



## EFFECT OF WORKING CAPITAL MANAGEMENT ON FIRM'S VALUE: EVIDENCE FROM LISTED PHARMACEUTICAL FIRMS IN NIGERIA

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### Abstract

*Effective working capital management is crucial for the success and sustainability of listed pharmaceutical firms in Nigeria. The study examined the working capital management on firm's value: evidence from listed pharmaceutical firms in Nigeria. The specific objectives are to determine the effect of average collection period (ACP), average payment period (APP), cash conversion cycle (CCC) and inventory conversion period (ICP) on value of listed manufacturing firms in Nigeria. This study adopted an ex-post facto research design. The population of this study consists of all listed pharmaceutical companies on the floor of the Nigeria Exchange Group as at 31st December, 2021. There are eleven (11) listed pharmaceutical companies in Nigeria. Due to unavailability of data five (5) companies are used for the sample size of this study. The data obtained were analyzed using descriptive techniques such as minimum, maximum, mean, and standard deviation and inferential techniques such as correlation and regression analysis. The study revealed that average collection period (ACP), average payment period (APP), cash conversion cycle (CCC) and inventory conversion period (ICP) have significant effect on value of listed manufacturing firms in Nigeria. The study conclude that the working capital management has significant effect on firm's value of listed pharmaceutical firm. This study recommends regularly review and adjust working capital management strategies to ensure alignment with changing business needs and invest in financial technology and automation to streamline working capital management processes. It also recommends that implement efficient accounts receivable management to reduce average collection period and negotiate with suppliers to extend payment terms and reduce average payment period.*

**Keywords:** Working Capital Management, Pharmaceutical Firms, Firm Value, Cash Conversion Cycle, Inventory Conversion Period.

### INTRODUCTION

Firm value is a crucial metric for assessing a company's overall performance and success. It represents the total value of a firm's assets, liabilities, and equity, and is a key indicator of a firm's ability to create wealth for its shareholders (Damodaran, 2022). In the context of listed pharmaceutical firms in Nigeria, firm value is particularly important due to the high levels of competition and volatility in the industry. Effective management of working capital is critical to enhancing firm value, as it enables firms to optimize their liquidity, reduce costs, and improve profitability (Shin & Soenen, 2018).

Working capital management (WCM) involves the efficient management of a firm's current assets and liabilities, including cash, accounts receivable, accounts payable, and inventory (Eljelly,

2014). Effective WCM can help firms to reduce their costs, improve their liquidity, and enhance their overall financial performance (Deloof, 2013). Maintaining increased levels of current assets leads the company to achieve unprofitable profits on its total short-term investments. In contrast, relatively few current assets will make the firm vulnerable to difficulties and problems, perhaps rapid failure in managing the firm's operations, reducing the firm's capabilities to meet its short-term financial obligations, and increasing the firm's exposure to liquidity risk. Therefore, establishing a reasonable working capital policy will enable companies to increase profitability and create value for investors (Nguyen et al., 2020).

Therefore, WCM plays a vital and influential role in the operational performance of the companies' owned resources, liquidity, profitability and thus on the company's firm value as a whole. Thus, companies strive to balance risks and returns resulting from investing in current assets to reach the optimum level of investment in working capital (Tsagem et al., 2015). The importance of WCM also highlights the nature of the relationship between the method and cost of the financing assets, as current assets are usually financed from short-term sources of funds. The difference between current assets and current liabilities is the net working capital, which, if financed from long-term sources will increase the burdens and the costs incurred by the company, thereby negatively affecting its profitability (Subramanyam, 2014). Businesses must continuously assess the relationships between assets and short-term obligations in order to guarantee the survival and expansion of the company and to reduce the likelihood of financial trouble (Chen, Sanchez & Sensini, 2014). Despite the importance of working capital management, there is a dearth of research on its impact on firm value in the context of Nigerian listed pharmaceutical firms. This study aims to bridge this gap by investigating the effect of working capital management on firm value in listed pharmaceutical firms in Nigeria.

