

## WORKING CAPITAL MANAGEMENT INDICATORS AND FINANCIAL PERFORMANCE OF NON-FINANCIAL FIRMS LISTED ON NIGERIAN EXCHANGE GROUP

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### Abstract

*Working capital management is the engine of the business, so indicators are pointers to financial crisis and liquidity of firms. This study analyzed the effect of working capital management indicators on financial performance of non-financial firms listed on Nigerian Exchange Group for the period, 2008-2022. The indicators used were cash conversion cycle, Net liquid balance and Working capital requirements. The research adopted the ex-post facto, with secondary data obtained from annual reports of the sixteen (16) selected firms. With the use of Feasible generalized least squares (FGLS) regression analysis, the hypotheses were subjected to test and showed that, Net liquid balance, Cash conversion cycle and Working capital requirement had a significant effect on Return on assets and Return on equity. The study noted that the coefficients of Net liquid balance and Working capital requirement added more value to the Return on assets and Return on equity, more than Cash conversion cycle and then recommended that to enhance the Return on Assets and Return on Equity, non-financial firms should focus on the use of Net Liquid Balance and Working Capital Requirement, which have been shown to be better predictors of financial performance. Alongside, minimize their Cash Conversion Cycle, manage their net liquid balance and align their Working Capital Requirement with their operational needs. Since maintaining an appropriate balance between liquidity and profitability is crucial, firms should strive to optimize their cash and liquid assets to meet operational needs while ensuring that excess liquidity is invested wisely to generate returns.*

**Key words:** *Working capital management indicators, working capital requirement, net liquid balance, cash conversion cycle*

### Introduction

Working Capital Management is certainly the engine force of every organization, as the mismanagement of Working Capital can wreak havoc or bring about the winding up of such organization. The place of Working Capital Management cannot be over-emphasized and as observed from the literature, most researches on Working Capital Management made use of Cash Conversion Cycle, Account Payables or Account Collection Period, Account Receivables or Account Payment Period (in Days), Inventory or Inventory Period to demonstrate the components of Working Capital Management and to give a view of the level of liquidity of the

firm or the sector under study. Few studies like Shulman and Cox (1985), Moradi et al. (2012) used Net Liquid Balance and Working Capital Requirement and with the view that the later were better indicators of Working Capital Management, in terms of predicting financial crisis and the liquidity of a firm, as they distinguished cash, short-term marketable securities and short-term borrowing, as being results of financial decision and not closely related to the firm's operating cycle and should not be considered as part of the firm's investment in working capital. It is based on these findings and the paucity of such researches that have used net Liquid balance and working capital management in the literature that this study sought to do an analysis of the cash conversion cycle, net liquid balance and working capital requirement as indicators of Working Capital Management, in order to ascertain which indeed is a better predictor for firm's liquidity. To do this, non-financial firms were employed, which involves every other sector except the financial sector. The other sectors from which firms were employed are; Services sector, Information and Communication Technology sector, Natural resources sector, Construction/Real estate sector, Oil and gas sector, Industrial goods sector, Consumer goods sector, Conglomerates sector, Healthcare sector and Agricultural sector.

### **Objective of the study**

The main objective of the study is to do an analysis of the effect of Working Capital Management indicators, on financial performance of non-financial firms on the Nigerian Exchange Group.

The specific objectives are:

- i. To determine the extent to which Cash Conversion Cycle affect Return on Assets of selected non- financial firms listed on Nigerian Exchange Group.
- ii. To find out if Cash Conversion Cycle significantly affect Return on Equity of selected non-financial firms listed on Nigerian Exchange Group.
- iii. To ascertain the extent of effect of Net Liquid Balance and Working Capital Requirement on Return of Assets of selected non-financial firms listed on Nigerian Exchange Group.
- iv. To determine the effect level of Net Liquid Balance and Working Capital Requirement on Return of Equity of selected non-financial firms listed on Nigerian Exchange Group.

### **Research Hypotheses**

- i. Cash Conversion Cycle do not significantly affect Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group.
- ii. Cash Conversion Cycle have no significant effect on Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group.
- iii. Net Liquid Balance and Working Capital Requirement do not have significant effect on Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group.
- iv. Effect level of Net Liquid Balance and Working Capital Requirement on Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group is not significant.

