



Moderating Role of Ownership Concentration on the Effect of Payable and Receivable Days on Firm Performance in Listed Industrial and Consumer Goods Companies in Nigeria

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Date of Submission: 20-10-2022

Date of Acceptance: 03-11-2022

ABSTRACT: Adequate resources and effective management of the resources is a panacea for business survival. Survival hinges on profitability which in turn is used as a basis for measuring the performance of an organization in relation to what is obtainable in the industry. There have been differing opinions on how the management of accounts payable and accounts receivable can influence business performance. However, beaming searchlight on the moderating role of owners may give a better insight into how business can perform favourably or otherwise in the marketplace and this area of research often has been ignored in past studies. To this end, this study scrutinizes the role of ownership concentration in moderating the activities of managers to ensure effective management of accounts payable and accounts receivable with resultant effect on the performance of listed industrial and consumer goods companies in Nigeria. Data for this study was sourced from the database of the Nigerian Stock Exchange for 26 Listed Industrial and Consumer Goods companies in Nigeria which covers a 10-year period from 2011 to 2020. The study employed the ex-post facto research design. The relationship between the data was analysed using the multiple regression model.

The study finds that payable and receivable in days moderated by ownership concentration has a positive and significant effect on financial performance. The study makes several recommendations, including that the management of listed consumer and industrial goods companies in Nigeria should build long-term relationships with their suppliers to access trade credit more quickly and easily, as increased use of trade credit improves performance, and to further implement a very active credit policy in preventing sub-standard account receivables.

Keywords: Ownership Concentration, Accounts payable management, Accounts receivable management

I. INTRODUCTION

One of the strategies used by financial experts in determining the sustainability of business organizations is the working capital management. It is an aspect of corporate finance that focuses on the creation of wealth and values for shareholders. The success of a business or otherwise is determined by the way the management handles available working capital towards earning profit and staying liquid (Malik et al., 2010). Working capital management is concerned with efficiently managing inventories,



accounts payable, accounts receivable, cash and attainment of optimum level of usage of resources. It covers both current assets and current liabilities and the efficient management of these in return generates maximum return to the organization (Van Horne, 2004).

Accounts payable is a major source of secured short-term financing available to an organization (Gitman, 2009). It is expressed in terms of the rate at which firms pay their suppliers. Managers are expected to jealously guard the relationship with creditors through proper management of the repayment system. Creditors form accounts payable, and it represents suppliers whose invoices for goods and services have been processed but for which payments have not been made. Such amount being owed to the suppliers is often seen as a free credit to the organization and as such, it is expected that management would establish a formidable tie with such suppliers to have an improved production lines and strong credit rating that will enhance expansion.

Importantly, the effective management of accounts receivable is a strategic way by which financial performance and value of the firm can be improved (Kilonzo, *et al*, 2016). Account receivables is a build-up of goods sold to customers for which funds have not been received. A company might profit from selling its products and services on credit when working with dependable and consistent clients. By doing so, it might be able to increase sales while decreasing transaction costs. However, when considering whether to offer sales on credit to customers, caution must be taken to create a buffer that can accommodate the risk of default by some customers. This may require the firm running a background check on the credit rating of the customer from previous dealing with other companies. Receivables increase sales because they give customers a chance to check the quality of a product before making a purchase; yet debtors entail finances and present opportunity costs. The element of risk, economic value, and futurity explain the basis and necessity for effective management of receivables based on the feature of accounts receivable. In order to maintain profitability and avoid placing their liquidity under undue strain, businesses must handle their accounts receivable properly (Kilonzo, *et al*, 2016).

The management of credit buying, and credit selling are crucial decision areas for effective cash management. The liquidity position of leading firms will usually depend on the management of accounts payable and receivable policy of the firm (Singh & Pandey 2008). Outflow of cash is triggered

during purchase and where it is not properly controlled can cause liquidity problem for the organization. Management of accounts payable is just as important as the management of accounts receivable.

Noteworthy is the concept of absolute handling of management by managers which result in conflict of interest. This is because managers have the tendency to becoming individualistic in their pursuit and at some points focus on personal goals over shareholders' value creation. Hence, the move to separate ownership and control has generated serious misconceptions between management and shareholders. In fact, theories of corporate finance tend to portend agency cost as one of the determinants of efficient working capital management set up in corporate governance to alleviate agency conflict. This perspective positions agency cost as a mediating element between ownership structure and working capital management. There is always a need to moderate the activities of managers by shareholders using corporate governance doctrines (James, 1999). Ownership structure provides a system of corporate governance that improves the performance of managers while reducing agency cost (James, 1999). The term ownership structure has been defined by Abel and Okafor (2010) as the proportion of shareholding of institutions, manager, and investors in an organization. In other words, it is the ratio of interest held by debt and equity holders to the total issued share of an organization. One of the mechanisms that affects firm performance is ownership structure (Yusoff *et al.*, 2013). In fact, ownership structure seems to be the key that unlocks the success of a firm, and which is not likely to fail when properly instituted (Wilson *et al*, 2013; Ararat *et al.*, 2017).

In the management of working capital, there is need to pay attention to the size of the organization (Garcia-Teruel & Martinez-Solano, 2012). This is because small businesses have difficulty of meeting the requirements for raising funds from the capital market and getting credits from suppliers when compared to their large business counterparts. Given this reality that there will always be stringent conditions to earn credit from suppliers, business size regardless, organizations must adopt policies on working capital management that will assure their continuous floating. One of the strategies an organization can adopt is to have sufficient investment in short-term assets or moderate investment in current assets. Olanisebe (2019) opined that a firm sustains growth



by balancing working capital to meet operational expenses and short-term obligations. This should always be the case because where there are no sufficient short-term assets, illiquidity looms and where a company excessively invests in current assets, profitability is reduced which is an indication of poor performance (Rahman, 2019).