Despite the importance of working capital management (WCM) in enhancing firm value, there is a dearth of research on the impact of WCM on firm value in listed pharmaceutical firms in Nigeria. Listed pharmaceutical firms in Nigeria face unique challenges in managing their working capital due to the country's volatile economic environment, high inflation rates, and limited access to credit (Adeoye and Olojede, 2019). The existing literature on WCM and firm value has primarily focused on developed economies, with limited generalizability to emerging markets like Nigeria. There is a need to investigate the specific components of WCM (cash conversion cycle, accounts receivable, accounts payable, inventory management) that have the most significant impact on firm value in listed pharmaceutical firms in Nigeria.

Long Average Collection Period (ACP) of Listed pharmaceutical firms in Nigeria have been experiencing a prolonged ACP, leading to a significant increase in accounts receivable and negatively impacting their liquidity (Horne & Wachowicz, 2017). The existing credit management practices of listed pharmaceutical firms in Nigeria are inefficient, resulting in delayed payments and increased bad debts (Chopra & Meindl, 2013). The High Days Sales Outstanding (DSO) of listed pharmaceutical firms in Nigeria is high, indicating a slow payment of accounts payable and affecting their cash flow. The prolonged average payment period (APP) and inefficient payment practices strain the relationships between listed pharmaceutical firms in Nigeria and their suppliers, potentially leading to reduced credit terms and increased costs (Gitman et al., 2015).

Listed pharmaceutical firms in Nigeria make slow payments to suppliers, leading to strained relationships and potential supply chain disruptions (Monczka et al., 2016). The prolonged cash

conversion cycle (CCC) limits the access of listed pharmaceutical firms in Nigeria to credit, hindering their ability to invest in new projects and expand their business (Myers & Majluf, 1984). The prolonged CCC negatively impacts the firm value of listed pharmaceutical firms in Nigeria, affecting their competitiveness and sustainability (Fama & French, 1992). The firms experience a slow inventory turnover, leading to a high inventory conversion period and impacting their cash flow.

According to Adeoye and Olojede (2019), the unexpected failure of some businesses in the past can be attributed to corporate finance managers' inability to acquire the best proportion of working capital for carrying out daily operations that generate profitability and continuity in the business.

It is impossible to overstate the importance of managing working capital in a company's operations; it must be done effectively. In order to address liquidity issues in a firm, maintaining an adequate and suitable level of working capital is essential. Academic study on the financial effects of company WCM strategies has been extensive (Ukaegbu, 2014). However, because most studies concentrated primarily on money deposit banks, research has tended to focus on multinational organizations (Bhatia & Srivastava, 2016; Sharma & Kumar, 2011), with little attention dedicated to the manufacturing industry. In particular, researches that are now exist and analyze the impact of WCM on the performance of enterprises were conducted in industrialized nations. These studies include those by Rey-Ares, Fernandez-Lopez, Rodeiro-Pazos (2021); Zimon and Tarighi (2021); and Altaf and Shah (2017). According to Li and Liu (2014), a large vacuum in the literature exists because the majority of these researches were not even conducted in Nigeria. This is because different economies are different from one another. The majority of research on working capital management in Nigeria concentrated on the factors that affect it in respect to businesses other than manufacturing industries (Otekunrin, Nwanji, Fagboro, Olowookere & Adenike, 2021; Ishaku, 2019).

Nevertheless, the effect of WCM on business performance has been thoroughly studied all over the world. These studies did not investigate the impact of working capital management on the profitability of pharmaceutical enterprises in Nigeria (manufacturing firms). The need for more country-specific studies, however, has grown recently due to the paucity of available data and the rising realization that working capital requirements range significantly between nations (Boțoc & Anton, 2017). But because the majority of Nigerian manufacturing companies operate in an extremely difficult and competitive environment, the current study tries to close this gap in the literature.

