solely as corporate managers utilize the information gotten from the analysis of corporate financial indicators to form the bases for their decisions in running the corporate affairs of the firm (Umeji, 2019). Authors have argued that the key to obtaining meaningful information from corporate financial ratio analysis is comparison. This may involve comparing ratios over time within the same business to establish whether things are improving or declining, and comparing ratios between similar businesses to see whether the company being analyzed is better or worse than average

within its specific business sector (Asiri & Salwa, 2014). Malikova and Brabec (2012) vehemently argued that investors select suitable firms to invest in through financial analysis of financial statements.

One of the means used to disclose financial information in the financial reports of firms is the use of corporate financial indicators that are expressed as accounting ratios. Principal users of the financial statements of manufacturing firms do not have access to the accounting records of those firms they have to rely solely on the information disclosed in the financial statements to make informed decisions. This disclosure is the best vehicle for communicating with investors. In the views of Sarkodie, Addai and Asiedu (2015), corporate financial indicators are essentially provided as ratios that quantify many aspects of a business and are an integral part of the financial statement analysis. Financial ratios are categorized according to the financial aspect of the business which the ratio measures. Liquidity ratios measure the availability of cash to pay debt. Activity ratios measure how quickly a firm converts non-cash assets to cash assets. Debt ratios measure the firm's ability to repay long-term debt. Profitability ratios measure the firm's use of its assets and control of its expenses to generate an acceptable rate of return.

These ratios or corporate financial indicators as Rehman, Khan and Imran (2014) termed them gauge the ability of an enterprise to yield earnings, profits and cash flows relative to some indicator, often the capital invested. Operational profitability being an outcome of a numerous policies and decisions reveals the blended outcome of liquidity, asset management and debt on the efficiency of the organization.

Inadequate disclosure of financial and non-financial information makes it difficult for users of financial statements to evaluate more properly the opportunities and risks of investing in the company and how well the business is profiteering. The disclosure of financial ratios in the annual reports do not adequately provide all users with a quick and simple tool that highlights firms' operational performance. This is because of the inherent limitations of corporate financial indicators which then makes management unable to picture how well the business unit is doing.

The usefulness and correctness of these ratios largely depends on the integrity of financial statements; this is why a number of factors have been observed to negatively affect the reliability of the ratios so far calculated (Agyei-Mensah, 2015). Umeji (2019) critiqued that given that corporate financial indicators expressed as accounting ratios are based on the information provided in the financial statements, they give room for distortion and various inaccuracies. Many firms as well manipulate the data in their financial statements by way of window-dressing and also use different accounting policies in terms of inventory valuation techniques, depreciation methods, etc.

As a consequence, the corporate financial indicators provided become less useful and do not supply commensurate quantitative financial information to both investors and analysts who wish to use them in evaluating the operation of a firm while analyzing its position within an industry or sector over time. Most decisions that are reached at based on the use of inadequate information from corporate financial indicators often lead to loss of financial benefits. The use of low value financial indicators has repeatedly thwarted the operational performance of firms. In time past, numerous researchers have all tried to uncover the empirical relationship between corporate financial indicators and financial performance of firms. Authors such as Umeji (2019); Onyekwelu, Nnadi & Iyidiobi (2018); Fajaria & Isnalita (2018); Rosada & Idayati (2017); Sarkodie, Addai & Asiedu (2015); Agyei-Mensah (2015); Borhan, Mohamed & Nurnafisah (2014); Ali & Mohammad (2014); Asiri & Salwa (2014); Rehman, Khan & Imran (2014); Karaca & Savsar (2011) have all tilted towards the direction of this research.

However, to the best knowledge of the researcher, no empirical research of this nature has utilized leverage ratio, liquidity ratio and activity ratio as three independent proxies of

corporate financial indicators to predict the operational performance of quoted manufacturing companies in Nigeria. The only study that attempted this was the study conducted by Onyekwelu, Nnadi & Iyidiobi (2018) which focused solely on the Nigerian Oil and Gas sector. To address this gap in knowledge, this study is initiated to determine the relationship between corporate financial indicators and the operational performance of listed manufacturing companies in Nigeria.

1.2 Objective of the Study

The broad objective of the study is to determine the relationship between corporate financial indicators and the operational performance of listed manufacturing firms in Nigeria. The specific objectives of the study are as follows:

1. To examine the relationship between activity ratio and return on equity of listed manufacturing firms in Nigeria.
2. To determine the relationship between leverage ratio and return on equity of listed manufacturing firms in Nigeria.
3. To ascertain the relationship between liquidity ratio and return on equity of listed manufacturing firms in Nigeria.

1.3 Scope of the Study

The study primarily examines the relationship between corporate financial indicators and operational performance of firms. The study specifically covers manufacturing firms that are listed on the Nigerian Exchange Group. The proxies of corporate financial indicators are liquidity ratio, leverage ratio and activity ratio. The time period that is covered in the study is a ten-year period that spans from 2010 to 2019 financial years. This period was chosen in order to obtain a balanced panel for the study.

2.1 Conceptual Review

2.1.1 Concept of Corporate Financial Indicators

Corporate financial indicators comprise a group of metrics used to indicate how financially efficient a firm is based on the accounting information provided in its financial statements (Sarkodie, Addai & Asiedu, 2015). Corporate financial indicators essentially provide a way of expressing the relationship between one accounting data point and another (Umeji, 2019). These financial indicators assist in measuring the efficiency and profitability of a company based on its financial reports. Corporate financial indicators appear in the form of accounting ratios which are immensely important for financial decision making irrespective of the size of the business entity. A financial indicator or accounting ratio is a relative magnitude of two selected numerical values taken from an enterprise's financial statements to be used in analyzing the performance of a business unit. The relevant financial indicators can be used to evaluate the financial condition of a company, including the company's strengths and weaknesses (Alper, Busra & Enes, 2015).