Owners of business must ensure that sound working capital management decisions is taken as an essential priority because it is one of the veritable tools for positive performance of the organization (Gill & Biger, 2013). Organizations will not always have the same result even if they adopt the same working capital management strategy. This is because business model and the level of participation differ. Managers of firms must be careful how working capital is being managed because this may affect liquidity and profitability in the long run. There are several studies carried out on the management of accounts payable and accounts receivable but only few have delved into investigating the effect of having owners participating fully in the day to day running of the affairs of the company and how that can influence firm performance. This study seeks to address this gap by examining the moderating role of ownership concentration in deciding accounts payable and accounts receivable policies and how that can affect performance in listed Industrial and Consumer Goods company in Nigeria vis-à-vis providing a more current empirical analysis on the issue in question, given that the study is brought up to the year 2021. To achieve the objective of the study, the following hypotheses have been formulated:

H0₁: Payable days have no significant effect on firm performance when it is moderated by ownership concentration in listed industrial and consumer goods companies in Nigeria.

H0₂: Receivable days have no significant effect on firm performance when it is moderated by ownership concentration in listed industrial and consumer goods companies in Nigeria.

II. LITERATURE REVIEW

Conceptual Framework

Accounts Payable Management

Credit facility from suppliers is an important source of finance that is readily available to organizations. This is what in finance is known as account payable on the current liabilities section of the financial statement. Accounts payables are unsecured short-term funding for firms that result from the acquisition of merchandise, claims Gitman (2009) He added that although suppliers could grant credit terms and discounts to a company, organizations must have procedures governing who has the authority to make purchases and how demand-driven purchasing is done to properly handle accounts payable. Haruna (2016) opined that the vendor mostly will give credit terms together with allowing discount to the purchasers. However, the essence of account payable management is to enable the purchasers pay in bits without necessarily destroying their credit rating. Utilizing the value of the relationship with the payee is a sound goal that should be highlighted along with having the optimum level of inventories as a result. Strong alliance between the company and its suppliers strategically improves production lines and strengthen credit record for future expansion (Feletiliki, 2011). He further added that deferral of payment for accounts payable is possible. This deferability is, however, only available to a certain amount; eventually, the supplier will stop working with businesses that persistently postpone payments (Belt, 1979), quoted in (Pieterse, 2012).

Accounts payable a major source of secured short-term financing available to an organization (Gitman, 2009). It is expressed in terms of the rate at which firms pay their suppliers. Managers should jealously guard the relationship with creditors through proper management of the repayment system. Creditors form the accounts payable, and it represents suppliers whose invoices for goods and services have been processed but for which payments have not been made. Such amount being owed to the suppliers is often seen as a free credit to the organization and as such, it is expected that management would establish a formidable tie with such suppliers to have an improved production lines and strong credit rating that will enhance expansion. Credit buying is crucial for effective cash management. Liquidity position of leading firms usually depends upon the management of accounts receivable, accounts payable policy and inventories conversion period of firm (Singh, 2004). Outflow of cash is triggered during purchase and where it is not properly controlled can cause liquidity problem for the organization. Management



of accounts payable is just as important as the management of accounts receivable.

Accounts Receivable Management

It is almost impossible that business can exist in today's world without selling their products on credit. This is solely because on daily basis, businesses are carving out bigger niche and craving for a larger share of the market to increase sales and profits (Haruna, 2016). Accounts receivable refers to the credit that a firm offers to its clients when they purchase goods or services, either in the form of trade credit to other businesses or consumer credit (Feletiliki, 2012). It refers to the option to purchase right now that the business offers to its final customers who have not yet made payment. Since the business depends on the repayment of this loan to survive, the success of the company's credit practices can have a big impact on how well it performs overall (Haruna, 2019). How to make sure that clients settle their debt in a timely manner is the management's main priority. Account receivable management addresses the delay in payment receipts after sales are complete (Haruna and Mshelia, 2016).

Meyer *et al.* (1992) averred that to establish an optimal credit extension policy, controllable variables such as credit terms, standards and collection efforts must be considered to control the level of receivables. This will also include grouping customers according to their credit worthiness and rating. The essence of this is to enable them avoid cost involved in the investigation of customers who do not fall within the credit worthiness group. A company should have a reason for collecting unpaid debts. According to Feletiliki (2012), there should be a comparison between the anticipated cost of credit extension and the anticipated profit that would be lost in the absence of credit to determine whether to extend credit to those who qualify. Trade credit is a marketing tactic typically employed by organizations to increase or maintain turnover, according to Anita (2012). However, effective receivables management combined with a shortened creditors' collection period, low levels of bad debts, and a sound credit policy will increase the businesses' capacity to draw in new clients and subsequently boost financial performance, necessitating the need for a sound credit policy. (Pandey, 2005). Low-quality accounts Management of accounts receivables can reduce a company's worth. This is supported by Michalski (2007), who concluded that a rise in an organization's level of accounts receivables leads to a growth in receivables, which both lower the firm's worth.