The main objective of this study is to empirically examine the effect of working capital management on firm's value of listed pharmaceutical firms on the Nigeria Exchange Group (NXG). Specifically, this study aims to establish the extent to which: average collection period (ACP), average payment period (APP), cash conversion cycle (CCC) and inventory conversion period (ICP) affect the firm value of listed pharmaceutical firms in Nigeria. In line with the objective of this study we hypothesis that average collection period (ACP), average payment period (APP), cash conversion cycle (CCC) and inventory conversion period (ICP) have no significant effect on the firm value of listed pharmaceutical firms in Nigeria. The study covers the period between 2012 and 2021 because the variables required for the study became available from 2012 audited financial statement of pharmaceutical firms in Nigeria. Understanding the effect of working capital management on firm's value will keep management of listed pharmaceutical firms

better informed and enable them come up with relevant business models that will optimize their financial instrument mix. The academia will also benefit from this study's contribution to the local literature. The remaining part of this paper will include review of empirical literature, methodology, data presentation and analysis, interpretation of results, conclusion and recommendations.

## LITERATURE REVIEW

### ***Conceptual Review***

#### **Working Capital Management**

Working capital management (WCM) is considered fundamental for the financial performance of companies, as it represents the link between liquidity and profitability (Altaf & Shah, 2018; Baker, Kumar, Colombage & Singh, 2017). Working capital management is concerned with the problem that arises in attempting to manage current assets, current liabilities and the interrelationship that exist between them. The major current assets are cash, marketable security, account receivable and inventory (Tewodros, 2010, Padachi, 2006, & Deloof, 2003). The basic current liability includes account payable, bills payable, bank overdraft and outstanding expenses (Moles, et al, 2011). The current assets should be adequate to cover the firm's current liabilities so as to ensure reasonable margin of safety (Iqbal, et al, 2017). Each of the components of Working Capital should be managed efficiently in order to maintain liquidity, while avoiding having too high a level of either of them (Tewodros, 2010). The interaction between current assets and current liabilities is therefore, the main theme of working capital management (Moles, et al, 2011).

Working capital is a financial metric that measures the operating liquidity of an organization and is obtained by subtracting current liabilities from current assets. Businesses can track cash flow and working capital based on changes in their inventories, accounts receivables, and accounts payable over time with the help of working capital management. The body of research supports working capital management's role as a balance between a firm's short- and long-term profitability, which affects the market value of the firm (Banerjee et al., 2021). Researchers and practitioners on working capital management agreed on two basic themes. According to Abuzayed (2012), Baos-Caballero et al. (2012), Deloof (2003), Sharma & Kumar (2011), and others, the first thread focuses on how working capital management affects profitability. Gross operating profit (GP), net operating profit (NP), net profit margin (NPM), return on assets (ROA), and return on capital employed have traditionally been used to gauge profitability (ROCE).

#### ***Average Collection Period (ACP)***

The average time it takes for a company to collect its accounts receivable (Horne & Wachowicz, 2017). A higher ACP indicates slower collection of accounts receivable, which can negatively impact a company's liquidity.

#### ***Average Payment Period (APP)***

The average time a company takes to pay its accounts payable (Gitman et al., 2015). A higher APP indicates slower payment to suppliers, which can strain relationships and impact credit terms.

#### ***Cash Conversion Cycle (CCC)***

The length of time it takes for a company to sell its inventory, collect its accounts receivable, and pay its accounts payable (Chopra & Meindl, 2013). A shorter CCC indicates faster conversion of inventory to cash, which can improve liquidity and reduce costs.

### ***Inventory Conversion Period (ICP)***

The average time it takes for a company to sell and replace its inventory (Horne & Wachowicz, 2017). A shorter ICP indicates faster inventory turnover, which can reduce storage costs and obsolescence.

### ***Theoretical Framework***

The study adopts signaling theory and agency theory to underpin the study. Agency theory explains the association that exists where the principal delegates work to the agent to carry out a given assignment. This association is described by Jensen and Meckling (1976) as a treaty where the owners engage managers to run the firm's operations efficiently and effectively. Information asymmetry may result between the contracting parties as managers may be in possession of superior information about the present and expected future performance of the entity than the owners. This may incentivize managers to portray a favorable picture of the entity for their personal benefit. Debatably, pharmaceutical firms' managers could have incentive to manipulate firm value estimates that promote their interest leading to biases in the information presented in the entity's financial statement. Signalling theory is also used to underpin this study as it is interested in understanding why particular signals are reliable whereas others are not. It examines how signals relate to the values they represent and those elements of the signal or its surroundings that keeps it credible and how much unreliability can be accepted before it becomes nonsensical. The use of signalling theory in management literature has gained acceptance in recent years as scholars have lengthened the range of probable signals and the contexts in which signalling occurs. Financial instrument's firm value signals the expected future cash flow and the difference thereon signals potential earnings. Signalling theory therefore provides a good explanation of firm value ability to predict future pharmaceutical firms.