## Conceptual Review

### Concept of Working Capital Management

Working Capital Management has to do with the workings, inter-relations, interactions of the current assets and current liabilities of the firm, in order to make maximum use of the both to achieve the desired goal of the organization, which is geared towards liquidity and profitability. Eljelly (2004) described effective working capital management as the capacity to manage current assets and current liabilities in a way and the firm must be in the position to easily pay of all the uncertain obligations whenever it urgently required. According to Napompech (2012), working capital management has to do with planning and controlling of current assets and current liabilities in a manner that eliminates the risk of inability to meet short-term obligations on one hand and exclude excessive investment in current assets on the other. Qazi et al. (2011) also stated that working capital management is an accounting strategy focusing on maintaining efficient levels of current assets and current liabilities in respect to each other.

### Importance of Working Capital Management

Sen and Oruc (2009), explained that working capital management is consequential to a firm and that is usually explained by the relationship between working capital management and profitability. Ikpefan and Owolabi (2014) gave more light on the importance of working capital management as they attributed the accelerated recovery from global economic meltdown to efficient working capital management by businesses. Currently, the novel, COVID 19 lockdowns, and disruptions to business activities also brought to play the importance of working capital management. Ajao and Nkechinyere (2012) assert that working capital management seeks to maintain an optimum balance of each working capital component thereby ensuring that firms operate with sufficient fund that will service their long term debt and satisfy both maturing short-term obligations and upcoming operational expenses. This therefore makes it more glaring that working capital management has a vital role to play in a firm's drive to achieve great profitability.

**Cash Conversion Cycle:** the cash conversion cycle is used in measuring cash management and it represents the interaction between the components of working capital and the flow of cash within a company (Wang 2002) Cash conversion cycle can also be used to determine the amount of cash needed for any sales level; it is the period of time between the outlay of cash on raw materials and inflow of cash from the sales of finished goods and represents the number of days of operation for which financing is needed (Ojeani 2014). Uyar (2009) posits that the longer the cash conversion cycle, the greater the amount of investment required in working capital. According to him, the length of cash conversion cycle depends on the on the length of: the inventory conversion period, the trade receivables collection period; and the trade payables deferral period. The length of the cash conversion cycle (CCC) is given by:

$CCC = \text{Inventory days} + \text{Trade Receivables days} - \text{Trade Payables days}$ .

### Working Capital Requirements (WCR) and Net Liquid Balance (NLB)

Shulman and Cox (1985) in an integrative approach to working capital management introduced a liquidity indicator aimed at measuring the net amount of liquid financial assets and obligations along with an integrated expression that demonstrates the direct impact changes in operating resources have on a firm's financial liquidity position. They classify Net Working Capital (NWC) components into financial and non-financial items and refer to these as Net Liquidity Balance (NLB) and Working Capital Requirements (WCR) respectively. Thus, the integrated expression of net working capital is given as:  $NWC = NLB + WCR$ . Net Liquid Balance (NLB)

encompasses all liquid financial assets minus all liquid financial obligations and WCR are defined as the difference between current requirements and resources which represent spontaneous items associated exclusively with the operating cycle. A firm's Working Capital Requirement (WCR) are similar in terms of interpretation to its financial needs.

## Theoretical Review

### The Cash Conversion Cycle Theory

The cash conversion cycle theory approach was developed by Richards and Laughlin (1980). In their work, Richards and Laughlin saw the need to have a critical look at working capital management and its individual components. They felt, that, although a substantial portion of financial manager's time is spent on decision relating short-term assets and liabilities, little attention has been given by most of the literature and researchers in this direction. Accordingly, they describe the receivables, inventories and payables as the constituents of the cash conversion cycle model. The theory of the cash conversion cycle centers on explaining a cycle that begins from the payment for the purchase of raw materials, through to its transformation and the emergence of new product, to the collection of receivables from the buyers and possible debtors of the interaction as a result of the stock sale. Therefore, in the overall, one can conveniently say that the cash conversion cycle theory is the most central one in explaining working capital management as it is concerned with all the concepts and components, ranging from raw materials to finished products, and outputs representing inventory levels, to receivables and payment representing the cash aspect.