Ownership Structure

Ownership structure is made up of various aspects. These include, institutional ownership, family ownership, government ownership and ownership concentration. Ownership structure therefore has attracted the attention of financial analysts in measuring the performance level of an organization (Al Matariet *al.*, 2013). Berle and Means (1932) in the study of contemporary firm theory explored the conflicts of interest existing between business owners and managers and observed that most of the time, well diffused ownership will reduce the authority of the owners to control the management. This study uses the concept of ownership concentration to measure ownership structure and its role in moderating activities that influence firm performance. According to Shams *et al.* (2019) ownership concentration is a concept of corporate governance that seeks to pursue the interest of owners. Ownership concentration is determined by how much of shares is being held by owners and in this case should be 50 percent and above shareholding (Olanisebe, (2019). The essence of having such holding is to ensure control. In Ahmad *et al.* (2018) decisions regarding company restructure, auditor's selection and extraordinary transactions determines the level of performance and as a result, shareholders should have absolute influence. Past studies have shown that ownership concentration has a negative effect on firm performance. Poshakwale and Thapa (2011) found that ownership concentration can lead to the misappropriation of firm's resources. This is because shareholders with higher shareholding can take advantage of other shareholders with lower holding through their voting right. However, Tian and Twite (2011) suggested that ownership concentration could have a positive relationship with working capital management efficiency since endogenous ownership assures executives of the desire to efficiently operate the company. This is substantiated in Isidro and Raonic (2012), where it was averred that ownership concentration creates better corporate governance practices that coordinate the goals of different interest group.

Firm Performance

Firm performance indicates the overall performance and profitability of organizations. It is being measured by different variables such as profit before tax, profit after tax, return on equity, return on assets and so on. This study adopts return on assets (ROA) as the variable measure for firm



performance (Nnubia et al., 2017, Selvam et al., 2016; Babalola, 2013).

Return on Asset

A frequently utilized tool for analyzing financial accounts of a corporation is ratio analysis. It aids in illuminating a company's favourable and unfavourable conditions or financial situation. The financial ratio analysis provides insight into the company's financial performance. One indicator of a company's financial performance, return on asset (ROA), gives details on management duties in managing the resources entrusted to them. Return on Assets is a metric used to assess a company's efficiency in turning a profit from the usage of its assets. The management of his property or the implementation of cost control may be indicated by this percentage. After interest costs and taxes, the rate of return on total assets is frequently measured using the ROA (return on assets) metric. The business will benefit from the high Return on Assets (ROA).

Firm size

The quantity and variety of production capacity and potential that a firm possesses or the quantity and variety of services that a firm can offer its consumers simultaneously have been cited as indicators of a firm's size (Shaheen & Malik, 2012). Because of the phenomenon of economies of scale, a company's size is particularly important in today's world. Comparatively speaking to smaller businesses, larger companies may produce goods for a lot less money. Modern businesses want to grow to get a competitive advantage over rivals by reducing manufacturing costs and boosting market share. According to Abdurahman et al. (2003), the nature of the link between business size and profitability is a crucial issue that may provide insight into the elements that boost earnings. Numerous studies have attempted to investigate the impact of company size on profitability because size has been identified in the literature as a key component in determining organizational success.

Empirical Review

According to Abdullah (2022), family ownership as a kind of ownership concentration has a moderating effect on the relationship between working capital management and business profitability. For the years 2014 through 2019, a sample of 150 nonfinancial companies listed on the

Pakistan Stock Exchange were examined. Numerous family ownership proxies were used, and robust and bootstrapped quantile regression models were utilized. According to the study, working capital management and business profitability are positively correlated. The findings also show that family ownership has a negative moderating effect on the relationship between working capital management and business profitability. In conclusion family ownership impact on working capital management gives room to take advantage of surplus liquidity for private purposes. The study has a shortcoming in the sense that it examined the nexus between family ownership, working capital management and firm profitability in the context of a only developing country, which makes the outcome possibly not usable when a developed nation is involved. It was recommended that the degree of concentration be monitored to avoid unwarranted diversion of limited working capital to personal benefits.

Shams et al. (2019) tried to conduct a study on the moderating effects of institutional and managerial ownership on the impact of working capital on a company's financial performance. The period from 2011 to 2015 was covered, and a random sample of 77 companies was taken. Leverage, the average collection period, and quick ratio were found to have a negative association with firm performance using a fixed effect model, but current ratio, account payable, and inventory turnover had a significantly favourable link with firm performance. Although the researcher attempted to introduce the role of ownership structure in moderating managers' activities, the view centred on only two aspect of ownership structure – managerial and institutional ownership and considered in isolation of each other. According to the study, institutional ownership had a beneficial impact on the impact of working capital on company performance, while managerial ownership had a negative impact. Therefore, it was recommended that owners need to be involved in the management of the limited resources efficiently to achieve profitability.

The moderating effect of firm characteristics on the link between working capital management and firm performance was examined by Zalaghi et al. in 2019. The years 2011 to 2015 were covered by a random sample of 65 businesses. Leverage, average collection time, and quick ratio were shown to have a significant negative association with business performance using the fixed effect model, while current ratio, account payable, and inventory turnover were shown to have a substantial positive link with firm performance.



Also, working capital management and firm performance was positively influence through institutional ownership while managerial ownership negatively affected performance. The study, hence, recommended that the managers need to do more in managing limited resources for improved profitability. It is also recommended that owners must be directly involved in the management process and place a balance on the level of managerial ownership allowed in the organization.

The relationship between the Nzoia Water Services Company's average collection period and financial performance was studied by Wasike et al. in 2019. The study used published financial records from the Nzoia Water Services Company and the Kenya National Audit Office to gather secondary data for the years 2012 to 2016. Regression and correlation analysis were used to assess the secondary source data, which was acquired using an exploratory study approach. Analysis revealed a connection between financial performance. Therefore, it was advised that Nzoia Water Services Company shorten the time it typically takes to collect money to enhance their financial performance. The management of NZOWASCO was advised to implement a very active credit policy to assist prevent bad account receivables.