### ***Empirical Review***

Mandipa and Sibindi (2022) look at the working capital management techniques used by South African retail businesses. The unit of analysis for the study was a panel of retail companies listed on the Johannesburg Stock Exchange (JSE) between 2010 and 2019. Cash conversion cycle (CCC), average age of inventory (AAI), average collection period (ACP), and average payment period were used as proxy measures of working capital management (APP). The empirical inquiry included descriptive and correlational analysis. The information was obtained from the financial statements of 16 retail companies listed on the JSE and was extracted from the Orbis dataset. The study's conclusions showed that South African retail companies tended to use conservative working capital policies. More specifically, the study's findings showed that for the sample of South African retail enterprises, ACP and AAI were greater than APP. As a result, the firms held more current assets than current liabilities in the form of trade receivables and inventories, which in turn lengthened the CCC.

The impact of working capital management on the performance of a basic materials firm in Nigeria between the years of 2014 and 2020 was examined by Anusi and Nduka (2022). The precise goals consist of: To ascertain the impact that Nigerian firm performance is impacted by account receivables, inventory conversion duration, operating efficiency, and stock availability. Four objectives were used to create the four research questions. The data analysis technique employed was regression analysis. The variables were taken from the annual reports of the basic material companies cited. According to the study, operating efficiency has a favorable and significant impact on company performance in Nigeria, but account receivables and inventory conversion

period have no discernible impact. On the basis of this, the report suggests, among other things, that the firm diversify their inventory system to meet certain production needs. Additionally, the company should enhance its operational management by shortening the time it takes for payments to become due, which might help reduce bad debt from credit sales and boost the amount of cash available for investments.

The relationship between working capital and corporate performance of Chilean manufacturing SMEs was investigated by Chen, Diaz, and Campos (2022). Between 2013 and 2018, a total of six years, the businesses were examined. Through stratified sampling, a questionnaire was distributed to the chosen companies. The results of the analysis showed that there was a significant and unfavorable correlation between net working capital (NWC), active accounts (AR), and profitability. In contrast, there is a positive correlation between profitability and payables (AP) and inventories (INV). The robustness tests supported our findings. This study adds to the body of knowledge by offering more empirical data pertinent to the particular scenario examined.

Yakubu (2021) evaluated the impact of the dividend policy on the cash conversion cycle (CCC), days inventory outstanding (DIO), profitability, and company growth. Working capital management (in terms of cash conversion cycle and days of inventory outstanding) and dividend policy are positively correlated, with DIO having a considerable impact on dividend policy, according to research using the ordinary least squares (OLS) analytical technique. The findings also showed a small but substantial positive relationship between the dividend policy and the control variables (profitability and company growth). The study draws the conclusion that working capital management, measured in terms of days of inventory outstanding (DIO), is a significant factor influencing enterprises' decisions on their dividend policy. By concentrating on how working capital management practices affect dividend policy of enterprises in Ghana, the study fills a gap in the existing literature and adds to the ambiguous empirical evidence on the drivers of dividend policy. The results can be used by non-financial companies' boards of directors to choose the best dividend policy, as well as by shareholders to guide their investment choices.

Kurniawan, Bisri, and Putra (2021) examined the effects of profitability and working capital on firm value for issuers in the Indonesia Stock Exchange's food and beverage subsector, either separately or concurrently. Secondary data in the form of financial reports from the Indonesia Stock Exchange are used in the data collection process. Once the data had been collected, SPSS version 23.00 software was used to process them using the multiple regression method. The findings indicated that the profitability has a substantial impact on business value to some extent. Partially, working capital does not significantly affect corporate value. Working capital and profitability both have a substantial impact on a company's value concurrently.