In the views of Arkan (2016), corporate financial indicators are simply the numerical value created from two or more values taken from a company's financial statements i.e. its statement of financial position, income statement or statement of cash flow to use in showing the extent of value which the business created over time. Typically, these indicators are presented as a quantified metric in the form of a percentage, multiple or a ratio which aims to evaluate the financial, operational performance and competitiveness of a company. Thus, Arkan (2016) posits that accounting ratio analysis has been developed over many years and it has become more than a tool of evaluation. It helps tax department's credit analysis in banks, financial market councils and CPA Accountants to determine some critical points in their jobs using the information that are portrayed in the corporate financial indicators. Agyei-Mensah (2015)

submitted that the objective of financial statements is to provide information about the financial position, performance and financial adaptability of an enterprise that is useful to a wide range of users in making economic decisions; hence, information on management accountability to judge management's effectiveness in utilizing the resources provided by shareholders in the running of the enterprise is provided by corporate financial indicators (Arkan, 2016).

2.1.2 Dimensions of Corporate Financial Indicators as Accounting Ratios

As a fundamental part of the financial statement analysis, financial or accounting indicators quantify many aspects of a business and are categorized according to the financial aspect of the business which the ratio measures. Liquidity ratios measure the availability of cash to pay current debt. Activity ratios measure how quickly a firm converts non-cash assets to cash assets. Leverage ratios measure the firm's ability to repay long-term debt. Profitability ratios measure the firm's use of its assets and control of its expenses to generate an acceptable rate of return.

There are four major classes of corporate financial indicators, viz: leverage ratios, liquidity ratios, activity ratios and profitability ratios. Liquidity ratio as we early discussed demonstrates a company's ability to pay their debts and other liabilities. Some liquidity ratios include the current ratio, quick ratio, cash ratio, and operating cash flow margin. Activity ratios demonstrate how efficiently the business operates. In other words, one can see how well the company uses its resources, such as assets available to generate sales. A few great examples of activity ratios investors should apply in their research include inventory turnover, receivables turnover, payables turnover, working capital turnover, fixed asset turnover, and total asset turnover. Profitability ratios indicate the extent of returns or profits which a company was able to generate over a period of time with the resources provided by shareholders. Good examples of profitability ratios are return on assets, return on equity, return on investment, etc. Finally, leverage ratios demonstrate a company's ability to pay its long-term debt. Leverage ratios are also referred to as debt ratios, debt-to-equity ratios, and interest-coverage ratios. However, we shall briefly examine only the independent variables of the study which are leverage, liquidity and activity ratios respectively.

1. Leverage Ratio

Leverage ratios as we said earlier are a type of corporate financial indicator that shows the ability of a company to pay its non-current liabilities. This particular financial indicator serves to demonstrate the company's ability to meet liabilities that have matured, both obligations on parties outside the company or in the company. This group of financial indicator shows the percentage of a company's capital structure that is made up of debt or liabilities that are owed to external parties (Arkan, 2016). Focusing on the long-term solvency in general, the more leveraged and higher amount of debt financing relative to equity financing the owner faces, then greater is the risk. Besides, higher leverage is usually associated with higher expected returns. Arkan (2016) enlisted the most common financial leverage indicators as the total debt ratios, the debt/equity ratio, the long-term debt ratio, the times interest earned ratio, the fixed charge coverage ratio, and the cash coverage ratio.

2. Activity Ratio

Activity ratios are sets of corporate financial indicators that show how efficiently the business operates. Put in another way, they indicate the efficiency with which a company uses its resources, such as assets available, to generate sales. Examples of activity ratios which an investor can apply in his/her research include inventory turnover, receivables turnover, payables turnover, working capital turnover, fixed asset turnover, and total asset turnover. Activity ratios, which can as well be called financial operation ratios or asset management

ratios, measure the efficiency with which a firm manages and controls its assets (utilizing its capital) in generating sales and earnings (Arkan, 2016). Investors can use these in order to analyze a company's or management's ability to efficiently use resources and how effective it converts its purchases and inventory to sales and then its sales to cash.

3. Liquidity Ratio

Liquidity ratios are financial indicators that are used to assess the ability of a firm to settle its short-term debt obligations (Agyei-Mensah, 2015). In general, the greater the coverage of liquid assets to short-term liabilities the better as it is a clear signal that a company can pay its debts that are coming due in the near future and its ongoing operations (Umeji, 2019). On the other hand, a company with a low coverage rate should raise a red flag for investors as it may be a sign that the company will have difficulty meeting running its operations, as well as meeting its obligations. Liquidity ratio measures the ability of the company's short-term liquidity to see to the company's current assets relative to its current debt. Companies that can pay off its short-term debts at maturity can also attract the attention of investors and gain the confidence of creditors (Fajaria & Isnalita, 2018). Kasmir (2008) submitted that the current ratio being one of the liquidity ratios is a ratio that measures a company's ability to pay short-term obligations or debt immediately due upon being billed as a whole. CR This ratio can be obtained by comparing total current assets to total current liabilities of the company (Fajaria & Isnalita, 2018). The main ratio in this group is the current ratio and acid test ratio.

2.1.3 Concept of Operational Performance

Operational performance refers to a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The performance measurement concept indicates that employees can increase the value of the firm by: increasing the size of a firm's future cash flows, by accelerating the receipt of those cash flows, or by making them more certain or less risky (Nwachukwu, 2019).

