

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**  
**GHANA**

**KNUST**

WORKING CAPITAL MANAGEMENT AND FINANCIAL PERFORMANCE OF  
FINANCIAL INSTITUTIONS LISTED ON THE GHANA STOCK EXCHANGE

BY

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BEING A THESIS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND  
FINANCE, COLLEGE OF HUMANITIES AND SOCIAL SCIENCES  
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF DEGREE  
OF  
MSc ACCOUNTING AND FINANCE

NOVEMBER 2023



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## DECLARATION

I, Elix Sackey, hereby declare that this submission is my work for the MSC Accounting and Finance degree and that, to the best of my knowledge and understanding, it does not contain any materials that have already been submitted by another person or materials that have already been endorsed for the award of any other university degree, excluding those instances where the proper citation has already been made in the writing.

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## DEDICATION

I express my gratitude to my wife, Mrs. Sackey, for her constant assistance during my research.

I also thank my mother Lydia Odupong and Mr. Isaac Gyaba for their continuing support in writing my thesis.

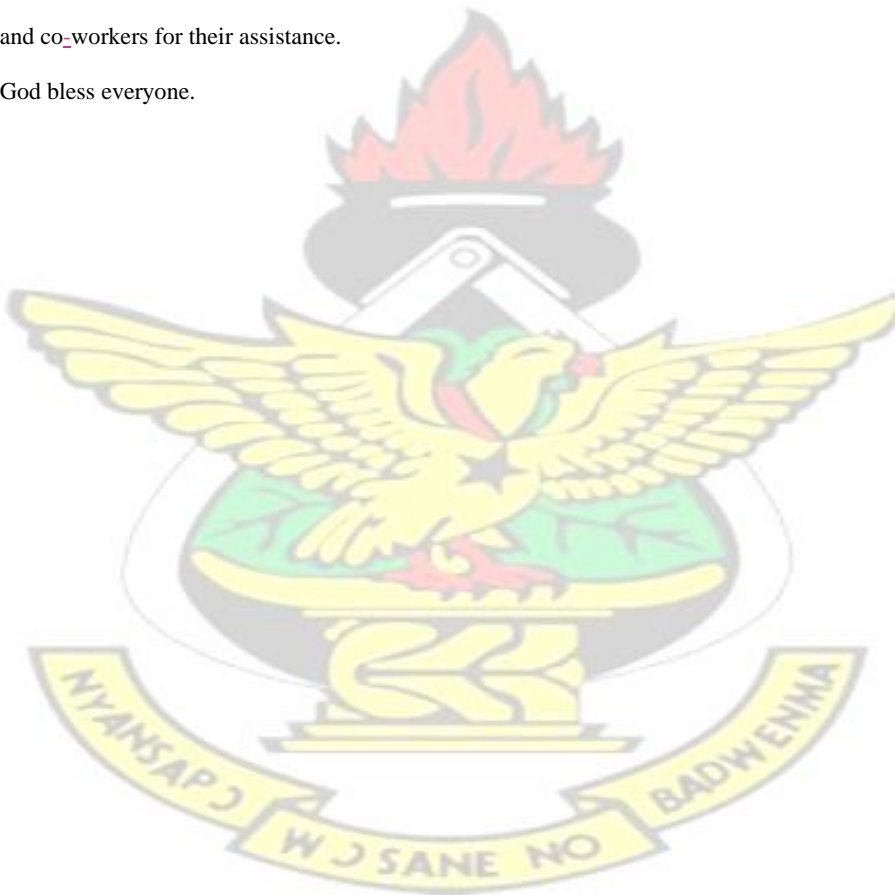
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## ACKNOWLEDGEMENT

My heartfelt thanks go to God Almighty for his grace, mercy, and protection throughout my studies. I owe a lot to my supervisor, Dr. Clement Opong. His leadership, guidance, and assistance were instrumental in the success of this project. I want to thank my family, friends, and co-workers for their assistance.

God bless everyone.



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## ABSTRACT

A company's stability and existence depend heavily on its working capital. When a bank fails, it automatically means that its working capital has failed as well. This failure might be quite infectious and result in a bank run on the struggling. This is one of the factors contributing to the performance of the banking industry being so highly dependent on effective working capital management.

In particular, this study looks at the impact of working capital management (WCM) on the financial performance of financial institutions in Ghana from 2011 to 2020. The study tasted Six (6) out of the nine (9) listed financial institution in Ghana as at 31<sup>st</sup> December, 2020. The information was obtained from the banks' annual reports (GSE). The Pearson Correlation Analysis was used to find out the link between working capital management characteristics and firms' profitability. Furthermore, Ordinary Least Squares regression was performed to investigate how working capital management affects the profitability of financial firms listed on the Ghana Stock Exchange. Using two profit indicators: ~~Return~~return on Asset and Return

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on Equity, the study found that, cash ratio and current ratio has a significant impact on the Return on Asset variable of the banks under study. Loan ratio however had no significant effect on return on assets.

The findings of this study led to the conclusion that, WCM has some effects in determining the profitability of financial firms listed on the Ghana Stock Exchange. This was evidenced by cash ratio and current ratios are the variables that have significant effect on return of asset. To make this possible, bank management must guarantee that there is always enough liquidity to satisfy consumer demand.



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## List of Abbreviations

WCM	Working Capital Management
CR	Cash Ratio
<u>C</u> R	Current Ratio
LR	Loan Ratio
FS	Firm Size
CLTA	Current Liability to Total Assets
ROA	Return on Asset
ROE	Return on Equity