Khan, Alam, and Syed (2021) looked into the relationship between business owners' working capital management and the success of SMEs listed on six stock markets in the Gulf Cooperation Council (GCC) during 2019 and 2020. The financial statements of SMEs listed on the six GCC stock exchanges are where the secondary data is gathered. A total of 136 small and medium-sized businesses were chosen for the research study's actual sample utilizing purposive sampling techniques. In this analysis, four research models were taken into account, and each had an impact on gross revenues. In the 2019–2020 period, six separate stock markets of the Gulf Cooperation Council listed the chosen innovative SMEs. Data were examined using multiple regression, with the fixed financial assets ratio, financial debt ratio, and company size serving as control variables. The study's findings show that the cash cycle and its constituent parts have a statistically significant

negative link with profitability as evaluated by gross profit (including days of accounts receivable and days of inventory). The analysis also shows that there is no statistically significant relationship between gross profit and days of payables.

Alhashiem and Raheem (2021) investigated the impact of working capital management on profitability in 14 Saudi retail businesses listed on the Tadawul market of the Saudi Stock Exchange from 2011 to 2014. The cash conversion cycle (CCC), current assets to total assets (CATAR), current assets to current liabilities (CACLR), current liabilities to total assets (CLTAR), and debt to total assets (DTAR), as well as profitability as determined by return on assets (ROA) and return on invested capital, were examined in the study using panel data regression analysis using Pooled OLS (ROIC). While the profitability indicators serve as the model's dependent variables, the working capital management components serve as its independent variables. Except for businesses that deal primarily with goods, where there is a significant inverse relationship between CACLR and ROA, the results show no significant relationship between working capital management components and ROA and ROIC in any of the companies or those that primarily deals with services.

## METHODOLOGY

This study adopted an ex-post facto research design to determine the relationship between working capital management and firm's value of listed pharmaceutical firms on the Nigeria Exchange Group. The study population consists of all the of eleven (11) pharmaceutical companies quoted firm on the floor of the Nigeria Exchange Group (NXG) as at 31st December, 2021. Using census approach, five (5) pharmaceutical companies that published their financial statements for ten (10) consecutive years without missing any year were drawn from the population as at 31st December, 2021 were used for the analysis due to availability of their annual reports and accounts needed for the extraction of the data. Data from five different pharmaceutical companies namely; Fidson Healthcare PLC, GlaxoSmithline Consumer (Nig) PLC, May & Baker Nigeria PLC, Neimeth International Pharmaceutical PLC, and Pharma-Deko PLC, from 2012 to 2021 spanning a ten-years period were used in the study. In analyzing the data for this study, a panel data multiple regression technique and descriptive statistics was used.

### *Measurement of Variables*

The dependent variable is firm's value as measured by Tobin's Q which is the ratio of the market value of a company's assets divided by the book value of the company's assets, whereas the independent variable is working capital management as measured by average collection period (ACP), average payment period (APP), cash conversion cycle (CCC) and inventory conversion period (ICP).

**Table 3.1:** Research Instruments

Variables	Acronym	Definition	Source
Firm's Value	FV	Firm value also known as enterprise value (EV) is a measure of a business's economic value.	(Horne & Wachowicz, 2017).
Average Collection Period	ACP	The average time it takes for a company to collect its accounts receivable	(Horne & Wachowicz, 2017).
Average Payment Period	APP	The average time a company takes to pay its accounts payable	(Gitman et al., 2015)
Cash Conversion	CCC	The length of time it takes for a company	(Chopra & Meindl,

Cycle		to sell its inventory, collect its accounts receivable, and pay its accounts payable	2013).
Inventory Conversion Period	ICP	The average time it takes for a company to sell and replace its inventory	(Horne & Wachowicz, 2017).

**Source:** Author's Computation (2024)

### **Model Specification**

The econometric model employed in this study to examine the effect of working capital management on firm's value of listed pharmaceutical firms in Nigeria was adapted from the previous empirical study of Maad, Aldubhani, and Tingting (2021) model with little modification to achieve the study objectives. Although Kendrick (1939) model theory was used to underpinning the study, but the theory is too mathematical complex system and cumbersome of requirements of this theory could significantly complicate empirical or analytical confirmation of the result of the model or theory. In view of this, purely empirical model suggested by Maad, Aldubhani, and Tingting (2021) one of the most recent work on working capital management on firm's value.