There are many different ways to measure financial or operational performance. However, all measures should be taken in aggregation. Some of the indicators of operational performance are net profit margin, gross profit margin, return on equity, liquidity ratios, asset management ratios, profitability ratios, leverage ratios and market value ratios (Gichaaga, 2014). Carreta and Farina (2010) argued that use of operational performance could still be justified on the grounds that it reflects what managers actually consider to be financial performance and, even if this is a mixture of various indicators like accounting profits, productivity, and cash flow, operational performance can as well be determined by the following indicators; profit or value added; sales, fees, budget; costs or expenditure and stock market indicators (e.g. share price) and autonomy.

Operational performance is a key to determining the perpetuity of a business set up. It is regarded as the foremost objective of profit-oriented organizations (Kakanda, Bello & Abba, 2016). A well-performing business is often one that is effective and efficient in securing it a long-term success (i.e. one that reasonably follow it standards and judiciously utilized it resources towards achieving high performance). Managers of corporate entities are much concerned on how to achieve high operational performance as it has a long-term effect on their corporate set-ups which ranges from management efficiency (utilization of limited resources at their disposal); investors goal (wealth maximization) and lenders-driven (repayment of debt and interest charge thereon). Thus, operational performance measurement will depict how better off a shareholder has become on the investment in an entity over a given period. Therefore, all profit-oriented organizations are striving towards achieving greater financial and

operational performance that will maximize shareholders' wealth and value of the firm in which manufacturing companies are not an exception.

2.1.4 The Nature and Function of Corporate Financial Indicators Using Ratio Analysis

Both credit analysts and security analysts are interested in evaluating the investment potential of the firm - the credit analyst for direct advancement of funds to the firm and the security analyst for acquisition or sale of securities in the market place (Nzewi, 2015). Both types of analysts are therefore interested in assessing, amongst other things, the expected return from their existing or potential investment and the risk associated with earning that return (Fajaria & Isnalita, 2018). Alternatively, they may be interested in evaluating the success of a prior investment decision. It is towards the attainment of these ends that corporate financial indicator arrived at using ratio analysis are employed as an analytical and interpretative tool. Their function is therefore to provide information to assist the analyst's investment decision or performance evaluation.

In general, then, the extent and depth of financial statement analysis is determined by user requirements through ratio analysis. This ratio analysis is the principal analytical tool employed by analysts in an attempt to explain the relationships which exist between key financial variables which appear principally in the published financial statements. The values for individual financial indicators are then compared with an appropriate standard to ascertain whether they are satisfactory or otherwise. According to Umeji (2019), three main types of comparisons are widely employed in this regard:

1. Cross-sectional

- (a) Intra-industry comparison: The subject firm is compared with other firms in the same industry. The industry average for each ratio is the standard employed.

- (b) Inter-industry comparison: The subject firm is compared with other firms in different industries, and the results of other firms or the averages of other industries are the standards employed. This approach is fraught with difficulty since the differing risk structures of industries make unadjusted raw results difficult to compare.

2. Intertemporal-intra-firm: The subject firm's ratios are compared across time for the identification of trends or other relationships.

3. Arbitrary standards - ratios of the subject firm are rated against "traditional" standards. These standards, which have evolved with the development of the technique through time, are arbitrary rules of thumb. Application of these standards requires caution.

2.1.5 Corporate Financial Indicators and Operational Performance of Firms

In financial literature, it is held widely that the most striking goal of every company, of course, is to seek after the prosperity of its shareholders by enhancing shareholders' value as reflected in the operational performance of the firm. Investors, as a result, are more interested in investing in companies that have favorable job prospects and promises, one of which is better corporate financial performance (Fajaria & Isnalita, 2018; Rosada & Idayati, 2017). Corporate financial indicators get investors informed about the financial health of the organization they are about investing in or have already invested in. This information about a business organization, its activities, profitability, financial condition and investment potential can come from a number of different sources. Foremost amongst these are the firm's financial reports, and therefore it is not surprising to find that traditionally financial statement analysis has played an important role in providing specialized information to particular decision makers. The principal analytical tool of corporate financial indicators which are employed by financial statement analysts is the accounting ratio (Agyei-Mensah, 2015; Borhan, Mohamed & Nurnafisah, 2014; Ali & Mohammad, 2014).

It is not a gainsaying that communicating corporate financial indicators can provide users of financial statements with new information that is not comprehensively presented in any single media. This piece of information is likely to be even more meaningful for non-sophisticated users in evaluating and making informed investment decisions. Hence, corporate financial indicators allow comparison with peers through inter-firm comparison schemes and comparison with industry averages so that possible strengths and weaknesses can be easily identified (Elliot & Elliot, 2013 as cited by Agyei-Mensah, 2015). Corporate financial indicators often indicate how well the financial objectives of the company are achieved (Nawaz, Aamir & Atif, 2015). They not only assist managers in financial planning but also help investors to make better investment choices. Manager's choice of making debt intensive or equity intensive company that formulate the financing of the company assets leads to the concept of financing decisions which could significantly influence the achievement of corporate and business objectives.

Furthermore, financial analysts and creditors can rely on a specified set of accounting ratio or financial indicators in their evaluation for each financial and operational performance of companies and when making decisions (Arkan, 2016). To perform a financial analysis process in an accurate way which is desired by investors and analysts, it requires the presence of multiple criteria to measure performance and compare the results by others in the same sector. Accounting ratios that are derived from past financial data are used to make rational estimate of future financial standing of the firm (Alper, Busra & Enes, 2015). In this context, financial ratios can be used to forecast the performance of firms and thus the value of a company. Manufacturing firms may have at the heart to make profit by way of inviting long term loans from other firms, especially financial institutions. This is because increasing long term loan accessibility can improve their chances of survival. In this regard an alliance of this financial institution would help form syndicate which can aid the assessment of long-term loans from them. Frequent monitoring of the industrial goods firms' ratios would help to prevent collapsing (Agyei-Mensah, 2015; Sarkodie, Addail & Asiedu, 2015). According to Alper, Busra & Enes (2015), since accounting ratios give important hints about the present and future state of a company; the analyses that will be made with the financial ratios provide significant benefits to decision makers by revealing positive and negative information that are not reflected on the company's stock values.