## Empirical Review

Gimba et al. (2022) examined the effect of working capital management on financial performance of 11 listed Industrial firms in Nigeria from 2011-2020, using cash conversion cycle, account payable and account receivables as indicators of working capital management and return on assets to measure performance. The study used secondary data, which was subject to least square regression and the result showed that CCC and account payable had insignificant effect on return on assets, while account receivable had a negative significance. So the study recommended that Industrial firms should ensure that inventory is adequate to meet customer demands at all times, while at the same time, minimizing cash conversion cycle of converting inventory into cash. Aldubhani et al. (2022) investigated the impact of working capital management on profitability using 10 manufacturing firms in Qatar for the period 2015-2019. Average collection period, inventory turnover, average payment period and cash conversion cycle was used to proxy working capital management, while profitability was measured by operating profit margin (OPM) return on assets, return on capital employed and return on equity. Multiple regression analysis was used to test data which showed that companies with shorter receivables collection periods and CCC are more profitable. Longer inventory turnover periods and account payables payment periods are related to higher profitability of the firms. Recommended that managers must know how to manage working capital as it is essential to the profitability and performance of companies. Oseifuah and Gyekye (2017) investigated the impact of working capital management on shareholder's wealth creation for a ten (10) years period 2003-2012, using 75 firms as sample, total of 335 non-financial firm listed on the Johannesburg stock exchange. Panel data regression method was used to analyze data extracted from the annual report of this companies. The traditional indicators used were; cash conversion cycle (CCC), inventory conversion period (ICP), receivable conversion period (RCP), and payable deferral period (PDP). The findings showed that both cash conversion cycle, inventory conversion cycle and receivable conversion period are significantly positively related to the

firm's value.

Moradi et al. (2012) examined the working capital management of the chemical and medicine listed companies in Tehran stock exchange as its relates to financial crisis, using working capital requirement (WCR) and net liquid balance (NLB) as indicators of Working Capital Management, and debt ratio, operating cash flow and growth rate of company to proxy the dependent variable. The data was analyze using the regression model and at the end the findings showed that debt ratio made more impact on reduction working capital requirement compared to medicine industry. They recommended same study be done in other industries that have important role to play in their countries economy. Vaicondam et al. (2016) examined the impact of capital investment on working capital management for a period of five (5) years, 2007-2011, using the Technology firms limited in the Main Board of Bursa, Malaysia. Working Capital Requirement (WCR) and Net Liquid Balance (NLB) were used as indicators of Working Capital Management. Regression analysis was used to analyze data and found that; capital expenditure established a positive significant impact on Working Capital Requirement, and a negative impact on Net Liquid Balance.

### Research Design

The study adopted the *ex-post* research design, because researchers intend to use available data. The population of the study comprised all the non-financial firms listed on the Nigerian Exchange Group, which are one hundred and six (106) as at 31<sup>st</sup> December, 2022. This study will cover a period of fifteen (15) years, 2008-2022. Purposive sampling was adopted in this research work to get the sample size. On account of the above, sixteen (16) companies were selected across the non-financial sectors. These data was collected from the audited annual accounts and reports of non-financial firms listed on the Nigerian Exchange Group. In this research, in order to evaluate the performance of working capital management of selected non-financial firms listed on the Nigerian Exchange Group, Cash Conversion Cycle, Net Liquid Balance and Working Capital Requirements will be used as a working capital management proxy, while Return on Assets and Return on Equity will be used as independent variables. In order to estimate the model and examine the proposed hypotheses, explicit linear regression model will be used. Thus, the regression equation is proposed as follows:

$$ROA_{it} = \alpha_0 + \beta_3 CCC_{it} + \xi_{it} \dots \dots \dots \text{eq 1}$$

$$ROE_{it} = \alpha_0 + \beta_3 CCC_{it} + \xi_{it} \dots \dots \dots \text{eq 2}$$

$$ROA_{it} = \alpha_0 + \beta_4 NLB_{it} + \beta_5 WCR_{it} + \xi_{it} \dots \dots \dots \text{eq 3}$$

$$ROE_{it} = \alpha_0 + \beta_4 NLB_{it} + \beta_5 WCR_{it} + \xi_{it} \dots \dots \dots \text{eq 4}$$

$$ROA_{it} = \alpha_0 + \beta_3 CCC_{it} + \beta_4 NLB_{it} + \beta_5 WCR_{it} + \xi_{it} \dots \text{eq 5}$$

$$ROE_{it} = \alpha_0 + \beta_3 CCC_{it} + \beta_4 NLB_{it} + \beta_5 WCR_{it} + \xi_{it} \dots \text{eq 6}$$