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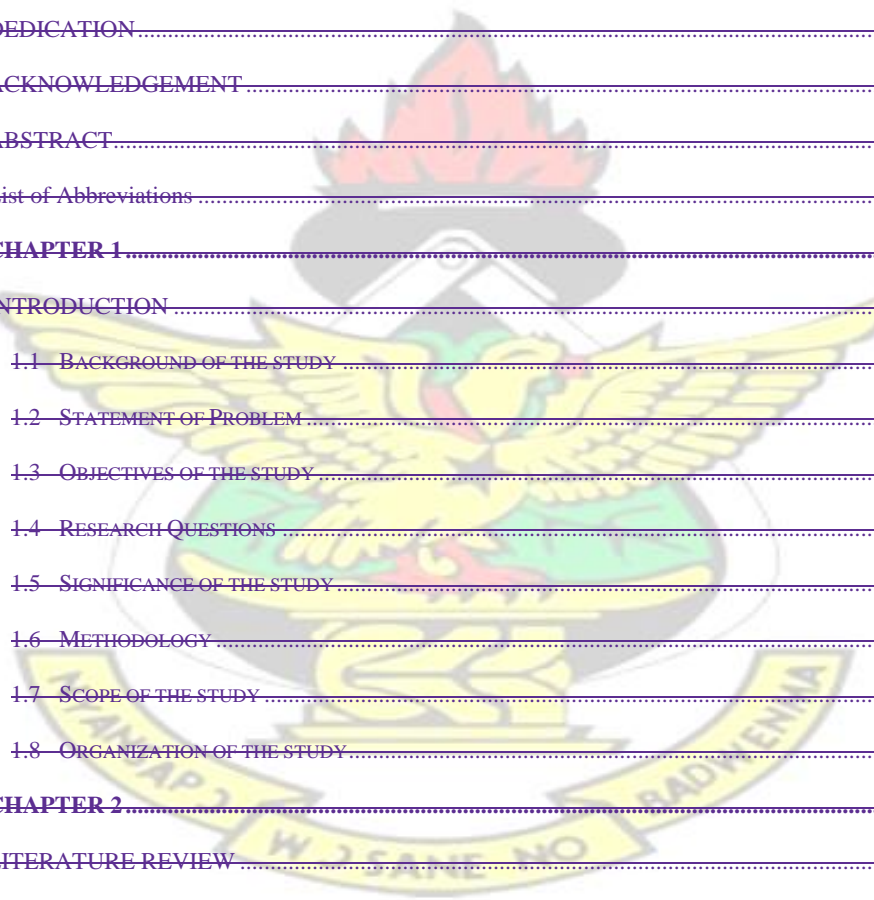
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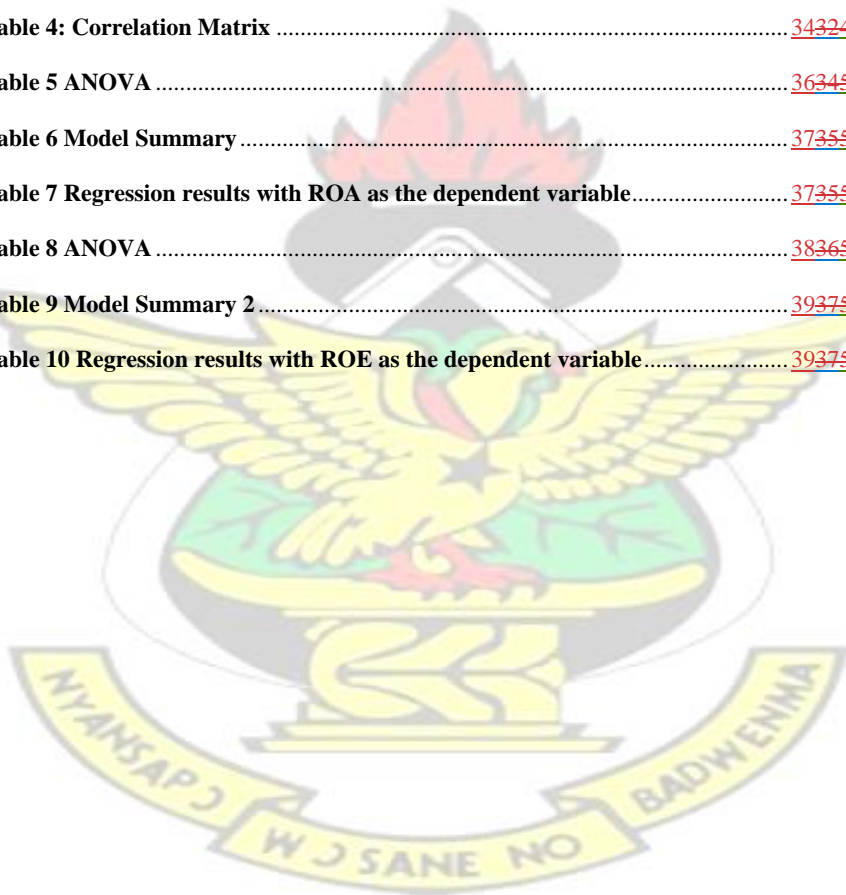
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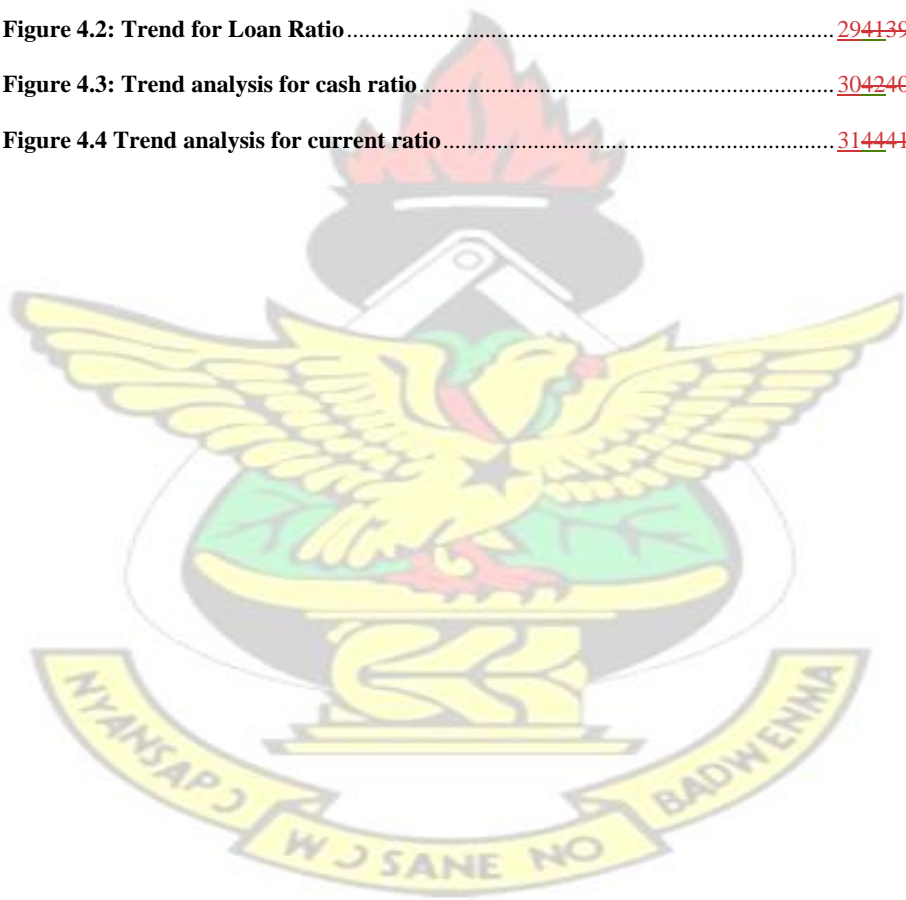
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## CHAPTER 1

### INTRODUCTION

#### 1.1 BACKGROUND OF THE STUDY

The present financial crisis and the downturn that began in 2008 have increasingly focused on the investments that organizations make in short-term assets, as well as the resources employed with maturities of less than one year, which account for the majority of items on a firm's balance sheet (Abuzayed, 2012). In today's recessionary financial environment, all businesses, regardless of size or sector, require healthy cash flow and liquidity (SENAN et al., 2021). According to Inge S, (2013), the manner in which working capital is managed has a significant impact on the company's financial performance. He goes on to say that financial managers have always struggled to strike the right equilibrium between profitability and liquidity (Inge S, 2013). This has increased the relevance of short-term WCM in businesses throughout the world and has piqued the interest of scholars (Abuzayed, 2012).