By providing an idea to the investors about deciding on investing their funds in a particular company, a good set of corporate financial indicators would attract more providers of capital in the future while a bad one will discourage providers of capital from bringing out their funds. When conditions do not fluctuate, reasonable predictions can be made about the future performance of a company. For instance, businesses create a common sized income statement to show all of the amounts on the income statement as a percentage of sales after it compares these statements historically for trend analysis. Once a trend has been built, it can predict what will happen or what can be achieved. Suppose if the selling expenses are increasing consistently by 3.2% each year, a business can reasonably assume that it will increase by the same ratio and sale will also increase by the same trend. This informs the economic decisions of the users of the financial statements. Corporate financial indicators reveal the snapshot measure of corporate success and thus serve as a prime metric of economic and operational performance. Therefore, the relationship between corporate financial indicators and operational performance is informed by the blended outcome of liquidity, asset management and debt on the efficiency of the organization (Rehman, Khan & Imran, 2014).

2.2 Theoretical Framework

The relationship between corporate financial indicators and operational performance of firms can lend itself to theoretical interpretations. Signaling Theory is the theoretical underpinning of this study and shall be briefly examined forthwith.

2.2.1 Signaling Theory

Signaling theory was developed by Spencer in 1983. This theory encompasses the response of investors to the positive and negative signals that greatly affect market conditions. Signaling theory is of the view that changes in corporate financial indicators primarily affects investors who often react in different ways in response to such signals as buying stocks or observe the development of the stock in the market.

Under this theory, financial reporting is said to stem from management's desire to disclose its superior performance where good performance indicated by the corporate financial ratios of the firm will enhance the management's reputation and position in the market for management services, and good reporting is considered as one aspect of good performance (Agyei-Mensah, 2015). This signal can be any information related to management's efforts to realize what was required of investors, or other information that can show their company better than other companies (Fajaria & Isnalita, 2018). This signal is given to reducing information asymmetry where internal party better understand the condition of the company.

Signal theory in this study is used to draw the relationship of influence of corporate financial indicators on operational performance of firms. In supporting of this position, Watson, Shrive & Marston (2002) stated that if signaling theory can explain financial indicators disclosure, then it would be expected that certain company attributes would be associated with disclosure. Thus liquidity, leverage, profitability and activity ratios may be disclosed by those companies wishing to highlight certain aspects of their operational performance.

Of essence, signaling theory suggests that firms with good performance will wish to signal their quality to investors, hence are more likely to disclose their performance using corporate financial indicators (Agyei-Mensah, 2015). According to Alsaeed (2006), management of profitable firms may wish to disclose more information to the public to promote a positive impression of which corporate financial indicators may be one form of such disclosures. It is against this background that the study is anchored on signaling theory.

2.3 Empirical Review

Umeji (2019) examined the relationship between accounting ratios and corporate financial performance. Out of the population of thirteen (13) industrial goods manufacturing firms listed on the Nigerian Stock Exchange as at the date of this study, eight (8) firms were purposively selected on the basis of availability of complete financial data. The secondary data that were utilized in this study were sourced from the annual reports of the sampled companies. The study adopted ex-post facto research design. The three hypotheses of the study were tested with simple regression technique with the aid of Statistical package for Social Sciences (SPSS) Version 22. The results of the analyses revealed the following: that the relationship between activity ratio and the return on equity of industrial goods manufacturing companies in Nigeria is not statistically significant ($F[1,78] = 1.582$, $p\text{-value} > 0.05$); that the negative relationship between activity ratio and return on equity of industrial goods manufacturing companies in Nigeria is not statistically significant ($F[1,78] = 1.582$, $p\text{-value} > 0.05$); and that there is a statistically significant negative relationship between leverage ratio and return on equity of industrial goods manufacturing companies in Nigeria ($F[1,78] = 7.171$, $p\text{-value} = 0.009$). The study recommended that financial analysts should endeavor to use accounting ratios mostly as a starting point for more detailed financial analysis because accounting ratios can refer to the

areas of good and bad performance as well as areas of significant changes, which would be analyzed more carefully. The study did not incorporate the financial reports of 2019.

Fajaria & Isnalita (2018) examined the effect of corporate financial indicators such as profitability, liquidity, leverage, and company growth on firm value, with dividend policy as a moderating variable, as well as firm size as a control variable. This research was conducted with documentation method, as well as sampling purposive sampling technique. The study population was a number of 146 companies listed in Indonesia Stock Exchange (BEI) in the period 2013-2016. The research sample was a number of 108 companies in the period of 2013, 106 companies in the period of 2014, 94 companies in the period 2015 and 2016. Secondary data were obtained from the financial reports of the selected companies. Data analysis techniques used in this study was comprised of descriptive analysis stage, the classic assumption test (test for normality, multicollinearity test, and test of heteroskedasticities), t-test, regression analysis moderation (MRA), and the coefficient of determination. Profitability and high growth company are proven to increase of Firm Value, but liquidity and high leverage are proven to reduce Firm Value. The study focused on firm value without considering the corporate financial performance of the firms.