Where:

ROA = Return on Asset

ROE = Return on Equity

$t$  = time period of the study

$\xi$  = error term

$\beta_{1,2,3,4}$  = measure the effect of CCC, NLB, WCR on financial profitability

NLB = Net Liquid Balance                      WCR = Working Capital Requirement

CCC = Cash Conversion Cycle

### Data Presentation and Descriptive Analysis



The study analyzed the effect of Working Capital Management indicators on the financial performance of non-financial firms on the Nigerian Exchange Group. A sample size of sixteen firms was obtained while a period of fifteen (15) years was deployed in the study, which spanned from 2008 to 2022. The data collected yielded 240 firm-year observations.

### Descriptive Analysis of Data

The analysis of descriptive properties of the data was done via mean, standard deviation, maximum and minimum values as produced by Stata 14.1 statistical software. The output of the descriptive statistical analysis of data is shown below in Table 4.1.

**Table 4.1 Descriptive Analysis of Data**

Variable	Obs	Mean	Std. Dev.	Min	Max
CCC	240	237.3417	544.1375	-657	5400
WCR	240	.8269496	.503532	0	2.801561
NLB	240	.5486931	.4282038	-.7203615	3.570771
ROE	240	3.619999	5.90749	0	74.00378
ROA	240	.1140176	.2075786	-.7752892	2.055363

*Source: Stata 14.1 Analysis Output (2023)*

### Test of Hypotheses

The hypotheses of the study were subjected to test after estimating Feasible generalized least squares (FGLS) regression. The full FGLS outputs for Models A and B are presented in Appendix II but the relevant parameters for hypotheses testing are succinctly presented in Table 4.2 and Table 4.3 below.

**Table 4.2 FGLS regression Output for Model A (ROA)**

Variable	Coefficient	Prob.
CCC	-.0001172	0.000
NLB	.1033977	0.000
WCR	.0251303	0.000
C	.0588781	0.000
Wald chi2(4)	12982.54	
Prob > chi2	0.0000	

*Source: Stata 14.1 Analysis Output (2023)*

**Table 4.3 FGLS regression Output for Model A (ROE)**

Variable	Coefficient	Prob.
CCC	-.0022797	0.000
NLB	-3.626919	0.000
WCR	2.501804	0.000
C	4.384638	0.000
Wald chi2(4)	6856.67	
Prob > chi2	0.0000	

*Source: Stata 14.1 Analysis Output (2023)*

### Test of Hypotheses I

*Cash Conversion Cycle does not significantly affect Return on Assets of selected non-financial*

*firms listed on the Nigerian Exchange Group.*

The regression results show that CCC has a coefficient of  $-0.0001172$  and a significant  $p$ -value of  $0.000$ , indicating a negative relationship between CCC and ROA. This suggests that as the cash conversion cycle increases, the financial performance, as measured by ROA, tends to decrease.

**Decision:** Since the  $p$ -value of  $0.000$  is less than  $0.05$ , the alternate hypothesis was accepted that Cash Conversion Cycle negatively and significantly affects Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -0.0001172$ ,  $p$ -value =  $0.000$ ).

*Cash Conversion Cycle have no significant effect on Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group.*

CCC has a coefficient of  $-0.0022797$  with a  $p$ -value of  $0.000$ . The negative coefficient suggests that an increase in CCC by a margin leads to a decrease in ROE. That is, a longer cash conversion cycle is detrimental to the firm's return on equity.

**Decision:** Since the  $p$ -value of  $0.000$  is less than  $0.05$ , the null hypothesis was accepted that Cash Conversion Cycle has a negative and significant effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -0.0022797$ ,  $p$ -value =  $0.000$ ).

## Test of Hypotheses II

*Net Liquid Balance does not have significant effect on Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group.*

The NLB coefficient is determined to be  $.1033977$  with a  $p$ -value of  $0.000$ . This coefficient indicates the change in the Return on Assets (ROA) for every unit increase in the NLB. Thus, an increase in net liquid balance is positively associated with an improvement in ROA. In other words, as the NLB increases, the company's return on assets is expected to rise.