Managing working capital may appear to financial managers to be a basic and clear idea. But, in fact, WCM has become one of the most essential concerns in businesses, with many finance managers struggling to identify the key drivers of working capital and the optimal level of working capital (Agyei et al., 2013). WCM is critical to the entire company strategy of increasing shareholder value. Maximizing shareholder wealth, on the other hand, entails establishing the proportions of both present assets and short-run obligations. Nwankwo and Osho are mentioned by Ali (2018).-(2010). Insolvency and bankruptcy may result from a lack of awareness of the influence of working capital needs on profitability, a lack of clarity about its causes, and a lack of management's capacity to plan and control its elements (Agyei et al., 2013).

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Most businesses have a substantial amount of money invested in working capital as well as significant quantities of current payables as a source of financing (Goleman et al., 2019). WCM is an important aspect of corporate financial management. WCM, whether inefficient or efficient, has ramifications for profitability and liquidity. As a result, working capital offers a recognizable front for profitability and liquidity management (Kimani, 2012).

Effective WCM is critical to overall business strategy in order to produce shareholder value (Abuzayed, 2012). Working capital is defined as the time lag between the spending for raw material acquisition and the collection for the sale of the completed item. The manner in which working capital is managed can have a substantial influence on the company's liquidity and profitability (Dong & Su, 2010). Many businesses are struggling as a result of insufficient or poor capital management, as well as an inability to determine the influence of an effective and efficient working capital component on organizational performance (Erdogan, 2015). Working capital is the backbone of any business, whether it is in finance or banking, manufacturing or trading. This is because if the company's working capital is not properly managed, it may result in the organization's total dissolution and closure (Yahaya & Bala, 2015).

For all firms, in both developed and developing economies, one of the key objectives of WCM is to ensure that they have sufficient and consistent cash flow to manage their day-to-day activities. This objective is particularly relevant for financial institutions like banks (Goleman, et al., 2019). At least two reasons for being profitable and liquid are not negotiable in the financial sector: to meet regulatory requirements and to have enough liquidity to meet customers' unexpected withdrawals. Trust in the banking system can be preserved only in this way. Working capital is the back bone of any business or organization. To maintain the trust of the public, especially customers, the organization should always be prepared to fulfil its liabilities (Mazreku et al., 2020).

## 1.2 STATEMENT OF PROBLEM

Ineffective financial management can have a detrimental impact on the performance of banks and other financial institutions. Financial management, including WCM, is essential to their success. Also, when a firm manages its finances well, it produces value for its shareholders, which is a crucial component of its entire strategy and a crucial basis to influence success (AL-Zararee et al., 2021). Businesses have a lot of working capital, which makes WCM and control challenging and demanding (Mazreku et al., 2020). Current assets can be managed using annual accounting, which results in cash obligations and current liabilities payable (Sohail et al., 2016). For a corporation to run smoothly, WCM and the relationship between assets and current responsibilities are essential. Also, WCM is essential to the ongoing operations of businesses engaged in a variety of activities. When it is no longer in use, it vanishes (AL-Zararee et al., 2021). The incapacity of financial managers to plan and handle their existing assets and obligations effectively has been implicated in a significant percentage of corporate failures. In order to optimize profits, managers must maintain the ideal level of working capital components. This level of working capital balances risk and return while also maximizing shareholder value (Inge S, 2013).

Various researchers, local and international have devoted ample consideration to the management of working capital of banks and other financial institutions over the years with much inconclusiveness as to what should form the basis for assessing their financial performance. Studies exclusively on the WCM and financial performance of financial institutions registered on the Ghana Stock Exchange are scanty and needs to be addressed. This research aims to bridge the geographical gap in literature by studying how the financial performance of financial institutions registered at the Ghana stock exchange for the period 2011 to 2020 is affected by the WCM.

Various researchers, local and international have devoted ample consideration to the management of working capital of banks and other financial institutions over the years with

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much inconclusiveness as to what should form the basis for assessing their financial performance. The major objective of this research is to fill a knowledge gap in the literature by attempting to investigate the influence of working capital regulations and its management on the financial performance of financial institutions listed on the Ghana Stock Exchange. Prior research examined how WCM and policy affected non-financial enterprises' profitability (Afza & Nazir, 2011; Ali & Ali, 2012; Nazir & Afza, 2009; Rehman & Anjum, 2013; ul Haq, Sohail, Zaman, & Alam, 2011; Zeeshan Khan, 2012; Erdogan, 2015; Dong & Su, 2010; Raheman & Nasr, 2007). By maintaining the ideal amount of working capital, which improves its liquidity, profitability, and financial performance, this research aims to provide guidelines for the financial industry, particularly the financial institutions listed on the Ghana Stock Exchange.

### 1.3 OBJECTIVES OF THE STUDY

The major focus of this study is to investigate the effect of WCM on the financial performance of listed financial firms in Ghana.

The specific objectives are:

1. To assess the impact of loan ratio on the Profitability of Listed financial firms in Ghana.
2. To examine the impact of cash ratio on the Profitability of Listed financial firms in Ghana.
3. To examine the impact of current ratio on the Profitability of Listed financial firms in Ghana.

### 1.4 Research Questions

The following research queries are formulated based on the identified gap and the objectives.

1. What is the impact of loan to deposit ratio on the Profitability of Listed financial firms in Ghana?
2. What is the impact of cash ratio on the Profitability of Listed financial firms in Ghana?
3. What is the impact of current ratio on the Profitability of Listed financial firms in Ghana?

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### 1.5 Significance of the study

The WCM strategies employed by Ghana's listed financial companies are investigated in this study, as well as the impact these strategies have on the profitability of Ghana's listed financial enterprises. The results of this study are also meant to offer management some guidance in choosing appropriate working capital solutions that would increase their efficacy.

The outcomes of this study will be useful to policymakers with an understanding of how the government may provide working capital management as a tool that can be used to improve the profitability of firms in Ghana, which is a vital blueprint for the country's economic development and growth.

The results would also act as a starting point for further study on related topics. Additionally, it might be helpful to academics who are researching the same topic. The results of this study also aim to contribute to knowledge by revealing the relationship between listed financial businesses' profitability and WCM for the years 2015 to 2020. In addition, it would highlight more pertinent relationships that require more research.

### 1.6 METHODOLOGY

The study will use panel data from the Ghana Stock Exchange's Annual Reports on financial institutions, which were issued from 2011 to 2020. The research will adopt the quantitative approach as the objectives of this study necessitate the examination of numerical variables and will use panel data and descriptive research design. Data will be analyzed using both descriptive and quantitative approaches. To assist with data analysis, the Statistical Package for Social Sciences (SPSS) version 26 will be utilized.

### 1.7 SCOPE OF THE STUDY

This research focuses on the effect of WCM on the financial performance of listed financial firms in Ghana. All the 23 authorized banks in Ghana constitute the population of this study.