Onyekwelu, Nnadi & Iyidiobi (2018) examined the effect of firms' growth indicators on operational performance of selected firms in Nigeria. Firm size and profitability were the proxies for operational performance while Return on Assets was the measure for financial performance. The population of the study was 13 listed oil and gas firms while the sample size was two (2). The study adopted the ex-post facto research design. Data were sourced from the financial statement of firms studied. Multiple regressions were used for analysis. Results show that firm size and profitability have significant a negative and insignificant effect on Return on Assets. The paper recommended that firms should strive to increase firm's size and profitability at a level that will positively and significantly affect Return on Assets. The study focused on the oil and gas sector with no concern for the manufacturing firms on the Nigerian Stock Exchange.

Amahalu, Abiahu, Obi & Nweze (2018) ascertained the effect of accounting information on market share price of Information, Communication and Technology (ICT) firms listed on Nigeria Stock Exchange. The specific objectives are to ascertain the effect or otherwise of Dividend per share, Earnings per Share and Return on Equity on Market Share price of ICT firms listed on the floor of Nigeria Stock Exchange from 2010-2016. The population of the study consisted of the eleven (11) ICT firms listed on the floor of the Nigerian Stock Exchange. Eight (8) listed ICT firms represented the sample size for this study. Ex-post fact research design was used for this study. Secondary data were sourced from the publications of Nigeria stock exchange. Inferential statistics of the hypotheses were carried out with the aid of E-view 9.0 statistical software using, Co-efficient of correlation and Simple Linear Regression (SLR) analysis. Findings of this study showed that Dividend per Share, Earnings per Share and Return on Equity have a positive and statistically significant effect on Market Share Price at 5% significance level. It is recommended among others that since accounting variables have significant influence on market share price, there should be better accounting information disclosure and improved quality financial reporting by ICT firms in Nigeria. Market share price was the thrust of the study as it did not cover the operating performance of firms.

Bamidele, Ibrahim & Omole (2018) investigated the effects of financial reporting quality on investment decision making by Deposit Money Banks in reference to Zenith Bank Plc, Nigeria. The sample size of the study was one, namely Zenith Bank plc. Data was obtained from the audited annual reports of Zenith Bank Plc. that covered period of 2009 – 2016. The study utilized both descriptive and Ordinary Least Square Regression method with the aid of E-view 9 to analyze the data. The findings showed that there was a significant effect of variables of Financial Reporting Quality FRQ (measured as profit after tax, cash used in/from investment

and cash equivalent) on investment. The result also shows that, Financial Reporting Quality has significant influence on investment of Deposit Money Banks with ($R^2 = 0.98$; $P < 0.05$). The study concluded that, higher financial reporting quality increases investment decision by Deposit Money Banks in Nigeria. The study dwelt on investment decision without examine how financial ratio influence operating performance of firms.

Amaraihu & Onodi (2018) examined the effect of financial information on investors' confidence in listed manufacturing firms in Nigeria. To achieve the objective of this study, ex-post-facto research design was used. Data was analyzed using simple regression analysis. The study uses only one sample size because it is a case study of Nigerian Breweries Plc. The findings revealed that financial information (interest coverage and dividend coverage) affects investor's confidence. Conclusively, the failure of firms may not be due to non-generation of financial information but ineffectively, inefficiently and inappropriately utilization of the financial information generated in an organization. The study recommended that the use of modern application like information technology application in accounting should be introduced to enhance timely, efficiency and effectiveness of financial information. Also, financial information generated should be readily available for potential investors' decision making. Investors' confidence was the bane of the study. It failed to establish whether or not financial ratio can be used to predict firm operational performance.

Thuhoye (2017) examined the effect of accounting information on investment decision using TANESCO Morogoro as a case study. The study employed descriptive survey research design. The study population was 50 persons who are the member of staff of the TANESCO Morogoro. The researcher also made use of primary methods of data collection which include questionnaires. Secondary methods of data collection involved library research of relevant materials. Data collected was then analyzed by using SPSS software. The study revealed that there is significant relationship between accounting information and investment decisions and all the selected areas significantly depend on accounting information for investment decision. It was discovered that the quality of accounting information in terms of its accuracy, adequacy, reliability and mode of disclosure is a major determinant of the level of efficiency of the investment decision making. The study recommended that public organization should use accounting information always to increase the accuracy of their investment decision making. The study was a case study design and so lack general applicability.

Zayol, Agaregh & Eneji (2017) empirically investigated the effect of financial accounting information on investment decision of shareholders of banks in Nigeria. The data for the study were extracted from published annual reports of five (5) selected banks in Nigeria from 2009 to 2015. Correlation matrix and regression analysis were deployed to establish the relationship between the variables. The results revealed a positive relationship, indicating that dividend per share have significant influence on investment decision of shareholders of banks in Nigeria. The study recommended that both existing and prospective investors can factor financial information relating to dividend paid per share while making investment decision in shares of Nigerian banks; as dividend per share is positively correlated with investment decisions of shareholders. The study was focused on the Nigerian banking sector. The findings are more appropriately applied in the banking sector than in industrial goods sector.

Arkan (2016) examined the relevance of accounting ratio indicators which was derived from financial statements to predict stock price trends in Kuwaiti financial market. A statistical examination to the prediction power of 12 financial ratios was tested using data of 15 companies distributed on 3 sectors for the years 2005–2014 in the Kuwaiti financial market. An equation to estimate the stock price in each sector was built according to the multiple regression model after eliminating non-effective variables with the STEP-WISE method. The results showed that some ratios could give strong positive and significant relationships to stock price behavior and trends. The most effective ratios on the stock price for the industrial sector

are ROA, ROE and net profit ratio. Also, the most effective ratio on the stock price for the service sector was the ROA, ROE, P/E and EPS ratio and the same for the investment sector. This study concluded that it could rely on a set of financial ratios for each sector to predict stock price, the decision maker of such investors can rely on the financial analysis presented by the financial ratios when making financial and operational decisions. The study was conducted in a developed economy. The economic realities that obtain in developing countries make the findings unsuitable to firms in developing economies such as Nigeria.