**Decision:** Since the  $p$ -value of  $0.000$  is less than  $0.05$ , the alternate hypothesis was accepted that Net Liquid Balance has a significant and positive effect on the Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = .1033977$ ,  $p$ -value =  $0.000$ ).

*Effect level of Net Liquid Balance on Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group is not significant.*

NLB demonstrates a statistically significant negative relationship with ROE. It has a coefficient of  $-3.626919$  and a  $p$ -value of  $0.000$ . This suggests that an increase in net liquid balance is associated with a decrease in return on equity. Therefore, maintaining a higher level of net liquid balance may negatively impact a firm's profitability as measured by ROE.

**Decision:** Since the  $p$ -value of  $0.000$  is less than  $0.05$ , the alternate hypothesis was accepted that Net Liquid Balance has a significant and negative effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -3.626919$ ,  $p$ -value =  $0.000$ ).

## Test of Hypotheses III

*Working Capital Requirement does not have significant effect on Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group.*

The WCR coefficient is determined to be  $.0251303$  with a  $p$ -value of  $0.000$ . This coefficient signifies the change in the Return on Assets (ROA) for each unit increase in the WCR. Based on these findings, it can be seen that an increase in the working capital requirement is positively

linked to higher ROA. In simpler terms, as the WCR increases, it is expected that the company's return on assets will also increase.

**Decision:** Since the p-value of 0.000 is less than 0.05, the alternate hypothesis was accepted that Working Capital Requirement has a significant and positive effect on the Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = .0251303$ ,  $p$ -value = 0.000).

*Effect level of Working Capital Requirement on Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group is not significant.*

WCR also exhibits a statistically significant positive relationship with ROE. It has a coefficient of 2.501804 and a p-value of 0.000. This suggests that an increase in the working capital requirement leads to an improvement in return on equity. Therefore, a higher working capital requirement may positively impact a firm's profitability.

**Decision:** Since the p-value of 0.000 is less than 0.05, the alternate hypothesis was accepted that Working Capital Requirement has a significant and positive effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = 2.501804$ ,  $p$ -value = 0.000).

## Discussion of Findings

***Cash Conversion Cycle negatively and significantly affects Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -.0001172$ ,  $p$ -value = 0.000).***

This finding suggests that a longer cash conversion cycle is associated with a lower ROA for the selected firms. This findings agree with Cheboror (2017), Megeid (2015) and Ajayi et al. (2015) and disagrees with Okoye et al. (2016). The CCC represents the time it takes for a company to convert its investments in inventory into cash flow from sales. A longer CCC indicates that the company's cash is tied up in the production and sales cycle, resulting in reduced liquidity and profitability.

***Cash Conversion Cycle has a negative and significant effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -.0022797$ ,  $p$ -value = 0.000).***

Similarly, this result indicates that a longer cash conversion cycle is linked to a lower ROE. These findings disagreed with that of Malik and Bukhari (2014), for which CCC has a positive and significant relationship with ROE. A lengthier CCC means that a larger portion of the company's funds is locked in the operational cycle, reducing the returns available to shareholders.

***Net Liquid Balance has a significant and positive effect on the Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = .1033977$ ,  $p$ -value = 0.000).***

This finding implies that an increase in net liquid balance is associated with a higher ROA for the selected firms. The NLB measures the difference between a company's liquid assets and its short-term liabilities. Maintaining a healthy NLB indicates strong liquidity and the ability to meet short-term obligations as and when due and will also prevent undue borrowings, which can positively impact profitability and ROA.

***Net Liquid Balance has a significant and negative effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -3.626919$ ,  $p$ -value = 0.000).***



In contrast to the previous finding, this result suggests that a higher net liquid balance is associated with a lower ROE. While a strong NLB indicates liquidity, it may also indicate an underutilization of funds that could otherwise generate higher returns for shareholders. Therefore, a higher NLB may result in a lower ROE.

***Working Capital Requirement has a significant and positive effect on the Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = .0251303$ ,  $p$ -value = 0.000).***

This finding indicates that an increase in the working capital requirement is linked to a higher ROA for the selected firms. The WCR measures the amount of capital needed to fund a company's day-to-day operations. A higher WCR suggests that the company has adequate resources to support its operations efficiently, leading to improved profitability and higher ROA.