Benjamin and Gladys (2016) investigated the connection between listed manufacturing enterprises' financial performance and accounts payable as a source of funding. The study employed secondary data from Nairobi Securities Exchange and a census sample technique. To analyze the connection between accounts payable and business performance, a multiple regression model was used. The Pecking Order Theory was supported by the finding that there was a direct positive association between Accounts Payable and the dependent variables, Profitability and Liquidity. According to the study, finance managers and financial officers of businesses should develop a long-term relationship with their suppliers to access trade credit more quickly and easily. This is because increased use of trade credit improves business performance through higher profitability.

In their 2016 study, Duru and Okpe looked at how Nigerian industrial and home manufacturing enterprises managed their accounts payable. The company's financial statements were used to gather the data. Hypotheses were tested using multiple regression technique. The regressed results proved that the relationship between accounts payable ratio and profitability is statistically positive and significant. The question however is, how does employee retrenchment affect this outcome based on

the problem projected by the study. It was however concluded that since account payable when efficiently managed can raise the profit level of an organization, it must be properly managed. It was recommended that managers must ensure they keep a strong relationship with suppliers to ease pressure on cash position.

Samuel and Peter (2016) examined the accounts payable management practices of small, medium and micro enterprises in the Cape Metropolis, South Africa. A sample of 200 SMMEs was used, and data collected using a closed-ended questionnaire and analysed using descriptive statistics and inferential statistics. The result from the research showed that about 140 out of the sampled SMMEs purchase on cash basis while 44 of them purchase using both cash and credit means, while the remaining 16 SMMEs purchase on credit basis. 72% of those who purchase on credit usually pay the suppliers promptly to take advantage of discount facilities. Only 43% settled accounts payable on the last day that the payment is due. About 104 of the companies have adopted technology in the management of their accounts payable. The results further indicate that effective management of accounts payable is affected by shortage of personnel and time. The findings suggest that SMMEs are more likely to make cash purchases or pay promptly when making credit purchases, which may suggest that they had less negotiating leverage with suppliers who may have seen these businesses as risky ventures and were hesitant to grant credit terms to them. Based on the conclusions, this study advises that decision-makers at SMMEs be informed about the competitive benefits acquired by purchasing on credit, the most significant of which are increasing cash flow and forging supplier relationships. Additionally, the decision-makers might receive training, possibly with the help of the government, on how to get beyond the obstacles that prevent them from properly handling their accounts payable with computers. The outcome of the study is sectional and does not consider the peculiarity of regions. It concentrated on a particular region of the country which may give differing outcome when applied to a different region.

Siele(2018) examined on the relationship between Kericho Water and Sanitation Company Limited's financial performance and accounts receivable management. Data analysis was done using descriptive and inferential statistics from 2012 to 2016. The study found a negative correlation between inventory turnover and return on equity, indicating that enterprises might improve their



financial performance by cutting back on their days' worth of inventory. It was determined that the average collection period and region's size were statistically significant and had a positive association with return on equity, suggesting that if the debtor's payment duration is extended, so is overall financial performance. In order to improve their financial performance, the study advised businesses to lengthen their average collection periods, inventory turnover times, and accounts receivable turnover.

Ksenija (2013), cited in Duru et al. (2016), conducted study on how public companies listed on the Serbian stock exchange market managed their receivables during a downturn. The sample size was 108 businesses. Data covers the 2008–2011 financial crisis. According to the short-term impacts, there is a positive but insignificant relationship between accounts receivables and the two profitability dependent variables, return on total assets and operational profit margin. The study concentrated on account receivables and profitability during the crisis, which may not have produced the same results in an environment of economic stability. The findings indicated that during times of crisis, the effect of receivables on a firm's profitability changes. It was suggested that managers assist clients who are struggling financially.

Singh and Pandey (2008) also cited in Duru et al., (2016) studied working capital components and its impact on profitability of Athenian companies for period spanning 1990-2007. Using a sample of 131 firms to test for optimum level of account receivables and account payables that can yield increased profitability to an organization, they applied multiple regression on secondary data sourced from the annual reports of these companies. Results of the study showed that payable turnover ratio had significant impact on the profitability. It was concluded that efficient management require keeping each component of working capital at optimum level. The study recommended that since fixed and current assets play a vital role in business success, the management of working capital should be essentially handled to have direct impact on profitability and liquidity.

Raheman and Nasr (2007) examined the impact of several working capital management variables on the net operating profitability using a sample of 94 Pakistani companies registered on the Karachi Stock Exchange. Six years, from 1999 to 2004, were covered by the data. The outcome indicated that there was a bad correlation between profitability and average collecting time. Using the

natural logarithm of sales, it was possible to determine that firm size and profitability were positively correlated. They concluded that businesses could boost their profitability by effectively managing their cash, accounts receivable, and inventories. Therefore, it was advised that efforts be focused on effective management of current assets and current obligations as well as sufficient funding.

Theoretical Review **Pecking Order Theory**

The Pecking Order Theory was first mentioned by Donaldson in 1961 but was modified by Myers and Majluf in 1984. The theory suggests that organizations will take a first option of using internal source of finance when faced with investment opportunities. This according to the theory can be affected by the dividend policy of the organization and other economic factors. A generous dividend policy may require them to seek external source of finance and when this happens, they will opt for debt as the safest instrument and then hybrid securities as a last resort. In essence, pecking order theory explains how organization can allow cash flows determine leverage and that organization will result to taking debt as a source of financing only when there is pressure of internal funds shortage. This position is supported by Kessevin (2006), who asserted that Pecking Order Theory suggests that firms tend to rely on internal source of funds and would rather issue debt than issue equity if becomes necessary to raise external funds.