Sarkodie, Addai & Asiedu (2015) determined whether accounting ratios have the capacity to tell the fortunes of microfinance institutions. The study relied purely on cross sectional and secondary data collected from one hundred and seventeen (117) microfinance institutions in Ghana. The secondary source was from the annual audited accounts of these microfinance institutions. The population in this study included all microfinance institutions in Ghana. The analyses of data were carried out with the use of logistic regression. The findings of the study are as follow: an increase in the current ratio reduces the log-odds of a firm's survival by -1.461987; an increase in the acid test ratio improves the log-odds of survival by 6.847345; an increase in the debt-equity ratio also enhances the log-odds of a firm's survival. It was advised per the findings of this study that short term loans to customers would be of great advantage to the microfinance institutions. Also, microfinance institution's ability to invite long term loans from other financial institutions could be of great help to the microfinance institutions. This is because increasing long term loan accessibility can improve their chances of survival. In this regard an alliance of microfinance institutions would help form syndicate which can aid the assessment of long-term loans from banks. The study, however, failed to establish the effect of accounting ratios on return on equity of the firms.

However, to the best knowledge of the researcher, no empirical research of this nature has utilized leverage ratio, liquidity ratio and activity ratio as three independent proxies of corporate financial indicators to predict the operational performance of listed manufacturing companies in Nigeria. The only study that attempted this was the study conducted by Onyekwelu, Nnadi & Iyidiobi (2018) which focused solely on the Nigerian Oil and Gas sector. To address this gap in knowledge, this study is initiated to determine the relationship between corporate financial indicators and the operational performance of listed manufacturing companies in Nigeria.

3.1 Research Design

The researcher, in an attempt to uncover the relationship between corporate financial indicators and operational performance of firms, adopted a correlational research design. This research design enables researchers to examine the statistical association, if any, between or among variables of interest.

3.2 Area of the Study

This study, while examining the relationship between corporate financial indicators and operational performance, covers the Nigerian industrial goods manufacturing sector.

3.3 Population of the Study

According to NGX factsheet (2020), there are thirteen (13) publicly-listed industrial goods firms in Nigeria which are shown in **Table 1** below.

Table 1 Population of the Study

Name of Company		
1. Austin Laz Plc.	6. Cutix Plc.	11. Notore Chemical Ind. Plc.
2. Berger Paints Plc.	7. Dangote Cement Plc.	12. Portland Paints & Products Nig. Plc.
3. Beta Glass Plc.	8. Greif Nigeria Plc	13. Premier Paints Plc.
4. BUA Cement Plc	9. Lafarge Africa Plc.	
5. CAP Plc.	10. Meyer Plc.	

Source: NGX Factsheet (2020)

3.4 Sample Size and Sampling Technique

Out of the population of thirteen firms that are listed on the NGX, the study utilised judgemental sampling technique to select the seven firms that made up the sample size of the study. The basis for the selection was that the firm must have filed its financial reports with NGX for periods covered by the study which is 2010 to 2019. All the firms that met the criterion were included in the study and are shown in **Table 2** below.

Table 2 Sample Size of the Study

Name of Company
1. Berger Paints Plc.
2. Beta Glass Plc.
3. CAP Plc.
4. Cutix Plc.
5. Dangote Cement Plc.
6. Greif Nigeria Plc
7. Lafarge Africa Plc.

3.5 Method of Data Collection

Secondary data were utilised in the study and were obtained from the annual reports of the selected firms. Data that helped in the calculation of leverage ratio, activity ratio, return on equity and liquidity ratio were obtained from the published annual reports of the firms form 2010-2019 because the financial statements have been validated by the external auditor.

3.6 Technique for Data Analysis

The data that were gathered for the study were coded into a computer software which is specifically used in data analysis. The data were further edited, sieved and prepared for analysis. Mean and standard deviation were used to analyse the descriptive statistics of the data. Furthermore, inferential statistical analysis was conducted with the aid of the Ordinary Least Square simple regression technique in order to test the hypotheses of the study. The test was conducted at a 5% level of significance. This level of significance implies that the null hypothesis is rejected in favour of the alternate hypothesis if the *p-value* is less than 0.05 and vice versa.

3.7 Specification of Model

To estimate the relationship between corporate financial indicators and the financial performance of firms, the independent variable, corporate financial indicators, was decomposed into leverage ratio, activity ratio, and liquidity ratio while the dependent variable,

corporate financial performance was measured by return on equity. In the mathematical model that represents the expected relationship, we have:

$$ROE = f(LEV, ACT, LIQ, \dots) \dots \dots \dots \text{eqn (i)}$$

The above can be re-written in an econometric form thus:

$$ROE_{it} = a_0 + b_1 ACT_{it} + e_{it} \dots \dots \dots \text{eqn (ii) for } H_{01}$$

$$ROE_{it} = a_0 + b_1 LEV_{it} + e_{it} \dots \dots \dots \text{eqn (iii) for } H_{02}$$

$$ROE_{it} = a_0 + b_1 LIQ_{it} + e_{it} \dots \dots \dots \text{eqn (iv) for } H_{03}$$

Where,

ROE_{it} = Return on Equity for a particular firm i in period t

LEV_{it} = Leverage Ratio for a particular firm i in period t

ACT_{it} = Activity Ratio for a particular firm i in period t

LIQ_{it} = Liquidity Ratio for a particular firm i in period t

e_{it} = stochastic term for a particular firm i in period t

3.8 Measurement of Variables

The major variables of the study are corporate financial indicators and corporate financial performance. However, as we said earlier, as corporate financial indicators are measured by leverage ratio, activity ratio, and liquidity ratio, corporate financial performance is measured by return on equity. The operational measurement of the variables is given in **Table 3** below.