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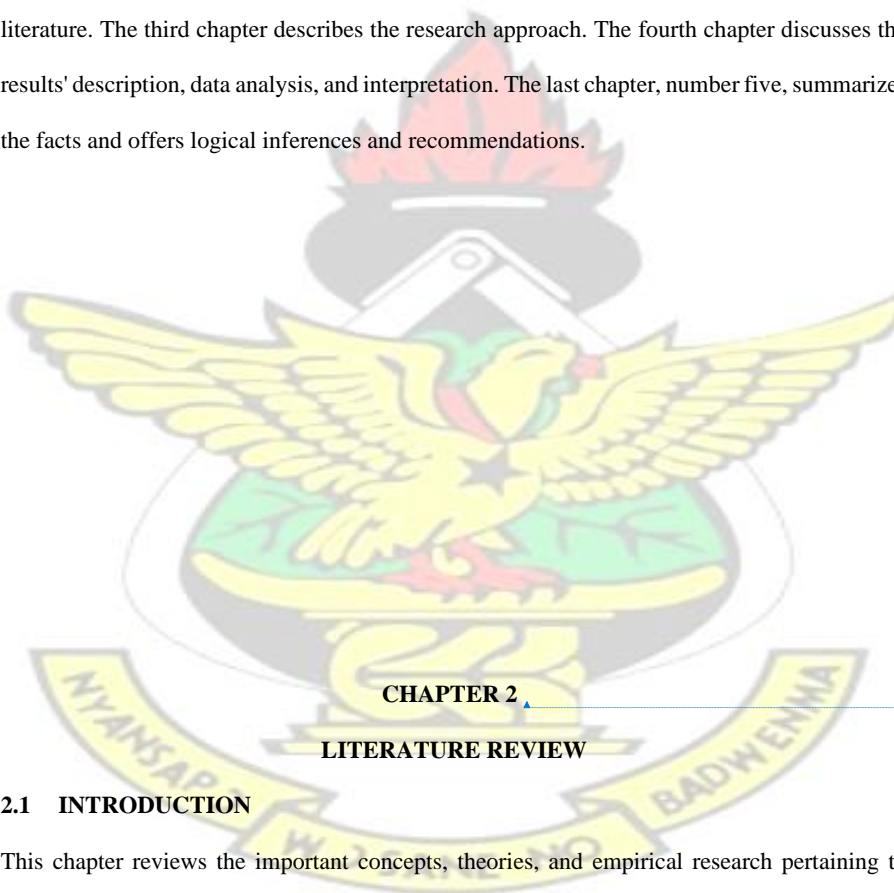
The researcher purposively selects 7 of these firms listed on the Ghana Stock Exchange as the sample size and included a 10 years period from 2011 to 2020 with current data available.

## 1.8 ORGANIZATION OF THE STUDY

This research is divided into five chapters. The first chapter describes the study's background, problem description, objectives, research questions, importance of the investigation, scope of the study, and organization. The second chapter provides a comprehensive survey of the linked literature. The third chapter describes the research approach. The fourth chapter discusses the results' description, data analysis, and interpretation. The last chapter, number five, summarizes the facts and offers logical inferences and recommendations.

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### 2.1 INTRODUCTION

This chapter reviews the important concepts, theories, and empirical research pertaining to working capital management in financial institutions. The chapter consist of four main sections; Conceptual analysis, theoretical analysis, empirical analysis, and conceptual framework. The conceptual review defines essential concepts and their relevance to the investigation. The

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theoretical analysis, reviews the theories that support the study. The empirical review gives an account of the results of previous studies on the objectives of the study while the conceptual framework provides a pictorial view of the study.

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## 2.2 CONCEPTUAL REVIEW

### 2.2.1 WORKING CAPITAL MANAGEMENT (WCM)

WCM is a critical component of corporate finance since it has a direct impact on a company's liquidity and profitability. (Yahaya & Bala, 2015). ~~According to Yeboah and Agyei (2012), Working capital management include overseeing current assets like as cash, liquid assets, debtors, staff borrowing, and inventories.~~ WCM was described by Asare-Kumi et al. (2016) as the control of a firm's current assets and obligations. ~~According to Van Horne (2000), A~~ company's ability to manage its current assets, including cash, debts, market investments, and inventory, affects how well its working capital is managed.

~~Hence, managing working capital is the coordination of a company's short term assets and short term obligations. Given this, Khan and Jain (2007) said that WCM refers to the issues that arise while managing current assets, current liabilities, and the relationships between them.~~

According to Yahaya and Bala (2015), WCM is concerned with the administration of all current assets, including cash, liquid assets, shares, and current liabilities. All of the company's current accounts are part of the financial functional area. It is worried about both the danger presented by current commitments and the sufficiency of current assets. Erdogan asserts this (2015), the percentage of current assets that are financed by long-term debt and/or equity for a corporation. Financial planning's subset of WCM looks for effective procedures for handling current assets and liabilities, as well as optimizing the advantages of working capital management. In order to develop an effective mix that assures capital adequacy, working

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capital management, ~~according to Yeboah and Agyei (2012),~~ must maintain an acceptable link between the various components of a firm's working capital. Working capital management deals with striking a balance between a company's short-term assets and short-term obligations. Making ensuring the company can continue to operate and has enough cash flow to pay off maturing short-term debt as well as impending operating expenditures is the aim of working capital management. ~~(2012) Abuzayed (2012). Hence, managing working capital should ensure that each element of employed capital is accessible for management in the desired proportions (Joshi, 2013).~~ Financial management includes a major element of working capital management. Any firm cannot function effectively without the proper controls. On the other hand, each company organization must appropriately manage current assets and current liabilities (Mazreku et al., 2020). Regardless of the type of the firm, WCM also has a significant impact on success or failure. WCM involves overseeing all current asset categories, including cash and equivalent assets, as well as current liability components, including short-term obligations (ALI, 2018).

The sum of the company's investments in current assets is known as working capital. It is typically believed that current assets must exceed current obligations in order to cover them. Since the maturity date of current assets and current liabilities (maximum maturity date is one year). Organizations experience liquidity issues when current liabilities and assets have different maturity dates.

~~Undoubtedly, some businesses may attempt to protect a portion of their present assets through shareholder rights, or fixed working capital. Together with current obligations like accounts and trade bills payable, pre receipts, and short term bank credits, current assets also include cash on hand, short term investments, claimed stock of goods and raw materials, and claimed inventory (Alavinasab & Davoudi, 2013).~~

Working capital management includes handling cash, accounts receivable and payable, and inventories. Cash management determines how much money is needed to cover daily needs while lowering the cost of retaining cash. Inventory management determines how much stock is needed to maintain production while lowering the cost of procuring raw materials and placing new orders for goods, hence enhancing cash flow. In order to ensure that any negative effects on cash flows and the cash conversion cycle are balanced out by increased revenue and, as a consequence, a stronger return on capital, debt management selects the best credit policy, i.e., credit conditions that would tempt consumers. Considering the cash conversion period, it is preferable to finance inventory using supplier credit, but it may be necessary to turn debtors into cash through a bank loan, overdraft, or factoring. The ideal financial source is short-term borrowing.