Information asymmetry serves as a powerful instrument to managers where it is efficiently utilized. Myers and Majluf, (1984) stressed the conflict that exist between managers and investor as a result of information asymmetry and that this has made organizations to prefer using internal source of finance to use external sources. Information asymmetry is a situation where a party has more information about the market than their counterparts which can create an imbalance in investment decision. Managers usually will have more information about performance in terms of business prospects, risks, and future outlook than other stakeholders. As a result of this imbalance, these stakeholders would desire higher return to cushion their risk. In essence, information asymmetry causes external investors to demand a higher rate of return to compensate for higher risk. Padachi (2006), confirmed that pecking order theory indicates that managers have more knowledge about the value creation of a firm than investors and this



influences their decisions on internal or external funding.

The density of information is also an area of concern for this theory. In Myers and Majluf (1984), it was argued that organizations will issue equity while building up cash reserve level during temporary low information asymmetry. This according to them is because knowledgeable managers can have information about the market that will resist the organization from financing their investment with equity issues. It becomes easier when an organization has a level of financial slack. There are varying positions on the theory of pecking order. However, information asymmetry is one important factor that determines firm's capital structure which is an area of working capital management (Fama & French, 2005). Myers and Majluf (1984) averred that an organization can be in a position where internal funding is insufficient to run operations and therefore will opt for a debt rather than go for equity. The bottom line of their argument is that equity source of funding is only considered when all capacity for debt issuance have been maximized.

Agency Theory

Jensen and Meckling popularized agency theory in 1976; it is a theory that is applied to explain and settle problems in the interaction between business owners and their agents. This kind of interaction most frequently exists between shareholders acting as principals and firm executives acting as agents. There is a chance that managers will engage in actions that may ultimately be detrimental to the business and stakeholders to gratify their own needs (Huang, 2011). He will create information gaps to only inform the investors what they should hear to make it simple for the managers to gratify his self-serving ambitions. Information asymmetry is prevalent, according to Fields, Lys, and Vincent (2001), when managers have more access to information than owners. This occurs because of the agent's access to information that is superior to that of the principal (Jensen & Meckling, 1976). The principal-agents dilemma that develops in these interactions is the subject of agency theory. It contends that managers may act in a self-serving and opportunistic manner (Davis, Schoorman & Donaldson, 2018).

The Risk Trade off Theory

The risk-return trade-off theory suggests high reward for taking high risk. There are several factors determining the appropriate risk-return trade-off. One of such is the investor's risk tolerance,

potential to replace lost funds and years of retirement. The theory was propounded in 1984 by Myers Stewart to explain the tax-bankruptcy view. He used this theory to associate low level of uncertainty with possible returns (vice versa). The risk-return trade-off theory states that as the level of risk taken rises, the potential return rises. In a nutshell, the theory suggests that the risk culture of an organization determines its earning culture.

Working capital decisions shows the risk-return nature of financial decision making. When the net working capital of a company is raised, the risk of not being able to meet arising obligations is reduced (Kamau and Ayuo, 2014). The flipside of it is that, increasing the net working capital will cause a reduction in firm's profitability (Ross, 2009). Since the process of transforming an investment in inventories and accounts receivables into cash for the company to employ in paying its operational costs, it is centre to the operating environment of the firm daily which enhances corporate performance measured by returns earned (Ross, 2009). The implication here is that the returns earned will be influenced by how much credit can be offered to customers and what policy is installed for prompt collection, how long can suppliers allow the firm before repayment for inventories purchased etc.

Nwidobie (2012), explained that working capital decisions involves the risk-return trade-off where investors will not take additional risk unless compensated with additional returns. In portfolio management, risk-return trade-off provides explanation to the nature of each investment mix being held with safeguards in place to make the most out of the mix with consideration to the risk nature of the investor. Risk-return trade-off theory applies to cash and account payable behaviour within the firm. Cash position is affected by how fast an organization pays its creditors and can determine profitability or otherwise which is an aspect of working capital management. Working capital decisions are characterized by risk-return trade-off with consideration to liquidity risk and opportunity loss risk (Caroline, Adamu, & Onwe, 2008). Hence, managers are expected to make decisions that will maximize shareholders' wealth, and this includes working capital decisions.

The risk trade off theory is the underpinning theory for this study. The theory proffers explanations on the management of investment mix available to an organization. This mix could come in terms of payable to suppliers matched against receivable from customers without mounting pressure on the cash level of the organization for daily operational activities. This



will involve taking into consideration the trade-off between extending trade credits and increasing the default risk involved on one hand as well as considering the short-term and long-term benefits of such arrangement on the other hand.

III. METHODOLOGY

The researcher adopts the ex-post facto research design for the study because data are already in existence on the financial statement and annual report thus, cannot be changed by the researcher. The non-experimental research methodology examined the moderating effect of ownership structure on the connection between working capital management and business performance in Nigerian industrial and consumer goods industries. This study's research methodology is based on positivism, which manipulates reality by changing just one independent variable to find patterns in and establish connections between some of the components of the social environment. The sample consists of 26 industrial and consumer goods businesses that are listed on the Nigerian Stock Exchange, and the data used spans a ten-year period from 2011 to 2020. The financial accounts were the source of the data used in the investigation. The pooled data were subjected to a multivariate correlation technique, and the degree of relationship was expressed as a correlation coefficient.

Firm performance is the dependent variable and is proxied by Return on Asset. On the other hand, payable and receivable management are the independent variables and is proxied by payable

days and receivable days. The model for the study is specified as follows:

3.1 Model Specification

In order to test the hypotheses formulated in this study and to achieve the objectives of the research, we followed the approach of Shams et al (2019), by adopting the following models;

MODEL 1

$$ROA_{it} = \beta_0 + \beta_1PAYD_{it} + \beta_2RECD_{it} + \beta_3FSIZ_{it} + \epsilon_{it}$$

..... equation (1)

Where,

ROA: Return on Asset

PAYD: Payable Days

RECD: Receivable Days

FSIZ: Firm Size

β : Interception of the equations.