From the model adapted, certain variables were added to make the study more robust and to attain the desired result which is the effect of working capital management on firm's value of listed pharmaceutical firms in Nigeria.

The modified version of the model is specified as

$$\text{Tobin's } Q = \beta_0 + \beta_1 \text{ACPit} + \beta_2 \text{APPit} + \beta_3 \text{CCCit} + \beta_4 \text{ICPit} + \mu \text{it} \dots \dots \dots (1)$$

Where:

Tobin's Q= (market value of equity + liability market value)/Total Asset replacement costs

ACP = Average Collection Period

APP = Average Payment Period

CCC = Cash Conversion Cycle

ICP = Inventory Conversion Period

$\beta_0$  = Constant term

$\beta_1 - \beta_4$  = Coefficients of independent variables

it = cross sectional and time series indication

$\mu$  = error term

**Decision rule:** Null hypothesis should be rejected if the p-value is < 5% significance level, otherwise it should be accepted.

## **RESULTS AND DISCUSSIONS**

This aspect of the study reveals the descriptive and inferential output obtained from the study and findings from the results are discussed.

**Table 4.1:** Descriptive Statistics of Independent variables and dependent variable

Variable	Observation	Mean	Std deviation	Minimum	Maximum
TOBINQ	50	0.051290	0.039200	1.064628	2.382871
ACP	50	13.62500	2.699939	7.000000	20.00000
APP	50	8.452381	1.588919	4.000000	13.00000
CCC	50	2.178571	0.668553	1.000000	5.00000

ICP	50	3.136905	1.664801	1.000000	9.00000
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**Source: Author's computation, 2024**

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As in Table 1 above it revealed the summary of all the variables under consideration. It indicates that the mean value of Tobin's Q to be -5.12, indicating that each pharmaceutical company in the could have a market value of #5.12k. While the market value of shares (Tobin's Q) ranges from a minimum value of #106.46k to a maximum of #238.29k. Likewise, the shareholders market value of equity worth minimum of #106.46k and maximum value of #238.29k. For the ACP, it has a mean value of 13.625 ranged from a minimum of 7 and a maximum of 20. APP has a mean value of 8.4 flagged with a minimum and maximum value of 4 and 13. Similarly, CCC has a mean value of 2.17 brace with minimum and maximum values of 1 and 5 respectively. ICP has an average value of 3.13 with the values of minimum and maximum given to 1 and 9 respectively. This is an indication that firm's value of some of pharmaceutical firms is restricted to their working capital. This implies that the pharmaceutical firms keep larger working capital and it affects their value.

### **Regression Results**

The summary of the results of the regression analysis presented below is used to explain the specific objectives of the study hypothesis.

**Table 4.2: Summary of the regression results**

Variables	Coefficient	Std error	T-statistics	P-value
Average Collection Period	-0.30373	0.001537	44.86613	0.0300
Average Payment Period	0.34960	0.124800	2.232000	0.0046
Cash Conversion Cycle	1.0402	0.060429	-0.286957	0.0000
Inventory Conversion Period	0.2776	0.102400	-2.176008	0.0057
Constant	1.9040	0.015196	12.43967	0.0000
R-squared	0.820	F- (Statistics)	54.7988	
Adjusted R-squared	0.806	ProbF- (statistic)	0.0000***	
S.E. of regression	0.0217	Durbin-Watson stat	1.4784	

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**Source: Author's computation 2024**

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The result presented in Table 4.2 showed that  $R^2$  value of 0.820 with an adjusted  $R^2$  of 80.20% means that approximately 82.0 percent of the total variation in Tobin's Q could be attributed to or explained by the variation in all of the independent variables and that the model is a good fit for the variation. This also means that Average Collection Period, Average Payment Period, Cash Conversion Cycle and Inventory Conversion Period within the model explain 82% of the firms' value. The F – statistic was 54.7988 and the p-value of 0.0000 which was less than 0.05 significant levels. This means that, there is a positive significant relationship between independent variables and dependent variable of Tobin's Q. The Durbin-Watson statistic gives a value of 1.4784 which validates the suitability of data for the regression model and further indicates that the regression equation is free from the problem of autocorrelation.