***Working Capital Requirement has a significant and positive effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = 2.501804$ ,  $p$ -value = 0.000).***

Similar to the previous finding, this result suggests that a higher working capital requirement is associated with a higher ROE. Adequate working capital ensures that the company can meet its operational needs effectively, resulting in enhanced returns for shareholders.

## Summary of Findings

The findings of the study revealed the following:

1. Cash Conversion Cycle negatively and significantly affects Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -.0001172$ ,  $p$ -value = 0.000).
2. Cash Conversion Cycle has a negative and significant effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -.0022797$ ,  $p$ -value = 0.000).
3. Net Liquid Balance has a significant and positive effect on the Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = .1033977$ ,  $p$ -value = 0.000).
4. Net Liquid Balance has a significant and negative effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = -3.626919$ ,  $p$ -value = 0.000).
5. Working Capital Requirement has a significant and positive effect on the Return on Assets of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = .0251303$ ,  $p$ -value = 0.000).
6. Working Capital Requirement has a significant and positive effect on the Return on Equity of selected non-financial firms listed on the Nigerian Exchange Group ( $\beta = 2.501804$ ,  $p$ -value = 0.000).

## Conclusion

Working capital management plays an important role in enhancing the financial performance of non-financial firms listed on the Nigerian Exchange Group. By effectively managing their working capital, these firms can optimize their operational efficiency, minimize financial risk,

and improve their liquidity position which maximally contributes to improved profitability, increased shareholder value, and sustainable long-term success in the competitive Nigerian market. It was also found that Cash Conversion Cycle (CCC) negatively affects ROA and ROE. A longer cash conversion cycle indicates that it takes more time for a firm to convert inputs (raw materials, labor) into cash inflows from sales. This can be due to extended payment terms with suppliers or delayed collection of receivables. The longer the CCC, the more working capital gets tied up in the operating cycle, leading to reduced liquidity and profitability. Managing the CCC efficiently by optimizing payment terms and improving working capital management is crucial to improve ROA and ROE.

The study revealed that Net Liquid Balance (NLB) has a positive effect on ROA and a negative effect on ROE. A higher NLB, representing a larger proportion of liquid assets relative to total assets, positively impacts ROA. It indicates better liquidity management, which can enhance short-term profitability. However, the negative effect on ROE suggests that excess liquid assets may not be efficiently employed to generate higher returns for shareholders. Striking a balance between liquidity needs and maximizing profitability is crucial for optimizing NLB and achieving a balanced financial performance.

Finally, it was indicated in the findings that Working Capital Requirement (WCR) has a positive effect on both ROA and ROE. A higher WCR is associated with improved financial performance. This suggests that firms with higher working capital requirements tend to generate higher returns. Adequate working capital enables smooth operations, efficient production, and effective management of cash flow. It reflects the firm's ability to maintain optimal levels of receivables, inventory, and payables, supporting both short-term profitability (ROA) and long-term shareholder value (ROE). In conclusion, an optimized cash conversion cycle contributes to improved ROA and ROE. Also, maintaining an appropriate net liquid balance and meeting the necessary working capital requirements positively impact ROA and can drive ROE, provided the excess liquidity is utilized effectively.

## Recommendations

1. **Net Liquid Balance:** Non-financial firms should carefully manage their Net Liquid Balance to maximize their Return on Assets. Maintaining an appropriate balance between liquidity and profitability is crucial. Firms should strive to optimize their cash and liquid assets to meet operational needs while ensuring that excess liquidity is invested wisely to generate returns.
2. **Working Capital Requirement:** Non-financial firms should consider aligning their Working Capital Requirement with their operational needs and financial objectives to enhance their Return on Assets and Return on Equity. This involves maintaining an optimal level of working capital that supports smooth operations and avoids excessive tied-up capital. Effective working capital management, including proper inventory control, efficient receivables and payables management, and strategic financing decisions, can help achieve this balance.
3. **Cash Conversion Cycle:** To enhance the Return on Assets and Return on Equity, non-financial firms should focus on minimizing their Cash Conversion Cycle. This can be achieved by reducing the time it takes to convert inputs into cash inflows. Streamlining payment processes, negotiating favorable payment terms with suppliers, and managing

working capital efficiently can help in shortening the cash conversion cycle and improving financial performance.

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