ϵ : The error term.

MODEL 2

$$ROA_{it} = \beta_0 + \beta_1PAYD*OC_{it} + \beta_2RECD*OC_{it} + \beta_3FSIZ_{it} + \epsilon_{it}$$

..... equation (2)

Where,

ROA: Return on Asset

PAYD*OC: Payable Days*Ownership Concentration.

RECD*OC: Receivable Days*Ownership Concentration

FSIZ: Firm Size

β : Interception of the equations.

ϵ : The error term.

Table 3.2
Table showing measurement of variables

Variable	Nature	Definition	Source
ROA	Dependent	Return on equity, which is calculated by dividing net profit by the average assets of the organization, return on assets is a performance ratio. It's a sign of how well the business is using its assets and resources to generate more revenue.	Ararat 2003 and Bostanci 2010
PAYD	Independent	This is the proportion of trade creditors relative to cost of goods sold times 365 days.	Gitman, 2009; Birt et al. 2011 and Haruna 2016
RECD	Independent	This measures the trade debtors as a ratio of revenue multiply by 365 days.	Feletiliki 2011; Kulkanya 2012; Haruna, and Mshelia, 2016
FSIZ	Control	Log (Total Assets).	Gill, 2011; Salawu, 2014; Onalapo&Kajola, 2015 and Qurashi&



			Zahoor, 2017
OC	Moderating	Ownership Concentration/structure. The proportion of shareholding of institutions, manager and investors in an organization. In other words, it is the ratio of interest held by debt and equity holders to the total issued share of an organization. By law, ownership concentration is said to be equity ownership of 50% and above.	Abel & Okafor (2010) and Financial Regulations, 2019 (As amended)

Source: Researcher Compilation 2022

IV. RESULTS AND DISCUSSION

Table 1: Descriptive Statistics

stats	roa	payd	recd	fsiz
N	260	260	260	260
mean	142740.9	80.68027	96.03108	7.266077
sd	2301936	121.1403	59.44845	.9876293
variance	5.3012	14674.98	3534.118	.9754116
max	504	356.92	286.72	9.31
min	-1923.49	57	11.31	5.24
skewness	16.03134	5.864729	3.138025	-.1008154
kurtosis	258.0039	52.57565	19.0027	2.080699

Source: Author's Computation (STATA 14 Output Results based on study data)

According to Table 1, the average return on asset (ROA) for publicly traded Nigerian consumer and industrial products businesses was N142740.9, with an SD of 2301936 and a variance of 5.3. This shows that the sampled companies' ROAs differ by N2301936 from both sides of the mean, indicating that the data are highly skewed relative to their mean. The ROA also has a minimum value of -N1923.49 and a maximum value of N504, respectively. With a value of 16.031, the ROA data are positively skewed, with most of the data falling on the right side of the normal distribution. The data were abnormally distributed, as indicated by the kurtosis value of 258.0039, which is explained by the large range of -N1419.49. The table also reveals that the average payable days (PAYD) of Nigeria's listed consumer and industrial goods companies was 80.68, with an SD of 121.14 and a variance of 14674.98. This indicates that the PAYD of the sampled firms deviates from both sides of the mean by N121.14, indicating that the data is widely dispersed from its mean. The PAYD range has a minimum of 57 days and a maximum of 357 days, for a total of 300 days. With a coefficient of

5.8647, the data for PAYD are positively skewed, with most of the data falling on the right side of the normal distribution curve. The data were unusually distributed, as indicated by the kurtosis value of 52.5757, which is explained by the wider range of 300 days. In a similar vein, the sampled companies' average receivable days (RECD) during the study period was 96 days, with a standard deviation of 59 days and a variance of 3534.18. This indicates that the data are widely distributed from the mean because the RECD deviates from both sides of the average by 59. Additionally, the RECD has a range of 275 days with a minimum of 11 days and a maximum of 286 days. With a coefficient of 3.1380, the data for RECD are positively skewed, which indicates that the majority of the data lie on the right side of the normal distribution curve. The data were abnormally distributed, as indicated by the kurtosis value of 19.0027, which is explained by the large range of 275 days. The minimum and maximum receivable collection periods are 11 and 286 days, respectively, whereas the minimum and maximum



creditors' payment periods are 57 and 357 days, respectively. This comparison shows that the companies have a competent debt collection policy.

Additionally, Table 1 demonstrates that the studied businesses' average firm size (FIZE) is 7.2661, with an SD of 0.9876 and a variance of 0.9754. This demonstrates that FIZE vary by 0.99 from the mean on both sides, indicating that the data is highly skewed. The FIZE also has a range of 4.07 with a minimum value of 5.24 and a high value of

9.31, respectively. With a coefficient of -1008154, the data for FIZE are negatively skewed, with most of the data falling on the left side of the normal distribution curve. The data were not normally distributed, as indicated by the kurtosis value of 2.0807, which is explained by the large range of 4.07. It has been determined that the study's data are neither regularly distributed nor skewed based on their nature and degree of dispersion. As a result, diagnostic tests were required to determine whether the data were normal or not.