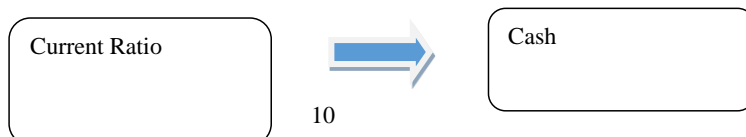
Fixed and flexible working capital investments are the two main categories. Fixed working capital investment is the portion of working capital preserved to maintain the same level of sales regardless of seasonality, whereas flexible working capital is the additional working capital necessary during periods of sales volatility (Mazreku et al., 2020). Flexible working capital is financed by short-term capital, it is anticipated that fixed working capital will be financed by long-term investment (Vigneau et al., 2015). Businesses use the aggressive strategy, the prudent policy, and the moderate strategy to satisfy their working capital demands. A business with an aggressive strategy uses little current assets to meet its current liabilities. This means that its current obligations are far more than its current assets. ~~On the other hand, a business that adheres to a conservative approach retains more current assets than current liabilities (Alavinasab & Davoudi, 2013). By having enough liquid assets to cover their present liabilities, they hope to lower their risk of running out of cash. Nonetheless, a reasonable working capital strategy aims to fairly balance current assets and liabilities. The industry in~~

which a company works affects the amount of working capital needed (Yeboah & Agyei, 2012).

### 2.3 CONSTITUENTS OF MANAGING WORKING CAPITAL.

2.4 The study conducted by Smith and Mallick (2016) explores the several elements that make up working capital management and highlights the significance of effectively managing short-term assets and liabilities. Their conclusions emphasize the significance of proactive inventories, payables, and receivables management to improve overall working capital efficiency. A sophisticated grasp of these elements becomes essential in Ghana's manufacturing sector, where market needs are constantly changing and competition is intense. Manufacturers must modify their tactics to maximize cash flow while maintaining the careful equilibrium between profitability and liquidity. Businesses can more effectively address the opportunities and difficulties posed by their distinct operating setting by aligning with the Ghana Stock Exchange's characteristics. THE MOST IMPORTANT ASPECT OF WCM IS ENSURING THAT ITS COMPONENT PP;S ARE USED EFFECTIVELY. LOAN RATIO, CASH RATIO, CURRENT RATIO, AND SHORT TERM SECURITIES ARE THE FOUR SHORT TERM ASSETS THAT THE COMPANY MUST FOCUS ON IN ORDER TO EFFICIENTLY MANAGE WORKING CAPITAL ADU, (2013). WCM, ACCORDING TO KAYANI, (2011), IS A CONDITION IN WHICH THE CURRENT ASSET/CURRENT LIABILITY BALANCE IS MAINTAINED. CURRENT ASSETS, THE CASH CONVERSION CYCLE, LOANS, AND DEPOSITS ARE THE FOUR CRUCIAL ELEMENTS OF WCM IN THE BANKING SECTOR, as seen in figure 1.

Figure 2.1 Components of Working Capital Management

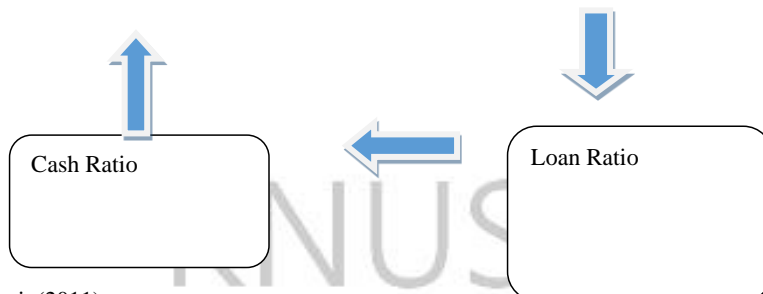


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Source: Kayani, (2011)

#### **2.4.1.12.3.1.1 Loan to Deposit Ratio (loan ratio)**

A bank's main function is to efficiently utilise funds (deposits) through borrowing (financing).

The profitability of the bank is impacted by the loan-deposit ratio since it is a good instrument for assessing bank liquidity. A research by Joni Tamkin Borhan & Towpek claims that the interest levied against deposits is what determines the bank's profit, which is produced by the positive contribution between both the interest on loans and the interest on deposits (2006). A bank's liquidity is measured by the loan-to-deposit ratio (LDR), which compares total loans to total deposits during the same time period. The LDR is assigned a percentage value. If the ratio is too high, the bank may be unable to cover any unexpected financial demands. If the ratio is too low, the bank may earn less than it should.

The loan-to-deposit ratio demonstrates a bank's ability to sustain loan losses and client withdrawals. Investors monitor banks' LDR to ensure that there is sufficient liquidity to pay down loans in the case of a downturn that triggers defaults.

The LDR also shows how successfully a bank keeps and draws in clients. A bank attracts fresh funds and clients as its deposits increase. The bank will thus probably have more money to lend, which should increase earnings. Despite the fact that banks make money from lending through interest, loans are still considered an asset. Banks must provide a minimal interest rate on deposits, which makes them liabilities.

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Investors can use the LDR to assess a bank's management quality. The bank will have less money available for lending if the level of deposits does not increase or decrease. In some situations, banks would offer loans to satisfy customer demand for credit and boost interest revenue. Yet, if a bank relies on debt rather than deposits to fund its lending activities, it will have to pay debt service expenses since loan interest must be paid.

Lower profit margins and more debt will be experienced by a bank that incurs financing costs to make loans to its clients. Depositors get much lower interest rates than borrowers, hence a bank would prefer to make loans using deposits. The LDR enables investors in discovering banks that have adequate deposits on reserve to lend without issuing new debt. Choosing the appropriate LDR is a challenging balance for banks to achieve. If banks lend too much of their deposits, especially during a recession, they risk overextending themselves. In contrast, if banks lend too little of their deposits, they may incur opportunity costs since their deposits remain on their balance sheets and generate no profit. Low LTD ratios may result in banks earning less money through lower interest rates.

#### **2.4.1.2.3.1.2 Cash Ratio**

The cash ratio serves as a proxy for a company's liquidity and capacity for timely short-term debt repayment. The liquidity ratio and the cash asset ratio are some other names for it. It is the proportion of a bank's demand deposit to its cash and cash equivalents. It represents the proportion of the total amount of money that clients have deposited into the bank that a bank should have on hand. The sum is determined to provide consumers peace of mind that, should they choose to do so, they would be able to withdraw their funds from the bank.

A cash ratio is used to calculate how much credit can be created from deposits. It also determines a bank's profitability. The bank will be less profitable if the ratios are higher. Higher cash ratios, on the other hand, provide greater security.

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### 2.4.1.32.3.1.3 Current Ratio

Current ratio stands for the proportion of current assets to current liabilities (Mamduh and Halim, 2014: 75). The current ratio is a trustworthy indicator of business liquidity since it takes into account each company's proportional relationship with both its present assets and liabilities. ~~(Pujiati, 2011)~~. Having a high CR might be advantageous to potential investors. As a result, there will be a rise in current assets and an increase in investor interest in making investments. The profit change is bigger the higher the current ratio. ~~(Kuswadi 2005: 79)~~ found that variations in profits are partially influenced positively by the current ratio. Current ratio significantly boosted return on assets, according to Gani (2017), Qurays et al. (2015), Sofie et al. (2015), and (2017). Supardi et al. (2016). Ambarwati et al. (2017) all showed that the current ratio had no impact on return on assets (2015). There is no relevant link between the current ratio and the return on assets, claim Akter and Mahmud (2014). The current and cash ratios have a significant impact on return on assets, according to research by Priya and Nimalathasan (2013). ~~Both Vayanos and Wang (2012) and Ruziqa (2013) proved that liquidity ratios significantly boost return on assets.~~

### 2.52.4 PROFITABILITY

An organization's ability to earn financial profit or gain" is a common definition of profitability (Enow and Kamala, 2016). Any company's success and growth are largely determined by its profitability (Amadhila, 2017). One might extrapolate from this that a company's long-term survival is highly dependent on its profitability. A company's net profit is the sum of its revenue less all of its operational costs. ~~(Oladipupo & Okafor, 2013)~~. Profit is the primary purpose of any commercial enterprise. The essential idea here is that if the company does not make a profit, it will eventually fail (Enow and Kamala, 2016). This emphasizes the significance of profitability in a business enterprise.