Table 3 Measurement of Variables

Name of Variable	Abbreviation	Type of Variable	Operational Definition
1. Leverage Ratio	LEV	Independent	$\frac{\text{Total Debt}}{\text{Total equity}}$
2. Activity Ratio	ACT	Independent	$\frac{\text{Total assets}}{\text{Revenue}}$
3. Liquidity Ratio	LIQ	Independent	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$
4. Return on Equity	ROE	Dependent	$\frac{\text{Earnings after tax}}{\text{Total equity}}$

Source: Researcher's Compilation, 2021

4.1 Data Presentation

Secondary data were utilised in the study and were obtained from the annual reports of the selected firms.

4.2 Descriptive Statistical Analysis of the Variables

The data that were gathered for the study were coded into a computer software which is specifically used in data analysis. The data were further edited, sieved and prepared for analysis. Mean and standard deviation were used to analyse the descriptive statistics of the data. **Table 4** below shows the descriptive statistics of the variables.

Table 4 Descriptive Statistics of the Variables

	N	Mean	Std. Deviation
Activity Ratio	70	1.5744	1.08483
Leverage Ratio	70	.8922	.62366
Liquidity Ratio	70	1.4230	.66476
Return on Equity	70	.2567	.47139

Source: Researcher's computation 2021, Using Stata Version 14

Table 4 shows the descriptive statistics for all the variables used in this study. The average value for Activity Ratio (ACT) is approximately 1.57. with a standard deviation of 1.08 from the mean value. For Leverage Ratio (LEV), the mean value is 0.89; and the standard deviation is 0.6237 which indicates that there is absence of outliers. For Liquidity Ratio (LIQ), the mean value is 1.423 with a standard deviation of 0.6648. By rule of thumb, there is no indication of outliers since the standard deviation is lower than 3. Finally, for Return on Equity (ROE), the mean value is 0.2567 with a standard deviation of 0.4714.

4.3 Test of Hypotheses

4.3.1 Test of Hypothesis 1

H₀₁: There is no significant relationship between activity ratio and return on equity of listed manufacturing firms in Nigeria.

The study deployed the model below for the test of hypothesis.

$$ROE_{it} = \beta_0 + \beta_1 ACT_{it} + \varepsilon_{it}$$

Table 5 Regression Analysis Result Between ACT and ROE

Source	SS	df	MS	Number of obs	=	70
Model	.31019288	1	.31019288	F(1, 68)	=	1.40
Residual	15.0223189	68	.220916455	Prob > F	=	0.2402
				R-squared	=	0.0202
				Adj R-squared	=	0.0058
Total	15.3325118	69	.222210316	Root MSE	=	.47002

ROE	Coef.	Std. Err.	t	P> t	Beta
ACT	-.0618059	.0521589	-1.18	0.240	-.1422359
_cons	.3540532	.0994967	3.56	0.001	.

Source: STATA 14 Regression Output, 2021

Interpretation of Univariate Regression Result

The research result in **Table 5** represents relationship between Activity Ratio and Return on Equity of listed manufacturing firms in Nigeria. A negative relationship is measured between Activity Ratio and Return on Equity (ROE). However, the research model for ROE demonstrates an insignificant negative relationship with ACT ($\beta_1 = -0.1422$) with t-test of -1.18 at ($P = 0.2402$). R^2 of 0.0202 shows that only 2.02% variation in Return on Equity can be explained by changes in Activity Ratio. The F-ratio of 1.40 shows that, at 5% level of significance, the model is not fit to predict the effect of ACT on corporate performance.

Decision:

Since the $Prob > F = 0.2402$ is greater than the critical value 0.05, the null hypothesis is accepted. Conclusively, there is no significant relationship between activity ratio and return on equity of listed manufacturing firms in Nigeria ($t = -1.18$, p -value > 0.05).

4.3.2 Test of Hypothesis 2

H₀₂: There is no statistically significant relationship between leverage ratio and return on equity of listed manufacturing firms in Nigeria.

The study deployed the model below for the test of hypothesis.

$$ROE_{it} = \beta_0 + \beta_1 LEV_{it} + \varepsilon_{it}$$

Table 6 Regression Analysis Result Between LEV and ROE

Source	SS	df	MS	Number of obs	=	70
Model	2.74892067	1	2.74892067	F(1, 68)	=	14.85
Residual	12.5835911	68	.185052811	Prob > F	=	0.0003
Total	15.3325118	69	.222210316	R-squared	=	0.1793
				Adj R-squared	=	0.1672
				Root MSE	=	.43018

ROE	Coef.	Std. Err.	t	P> t	Beta
LEV	-.3200423	.0830375	-3.85	0.000	-.423423
_cons	.5422826	.0901786	6.01	0.000	.

Source: STATA 14 Regression Output, 2021

Interpretation of Univariate Regression Result

The research result in **Table 6** represents relationship between Leverage ratio and Return on Equity of listed manufacturing firms in Nigeria. A negative relationship is measured between Leverage ratio and Return on Equity (ROE). The research model for ROE demonstrates significant relationship with LEV ($\beta_1 = -0.4234$) with t-test of -3.85 at ($P > 0.05$). R^2 of 0.17.93 shows that approximately 17.93% variation in Return on Equity can be explained by changes in Leverage ratio. The F-ratio of 14.85 shows that, at 5% level of significance, the model is fit to predict the effect of LEV on corporate performance.