Table2: Test for Data Normality
Results of Shapiro-Wilk(W)Test for Data Normality

Variable	Obs	W	V	z	Prob>z
roa	260	0.03583	181.010	12.118	0.00000
payd	260	0.48941	95.855	10.636	0.00000
recd	260	0.75306	46.202	8.933	0.00000
fsiz	260	0.97425	4.834	3.673	0.00012

Source: Author's Computation (STATA 14 Output Results based on study data)

To assess how normal the data were, the study used the Shapiro-Wilk (W) data normality test. A variable that derives from a population with a normally distributed distribution was tested. At a significance level of 0.05, it was intended to test the null hypothesis that the data are not regularly distributed. Table 2 displays the test's outcomes. Table 2 displays that the W test coefficient for ROA is 0.03583, the Z-value is 12.118, and the P-value is 0.00000. A confidence level of greater than 95% indicated that the test was significant at 5%. The alternative hypothesis, that the data for ROA are normally distributed, was thus rejected, and the study accepted the null hypothesis that they are not normally distributed. This also holds true for the PAYD data, which has a W test coefficient of 0.4894, a Z-Value of 95.855, and a P-Value of 0.00000, indicating that the test was significant at 5% and with a confidence level above 95%. As a result, the study rejected the alternative hypothesis that the data for PAYD are regularly distributed and supported the null hypothesis that

they are not. The test was significant at 5% with a confidence level better than 95%, as shown by the W test coefficient of 0.7531 for RECD, with a Z-Value of 46.202 and a P-Value of 0.00000.

As a result, the study rejected the alternative hypothesis that the data for RECD are regularly distributed and also supported the null hypothesis that they are not. As a result, the study rejected the alternative hypothesis that the data for FIZE are regularly distributed and supported the null hypothesis that they are not. The results of the test show that the regression analysis cannot be done using ordinary least squares (OLS). A robust regression analysis was thus necessary for the models used in this investigation. The correlation between the variables serving as proxies for working capital and financial performance both before and after moderation is displayed in Table 3 below. It includes the study's variables' Pearson pairwise correlation coefficients. In Table 3 below, the correlation matrix is displayed.

Table3:CorrelationMatrix Analysis

roa	payd	recd	paydoc	recdoc	fsiz
1.0000					
0.6510	1.0000				
0.4604	0.2350	1.0000			
0.6182	0.9666	0.2027	1.0000		
0.3827	0.2046	0.8759	0.2499	1.0000	
-0.0099	-0.1622	-0.0396	-0.1029	0.1061	1.0000

Source: Author's Computation (STATA 14 Output Results based on study data)



Table 3 demonstrates that, with a correlation coefficient of 0.6510, ROA and PAYD have a statistically significant positive association. The results also showed a positive relationship between ROA and RECD, with a correlation coefficient of 0.4604 indicating that if RECD increases by one unit, it will cause ROA to increase by 0.4604 units and vice versa; ROA has a positive relationship of 0.6182 with payable days when moderated with ownership concentration (PAYDOC), so a unit increase in PAYDOC means ROA will increase by 0.6182 units. The Table also demonstrates that, when ownership concentration is mitigated, there is a positive link between ROA and

receivable days (RECD). The 0.3827 shows that this is the case. This suggests that, during the study period, RECD had a favourable impact on the ROA of Nigeria's listed consumer and industrial goods companies.

Table 3's outcome further demonstrates that during the study period, there was a bad correlation between the sampled enterprises' ROA and FIZE. The -0.0099-correlation coefficient suggests this. According to this, the ROA of publicly traded consumer and industrial enterprises in Nigeria decreased by 0.99 units for every unit that the FIZE increased throughout the period.

**Table4:Multi Collinearity/VIF Test
 Resultsof Multi Collinearity/VIF Test**

Variable	Model I		Variable	MODEL II	
	VIF	1/VIF		VIF	1/VIF
payd	1.09	0.9214	recdoc	1.09	0.918235
recd	1.06	0.9448	paydoc	1.09	0.920738
fsiz	1.03	0.9737	fsiz	1.03	0.968370
Mean VIF	1.06		Mean VIF	1.07	

Source: Author's Computation (STATA 14 Output Results based on study data)

Models one and two's multicollinearity test results are shown in Table 4. The findings showed that PAYD has a VIF of 1.09 at 0.9214 tolerance, indicating that the data for PAYD are not highly collinear with the data for other explanatory variables; RECD has a VIF of 1.06 at 0.9448 tolerance, indicating that there was no perfect collinearity between RECD and other independent variables; FIZE has a VIF of 1.03 at 0.9737 tolerance, indicating that the data for FIZE are not perfectly collinear. When ownership concentration (OC) was used in model II to moderate the variables for PAYD and RECD, the results showed that PAYDOC had a VIF of 1.09 at a

tolerance of 0.920738, indicating that there was no perfect collinearity between PAYDOC and other explanatory variables. In addition, the results showed that RECD had a VIF of 1.09 at a tolerance of 0.918235, indicating that there was no perfect collinearity between RECD. The absence of perfect multicollinearity among the independent variables is indicated by the mean VIF for all explanatory variables for models I and II being 1.06 and 1.06, respectively. VIF is less than 10 and tolerance level is greater than 0.10 in both models.

**Table5:Test for Heteroskedasticity
 ResultsofBreusch-Pagan/Cook-Weisberg test for heteroskedasticity**

	Model I		Model II	
	Chi ²	Prob > chi2	Chi ²	Prob > chi2
Hetest	0.21	0.6485	606.53	0.0000

Source: Author's Computation (STATA 14 Output Results based on study data)

For fitted values of ROA in Model I, Table 5 displays a Hetest Chi2 of 0.21, which is not significant at the 5% level of significance (P-Value = 0.6485). As a result, the study rejected the alternative hypothesis that the

data for the fitted values of ROA in model I had heteroskedasticity and accepted the null hypothesis, which is for homoscedasticity among fitted values of ROA. According to Table 5's findings, the fitted values of ROA



in Model II have a Hettest Chi2 of 606.53, which is significant at the 5% level of significance (P-Value = 0.0000). As a result, the study disproved the null hypothesis, which contends that heteroskedasticity does

not exist among fitted values of ROA, and supported the alternate hypothesis, according to which the data for fitted values of ROA has heteroskedasticity and require a robust regression.