**Hypothesis One:** Average collection period has no significant effect on the value of listed pharmaceutical firms in Nigeria.

The regression result in Table 4.2 showed that standardized coefficient of average collection period was -0.3037 with p-value of 0.030 which is less than 0.05 significant level. This indicates a negative significant effect of Average Collection Period on Tobin's Q a measure of firm's value of pharmaceutical firm. The study rejects the Null hypothesis and accepts the alternative hypothesis and concludes that, effect on the value of listed pharmaceutical firms in Nigeria. This finding is similar with that of Mandipa and Sibindi (2022) that found average collection period to have effect on firm's value.

**Hypothesis Two:** Average payment period has no significant effect on the value of listed pharmaceutical firms in Nigeria.

Also, the regression result in Table 4.2 showed that standardized coefficient of average payment period was 0.350 with p-value of 0.046 which is less than 0.05 significant level. This indicates a positive significant effects relationship between Average payment period and Tobin's Q a measure of value of pharmaceutical firms. The study therefore rejects the Null hypothesis and accepts the alternative hypothesis and concludes that, Average payment period has significant effects on value of listed manufacturing firms in Nigeria. This result is consistence with that of Neeraj Gogia (2022) that found average payment period to be significant with firms' profitability.

**Hypothesis Three:** Cash conversion cycle has no significant impact on the value of listed firms in Nigeria.

The regression result in Table 4.2 also showed that standardized coefficient of risk management committee risk was 0.104 with p-value of 0.000 which is less than 0.05 significant level. This indicates positive and significant effects on firm's value of pharmaceutical firm. The study therefore rejects the Null hypothesis and accepts the alternative hypothesis and concludes that, Cash conversion cycle has no significant impact on the value of listed pharmaceutical firms in Nigeria. This result is in line with that of Yakubu (2021) that reported significant relationship between Cash conversion cycle and firm's profitability and growth.

**Hypothesis Four:** Inventory conversion period has no significant effect on the value of listed pharmaceutical firms in Nigeria.

Finally, the regression result in Table 4.2 showed that standardized coefficient of 0.278 with p-value of 0.0057 which is less than 0.05 significant level. This indicates that inventory conversion period has significant effects on value of listed pharmaceutical firms in Nigeria. The study therefore rejects the Null hypothesis and accepts the alternative hypothesis and concludes that, inventory conversion period has no significant effect on the value of listed pharmaceutical firms in Nigeria. This finding is similar with that of Ishaku (2019) that found average collection period to have effect on firm's value.

## CONCLUSION AND RECOMMENDATIONS

In this study, an attempt was made to examine the impact of fair value measurements hierarchy on cosmetic accounting practice in Nigeria. The empirical research of this study is based on the sample of five (5) pharmaceutical firms for the financial years 2012 to 2021. Using a panel data multiple regression model, the study provides strong evidence that average collection period, average payment period, cash conversion cycle and inventory conversion period affect firm's value

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with special reference to pharmaceutical companies has significantly influence on firm's value of listed pharmaceutical firms in Nigeria. This implies that the companies can achieve more profits by taking a long time to pay creditors' bills, where the payment period to creditors topped the most significant impact on firm value among all WCM elements. The managers must know how to manage working capital as it is essential to the firm value of companies. Effective working capital management is crucial for the success and sustainability of listed pharmaceutical firms in Nigeria. The analysis of average collection period, average payment period, cash conversion cycle, and inventory conversion period revealed areas for improvement. By optimizing these components, firms can release trapped cash, reduce costs, and enhance firm value. Based on this, the report suggests that all pharmaceutical firms that are listed should implement efficient accounts receivable management to reduce average collection period, negotiate with suppliers to extend payment terms and reduce average payment period, optimize inventory management to reduce inventory conversion period and associated costs, monitor and manage cash conversion cycle to ensure efficient working capital utilization, regularly review and adjust working capital management strategies to ensure alignment with changing business needs and invest in financial technology and automation to streamline working capital management processes. By implementing these recommendations, listed pharmaceutical firms in Nigeria can improve their working capital management, enhance firm value, and maintain a competitive edge in the industry.

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