Decision:

Since the $\text{Prob} > F = 0.0003$ is less than the critical value 0.05, the alternate hypothesis is accepted while the null hypothesis is rejected. Conclusively, there is a statistically significant negative relationship between leverage ratio and return on equity of listed manufacturing firms in Nigeria ($t = -3.85$, $p\text{-value} = 0.0003$).

4.3.3 Test of Hypothesis 3

H_{03} : Liquidity ratio has no significant relationship with return on equity of listed manufacturing firms in Nigeria.

The study deployed the model below for the test of hypothesis.

$$\text{ROE}_{it} = \beta_0 + \beta_1 \text{LIQ}_{it} + \varepsilon_{it}$$

Table 7 Regression Analysis Result Between LIQ and ROE

Source	SS	df	MS	Number of obs	=	70
Model	.002333156	1	.002333156	F(1, 68)	=	0.01
Residual	15.3301787	68	.225443804	Prob > F	=	0.9193
Total	15.3325118	69	.222210316	R-squared	=	0.0002
				Adj R-squared	=	-.0146
				Root MSE	=	.47481

ROE	Coef.	Std. Err.	t	P> t	Beta
LIQ	.0087475	.0859864	0.10	0.919	.0123357
_cons	.2442974	.134879	1.81	0.075	.

Source: STATA 14 Regression Output, 2021

Interpretation of Univariate Regression Result

The research result in **Table 7** represents relationship between Liquidity Ratio and Return on Equity of quoted Manufacturing firms in Nigeria. A positive relationship is measured between Liquidity Ratio and Return on Equity (ROE). However, the research model for ROE demonstrates an insignificant positive relationship with LIQ ($\beta_1 = 0.0123$) with t-test of 0.10 at ($P > 0.05$). R^2 of 0.0002 shows that less than 1% variation in Return on Equity can be explained by changes in Liquidity Ratio. The F-ratio of 0.01 shows that, at 5% level of significance, the

model is not fit to predict the effect of LIQ on corporate performance of manufacturing firms in Nigeria.

Decision:

Since the $\text{Prob} > F = 0.9193$ is greater than the critical value 0.05, the null hypothesis is accepted while the alternate hypothesis is rejected. Conclusively, liquidity ratio has no significant relationship with return on equity of quoted manufacturing firms in Nigeria ($t = 0.10$, $p\text{-value} > 0.05$).

4.4 Discussion of Findings

The test of the first hypothesis showed that Activity Ratio is negatively related to corporate performance such that an increase in ACT by 1 unit will lead to a corresponding 0.1422 decrease in the Return on Equity of manufacturing firms. However, this decrease is not statistically significant. This finding contradicted the findings of Sarkodie, Addai & Asiedu (2018) and Asiri & Salwa (2014).

More so, it was found that Leverage ratio is negatively associated with corporate performance. That is, an increase in LEV by 1 unit will lead to 0.4234 decrease in corporate performance of the firms (when measured with ROE). The empirical evidence in the study shows that this positive relationship is statistically significant. The debt ratio of manufacturing firms is negatively associated with the financial results of the firm because when a firm is highly levered, the cost of borrowing increases accordingly, which is a deduction in profit. This finding is in line with the submission of Umeji (2019); Fajaria and Isnalita (2018); and Nawaz, Aamir and Atif (2015).

Finally, the test of hypothesis three revealed that Liquidity Ratio is positively associated with the corporate performance manufacturing firms in Nigeria. That is, an increase in LIQ by 1 unit will increase the firm's performance by 0.0123. This positive relationship was shown to be statistically insignificant at 5% level of significance. By implication, the contribution of current ratio to firm performance is negligible. This finding agrees with the submission of Borhan, Mohamed and Nurnafisah (2014) and Rehman, Khan and Imran (2014).

5.1 Conclusion

The study examined the relationship between corporate financial indicators and operational performance of manufacturing firms. The study established the extent of effect which Leverage Ratio, Activity Ratio and Liquidity Ratio on Return on Equity. The result revealed that the extent of relationship between Corporate Financial Indicators and Operational Performance is weak. By implication, principal users of the financial statements of manufacturing firms do not have access to the accounting records of those firms they have to rely solely on the information disclosed in the financial statements to make informed decisions. This disclosure is the best vehicle for communicating with investors. Corporate financial indicators are essentially provided as ratios that quantify many aspects of a business and are an integral part of the financial statement analysis.

The study emphasized that financial ratios are categorized according to the financial aspect of the business which the ratio measures. In conclusion, liquidity ratios do not influence firm operating performance. Activity ratios measure do not determine the operating performance of firms; and debt ratio, which measure the firm's ability to repay long-term debt, is negatively associated with firm's operating performance. This conclusion is premised on the analysis of the study which confirmed that the effect of activity ratio and liquidity ratio on firm performance is not statistically significant. However, leverage ratio has a negative relationship with corporate performance of manufacturing firms in Nigeria.

5.2 Recommendations

The study suggests the following recommendations.

1. Firms in the manufacturing sector should pay much attention to their level of asset management so that the assets used in production and distribution of goods will be optimised for an improved financial result.
2. Existing and prospective investors can factor financial information relating to firm leverage while making investment decision in shares of Nigerian industrial goods firms.
3. Use and storage of working capital should be followed by adequate monitoring to avoid over-investment or under-investment in liquid assets.

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