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### **2.6.2.5 THEORETICAL REVIEW**

The researcher aimed to provide insight into the theoretical principles that drive the study of WCM in this segment. The study examines the notion of resource limits, transactions cost theory, theory of risk and return, and operating cycle theory. However, the study is situated in the operating cycle theory as it explains a wide range of working capital management difficulties. Details of the theories are discussed in the paragraphs below:

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#### **2.6.12.5.1 THEORY OF RESOURCE CONSTRAINTS**

Constraints on Resources According to theories, there are various forms of business behaviour and levels of performance. As a result, company's performance differs depending on how much access to production inputs and control the owners have. It states that a company's ultimate purpose is to perform successfully over time in increasing the value of its stakeholders. This explanation for company performance, on the other hand, ignores the importance of technology and shocks in explaining why a company's performance varies across industries (Zigah et al., 2018). The theory of resource limitations assesses company performance based on their availability to resources to production inputs and directly relates to the study's general objective of measuring profitability; a key indicator of firm's performance.

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#### **2.6.22.5.2 TRANSACTIONS COST THEORY**

According to Akey, (2014), the transaction cost approach to business theory is the cost of supplying a good or service through the market instead of internal sources. In his paper, "The Problem of Social Cost," Coase (1973) cited in Akey, (2014) argues for the transmission of information that is required to stakeholders about the firm's operations, ranging from mergers and acquisitions to sales. This is the case when internal routine expenses are less expensive than transaction costs ~~from outside sources Filbeck & Lee (2000)~~ cited in Akey, (2014). Environmental unpredictability, opportunism, hazards, constrained rationality, and core corporate assets are all elements that influence transaction costs. Because rational managers

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would always turn on systems whose advantages are above their costs, businesses are anticipated to deploy assets in which they will earn the maximum marginal return. Assets may be invested in a specific sector of working capital where better marginal returns are predicted (Zigah et al., 2018).

The transaction cost theory is important for this study: it describes how money is spent in a company. As a result, it explains why a company exists, why it outsources some operations to the outside world to reduce operating costs, and why it tries to optimize profitability within the company. According to the notion, managing transactions with third-party costs and the company's internal procedures costs will result in significant profit. It also predicts how assets can be invested in a specific sector of working capital where better marginal returns can be earned.

#### 2.6.32.5.3 **THEORY OF RISK AND RETURN**

The Theory of Risk and Return is a popular finance theory. According to this theory, a profit trade-off exists between a company's profit as well as the risk it takes. According to the notion, the magnitude of the danger a company takes and the profit it makes are inextricably linked. As a result, riskier investments pay off more (Brealey et al. 2008; Mukherji et al. 2008). Firms would aim to increase when they believe that putting their inputs at danger in the place where they work will increase their profitability, according to the notion (Zigah., 2018). The risk and return theory is important to the current study as it allows us to determine the trade-off between a company's profit as well as the risk it takes. It also helps us to understand how riskier it is for a firm to invest its resources into working capital and the best possible returns.

#### 2.6.42.5.4 **THE THEORY OF OPERATING CYCLE**

The Theory of Operating Cycle is a model used to explain a wide range of working capital management difficulties. It highlights the time required by a company in converting raw resources and WIP into finished goods. WCM reflects the conversion of finished goods into

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sales and cash and is an effective performance indicator (Raheman and Nasr, 2014) Changes in payment and collection procedures have a direct influence on account receivable balances, yearly sales, and business performance according to this idea. It explains why there are variances in terms of effectiveness in Working Capital Management and corporate efficiency across and within industries (Zigah, 2018).

The theory of operating cycle is relevant and establishes the basis for the study as it highlights and explains a wide range of working capital challenges. It also aids financial managers and analysts to identify that, on the surface, not all investments in working capital have the same lifespan and their conversion rate of useful liquidity flows is never the same ~~\_Mansoori and Muhammad (2012)~~ cited in (Raheman and Nasr, 2014)

## **2.7.2.6 EMPIRICAL REVIEW**

In a number of contexts, an empirical research on profitability and the management of working capital has been conducted. Most of these empirical studies support the conventional wisdom that reducing working capital investment would increase business profitability by lowering the proportion of current assets to total assets.

### **2.7.12.6.1 WORKING CAPITAL MANAGEMENT AND PROFITABILITY**

The capacity of the business to make a profit using its invested assets is known as profitability. There have been other earlier studies that have examined the WCM's significance and its consequences. Making decisions about working capital may affect a company's risk, return, and market value (Sohail et al., 2016). Companies need an effective WCM more than ever, especially as investment opportunities grow (goleman, daniel; boyatzis, Richard; Mckee, 2019). According to (Mazreku et al., 2020), organizations may enhance capital for additional strategic goals, lower financial costs, and ultimately boost profit with an effective WCM. Furthermore, it was suggested by (Kokotsaki et al., 2014) that WCM is crucial to a firm's

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performance. ~~On the other side, a high working capital expenditure would be detrimental to profitability or investment returns (Vishnani and Shah, 2007).~~ So, the main goal of effective WCM should be to manage and use a company's present financial resources in order to strike a balance between profitability and the risk involved ~~(Alavinasab & Davoudi, 2013).~~

#### 2.7.32.6.2 LIQUIDITY AND PROFITABILITY

Another key duty of financial management is managing liquidity since it has a negative effect on a company's profitability. Liquidity and profitability are very important goals for all corporate organizations. If the business gives up one of the two key objectives in favor of another, a severe issue will arise. If a corporation sacrifices earnings for liquidity, it will no longer be able to exist and endure. Similarly, ~~according to Scharf (1984),~~ liquidity is a short-term goal of every enterprise that should be addressed to prevent insolvency. Many studies, ~~including Raheman and Nasr and Smith (1980), (2007),~~ have addressed the significance of liquidity alongside profitability as a key goal for every corporate organization. In these studies, the importance of profitability and liquidity are emphasized. Up until marginal returns outweigh the cost of committed capital, businesses should invest in working capital. Trade-offs between profit and liquidity should be set up in this manner.