Table 6: F-test Results

Pooled ordinary least square and fixed effects regression ascertained by the use of spam test for the appropriate model.

	Model I without Moderation		Model II with Moderation	
	Chibar ²	Prob.> chi ²	Chibar ²	Prob.> chi ²
F test	3.33	0.0000	0.92	0.5829

Source: Author's Computation (STATA 14 Output Results based on study data)

The results in Table 6 above for Model I (without moderation) show a F value of 3.3 and a corresponding P value of 0.000, both of which are less than 5% (0.05). As a result, the study rejects the null hypothesis and accepts the alternative hypothesis and concludes that Fixed Effect Regression is most appropriate for Model I. However, with regard to Model II (with moderation), the result of the F test revealed a F value of 0.92 and a corresponding P value of 0.

Table 7: Hausman test Results

The Hausman test was used to determine between random effect regression and fixed effect regression which is most appropriate. The null hypothesis of the test is that random effect Model is most appropriate, while the alternative hypothesis is that fixed effect model is most appropriate. The decision rule is to accept the null hypothesis if the P value is greater than 5% (0.05), otherwise accept the alternative hypothesis if the P value is less than 5% (0.05).

	Model I without Moderation		Model II with Moderation	
	Chibar ²	Prob.> chi ²	Chibar ²	Prob.> chi ²
Hausman test	2.85	0.4152	0.40	0.5271

Source: Author's Computation (STATA 14 Output Results based on study data)

The Hausman test result in Table 7 above is more than 5% and has chi2 values of 2.85 and 0.40 and corresponding probability values of 0.4152 and 0.5271 for Models I and II, respectively (0.05). This suggests that for both models, the random effect regression model is the more suitable.

Table 8: Breusch and Pagan LM test

	Model I without Moderation		Model II with Moderation	
	Chibar ²	Prob.> chi ²	Chibar ²	Prob.> chi ²
Breusch and Pagan LM test	34.92	0.0000	0.0000	1.0000

Source: Author's Computation (STATA 14 Output Results based on study data)

According to the results in table 6 above, model I's chi2 value is 34.92, and its associated probability value is 0.0000. In contrast, model II revealed a chi2 value of 0.0000 with a corresponding P value of 1.0000, which is greater than 0.05, and the study accepts the null hypothesis that Pooled OLS regression is most appropriate for the estimation of Model II. This implies that the null hypothesis is rejected, and the study concludes

that the random effect model is most appropriate for model I. Pooled OLS regression was shown to be the most suitable method for Model II analysis by the LM test. But model II's post-diagnostic analysis revealed that the model has a heteroskedasticity issue, which was fixed by running a robust regression. As a result, the robust regression's findings serve as the foundation for model II interpretation.

Table 9 Model II Results



Robust regression Number of obs = 259
F(3, 255) = 173.43

Prob > F = 0.0000

roa	Coef.	Std. Err.	t	P> t
paydoc	0.0119176	.0006805	17.51	0.000
recdoc	0.0100639	.0012985	7.75	0.000
fsiz	-30.46442	5.165315	-5.90	0.000
_cons	118.4262	38.06025	3.11	0.002

Source: Author's Computation

The model is suitable to explain the relationship expressed in the study, according to the F statistics value of 173.43 and a matching Prob.>F of 0.0000. The following provides further explanation of the type and degree of the link between the dependent variable and each of the study's independent variables in terms of coefficients, t-values, and p-values:

H0₁: Payable days have no significant effect on working capital management and firm performance when it is moderated by ownership concentration in listed industrial and consumer goods companies in Nigeria.

This section analyzed the effect of payable days on financial performance of listed industrial and consumer goods companies in Nigeria moderated by ownership concentration. The results as presented in Table 9 above showed that ownership concentration has a positive and significant moderating effect on the association between payable days and return on asset at 5% level of significance (ceff 0.0119, p=0.000). Based on the result, the first null hypothesis (**H0₁**) is rejected. This implies that ownership concentration moderates the effect of payable days on financial performance positively, and it is statistically significant.

This finding is consistent with those of Shams et al (2019), and Zalahi et al (2019), who found that ownership concentration has a positive and significant moderating effect on the relationship between payable days and return on asset. However, it is not in agreement with the findings of Samuel I and Peter (2016), who found that ownership concentration has a negative and insignificant moderating effect on the relationship between payable days and return on asset.

H0₂: Receivable days have no significant effect on financial performance of listed industrial and consumer goods companies in Nigeria when it is moderated by ownership concentration.

The results in Table 9 above revealed that receivables days when moderated by ownership concentration has positive and significant effect on financial performance at 5% significance level (ceff 0.01, t=0.000).

Based on the result, the second null hypothesis is rejected. This implies receivable in days moderated by ownership concentration has a positive and significant effect on financial performance. This finding is consistent with those of Shams et al (2019), who found that ownership concentration has positive and significant moderating effect on the relationship between receivables days and financial performance. However, the result contradicted the findings of Zalahi et al., (2019), who found that receivable days have a negative effect on financial performance when moderated by ownership structure.

V.

CONCLUSION AND RECOMMENDATIONS

The study came to the conclusion that ownership concentration significantly modifies the impact of payables days and receivable days on financial performance based on the findings of the analysis. Because increased use of trade credit improves performance, the study advises management of listed consumer and industrial goods companies in Nigeria to build long-term relationships with their suppliers in order to access trade credit more quickly and easily. It also suggests that management implement a very active credit policy in order to help prevent bad account receivables.



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