#### 2.7.32.6.3 DEBTORS' MANAGEMENT AND PROFITABILITY

Many studies, including Raheman and Nasr and Smith ~~(1980), (2007),~~ have addressed the significance of liquidity alongside profitability as a key goal for every corporate organization. In these studies, the importance of profitability and liquidity are emphasized. Businesses should invest in working capital until marginal returns outweigh the cost of invested capital in order to balance the liquidity and profitability trade-off. ~~But only if marginal operational profit exceeds marginal cost of prolonged borrowing duration can this be accomplished.~~ Furthermore, it is anticipated that giving consumer's credit periods will increase enterprises' worth and usually have a good influence on profitability (Lazaridis and Tryfonidis, 2015~~06~~). The

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aforementioned summarizes the consensus among academics about the association or profitability, which is an objective of most business organizations, and receivables management.

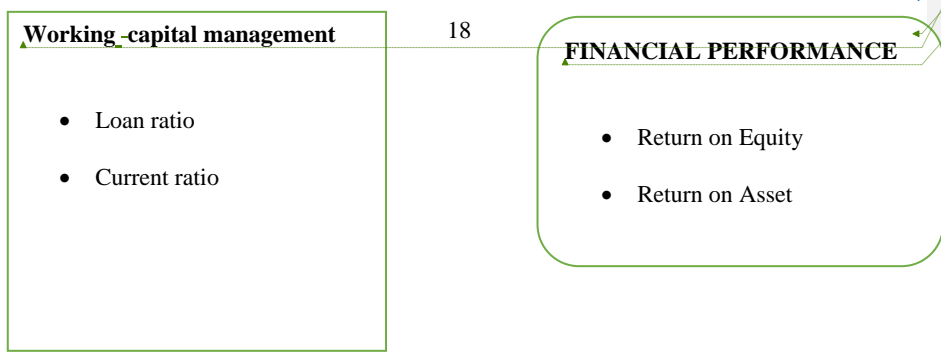
**2.7.42.6.4 CREDITORS MANAGEMENT AND PROFITABILITY**

The main goal of effective WCM, particularly for accounts payable, is to improve business performance and firm stability as shown by liquidity level. In order to increase a firm's growth and profitability, it is possible to control all the different WCM components, including the loan ratio, cash ratio, and current ratio in this thesis. ~~(Tryfonidis&Lazaridis,2006)~~. The company's purchases, which are reliant on the volume of output, are a major factor in the account payables, which are short-term obligations on a bank's balance sheet. Hence, while selecting whether to accept a trade discount or stretch account payables, the trade-off between the benefits and drawbacks of a credit policy should be taken into account. It is important to weigh the advantages of trade credit against the disadvantages of forgoing potential cash discounts, prospective late payment fees, and potential price increases. ~~(Horne and Wachowicz, 2008)~~. Reduced cash outflows from the company are the goal of financial managers' efforts in account payables in order to prevent a detrimental effect on the company's liquidity. (ALI, 2018)

**2.82.7 CONCEPTUAL FRAMEWORK**

Figure 2.2. Depicts the relationship between business profitability and working capital. The chart depicts how the independent variables measured by loan ratio, cash ratio and current ratio affect profitability, based on return on equity and asset performance. It also shows how to control additional factors that might affect how the dependent and independent variables relate to one another. For the purposes of this study, the researcher decides to limit business size and current obligation to current assets.

**Figure 2.2 Conceptual Framework**



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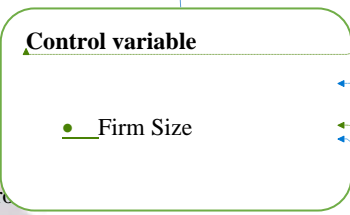
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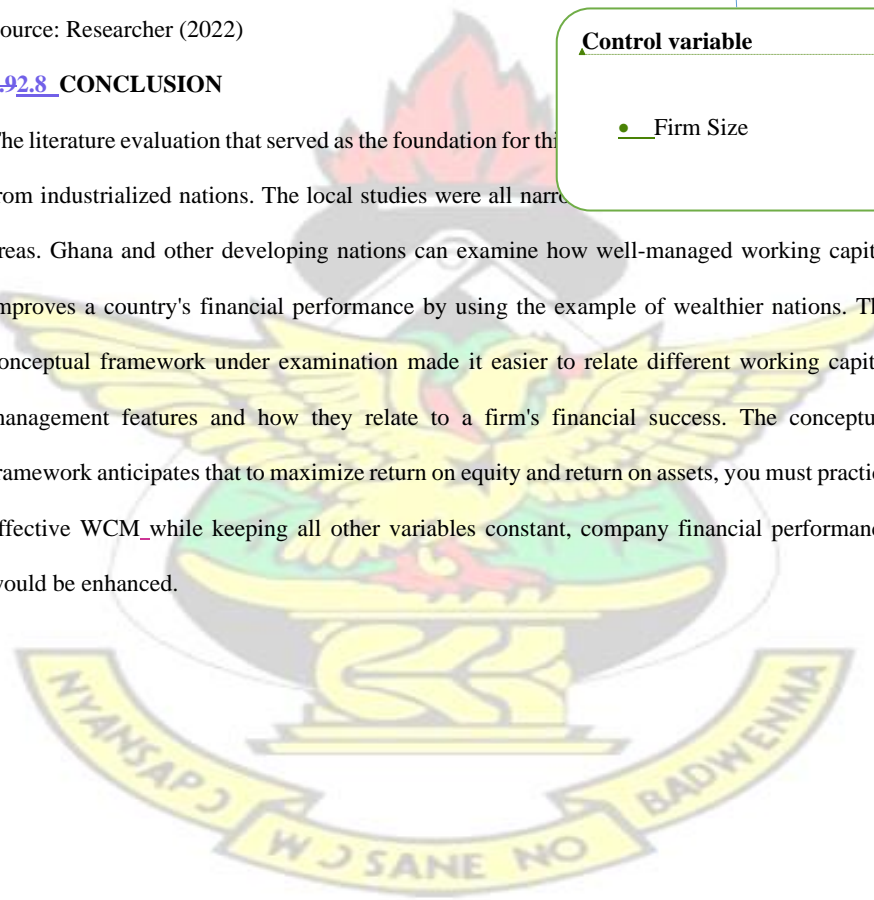
Source: Researcher (2022)

### 2.92.8 CONCLUSION

The literature evaluation that served as the foundation for this study was drawn from industrialized nations. The local studies were all narrow in scope, focusing on specific areas. Ghana and other developing nations can examine how well-managed working capital improves a country's financial performance by using the example of wealthier nations. The conceptual framework under examination made it easier to relate different working capital management features and how they relate to a firm's financial success. The conceptual framework anticipates that to maximize return on equity and return on assets, you must practice effective WCM\_while keeping all other variables constant, company financial performance would be enhanced.



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## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 INTRODUCTION

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The research methods section provides a thorough examination of the study's strategy to doing research. Its primary goal is to research the impact of working capital management on the profitability of Ghanaian manufacturing enterprises. This section delves into data collection and estimation techniques, covering topics such as sample size, population, sampling methodology, data analysis, and research design.

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~~3.2 IN THIS CHAPTER, THE WHOLE RESEARCH STRATEGY USED TO CARRY OUT THE STUDY IS PRESENTED. THE APPROACH IS BASED ON THE DATA COLLECTION AND ESTIMATING METHODS USED DURING THE INQUIRY. THIS ARTICLE COVERS THE DEMOGRAPHIC, SAMPLE, DATA COLLECTION, DATA PROCESSING, AND PRESENTATION STRATEGIES.~~

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### 3.3.2 STUDY DESIGN

The objective of the study is to examine the impact that WCM has on the financial performance of Ghana's publicly listed banks. As the objectives of this study need the investigation of numerical variables, a quantitative technique is used. ~~The research~~ research makes use of panel data and a descriptive research methodology, just like Inge S. (2013), Patel, (2019), and SENAN et al (2021) A descriptive research design is used to improve the structure and clarity of the study even further. The objective of this design is to gather data in an orderly manner so that a phenomena, situation, or population may be represented. It is especially helpful for answering the study problem's "what," "when," "where," and "how" questions. The study uses a panel data technique, taking inspiration from Martínez-Solano and García-Teruel (2011). The research strategy, which is both quantitative and descriptive, emphasizes the study's dedication to methodically investigating the connections between working capital management and profitability in the context of Ghanaian manufacturing companies. By enabling accurate measurement and analysis, this methodological technique helps to meet the goals of the study.

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### **3.43.3 POPULATION AND SAMPLING DESIGN**

The study targets all the 23 authorized banks in Ghana between 2011 and 2020.

### **3.53.4 SAMPLE SIZE AND SAMPLING TECHNIQUE**

A purposeful sampling strategy was used to choose the sample. Two criteria were used to choose the sample: the business must be a Ghanaian stock exchange-listed financial firm. Annual reports of the financial institution must be readily available on annual reports Ghana, a site that is accredited for listed companies' annual statements, from 2011 to 2020. The researcher selects a sample size of 6 financial institutions from the overall population, each with data for the previous ten years from 2011 to 2020.

### **3.63.5 SOURCES OF DATA OF THE STUDY**

Information from the firms was gathered using their financial statements for the year (statement of comprehensive income and statement of financial condition); these reports come from a reputable source, the Ghana Stock Exchange reports, and cover the most recent periods with available data for the span of six years, from 2011 to 2020. The research utilized panel data from Ghana Stock Exchange's Annual Reports on financial Institutions, which were issued from 2011 to 2020. The report included pertinent income and spending details, as well as the budgeted amount for the time.

### **3.73.6 DATA COLLECTION METHODS**

Due to the requirement that all listed businesses publish their financial accounts with the GSE, the study was totally dependent on the audited annual financial statements of the selected enterprises, which were acquired with reliability via company websites or GSE records. The balance sheets and income statements of the sample businesses were analyzed for information

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using the data collecting sheets. Current assets, current liabilities, inventories, accounts receivable, financial assets, total assets, and total assets were all included. The data's legitimacy and trustworthiness were ensured because it was acquired from audited financial accounts, which decreased the possibility of distortion of information included within.

### **3.83.7 DATA ANALYSIS**

Both descriptive and quantitative analytic methodologies were used in the data analysis to meet the study's goal. The usage of SPSS version 18 facilitated data analysis (Statistical Program for Social Sciences). Because it is extremely methodical and can handle a wide variety of the most popular statistical and graphical data, SPSS was chosen. The lowest, maximum, mean, and standard deviations of the study's variables are provided through descriptive analysis. Using correlation analysis to evaluate the degree of relationship between the dependent and explanatory variables, the link between profitability, WCM, and other chosen parameters was identified. To clarify the causal links between the three sets of variables, regression analysis was once more performed (dependent, explanatory and the control variables). Because the data was entirely quantitative and derived from the company's financial statements for multiple industries over the whole research period, pooled least squares analysis was also employed. Using SPSS software version 26, the collected data were examined. Regression analysis is used in the study to determine how the variables under inquiry are related to one another. The study uses a multiple panel linear regression data analysis technique and includes cross-sectional and time-series data to examine the collected data, both descriptive and correlational. Both time series and cross-sectional data are used in the data analysis. To quantify the key performance indicators in descriptive statistics, the Mean, Maximum, Minimum, and Standard Deviations are employed.

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### 3.9.3.8 MEASUREMENT OF VARIABLES

Variables have a slightly different meaning and use in statistics, although they have a little overlap with algebraic meaning, therefore their uses and definitions are vastly different. The elements included Return on Assets (ROA), Return on equity (ROE), Current Ratio (CR), Loan Ratio (LR), Cash Ratio (CaR), Firm Size (FS), are been conceived as the variables in the study. Table 1 provides details of the constructs to be used in the study, how the variables were measured, and their definition per this research.

**Table 1.1** Measurement Construct

Variable	Definition	Formulas
DEPENDENT		
Profitability		A company's return on assets, ROA, is a measure of how much money it generates from its assets.
	Return on Equity (ROE) is a metric used to determine how much a firm makes from the capital that its shareholders have invested in it.	$\frac{\text{Net Profit}}{\text{Total Assets}}$
INDEPENDENT		$\frac{\text{Net Income}}{\text{Shareholder's Equity}}$

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Loan Ratio		A bank's liquidity is measured by comparing its advances to total deposits for the same time frame.	Formatted: Space Before: 0 pt, After: 0 pt, Line spacing: 1.5 lines
Cash Ratio	Cash ratio assesses the firm's capacity to employ its near cash or fast assets to promptly retire its outstanding debts.	Total Loans Total Deposit	Formatted: Space Before: 0 pt, After: 0 pt, Line spacing: 1.5 lines
Current Ratio	The current ratio evaluates a company's ability to use its current assets to satisfy short-term obligations.	Cash and cash equivalent liabilities	Formatted: Space Before: 0 pt, After: 0 pt, Line spacing: 1.5 lines
Firm Size (FS) control variable		FS represents the company's overall sales.	Formatted: Space Before: 0 pt, After: 0 pt, Line spacing: 1.5 lines
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Source: Author's Construction (2021).

### 3.9 MODEL SPECIFICATIONS

#### 3.10

The paper adopted two regression models to institute the connection between the study's independent and dependent variables. The first model specification is presented as:

$$ROA = \beta_0 + \beta_1CR + \beta_2LR + \beta_3CaR + \beta_5FS + \varepsilon \dots \dots \text{Model 1}$$

Where: ROA = Return on Assets

CR = Current Ratio

LR = Loan Ratio

CaR = Cash Ratio

FS = Firm Size

$\beta$  = coefficient of independence variables

$\varepsilon$  = Error term within a confidence interval of 5%

The second model specification is presented as:

$$ROE = \beta_0 + \beta_1CR + \beta_2LR + \beta_3CaR + \beta_5FS + \varepsilon \dots \dots \text{Model 1}$$

Where: ROE = Return on Equity

CR = Current Ratio

LR = Loan Ratio

CaR = Cash Ratio

FS = Firm Size

$\beta$  = coefficient of independence variables

$\varepsilon$  = Error term within a confidence interval

### 3.113.10 JUSTIFICATION OF VARIABLES

This study uses CR, LR AND CaR as adopted by Joshi, (2013) as the Independent Variable whiles ROA and ROE were maintained as the dependent variable. Firm Size was then used as control Variables.

*Table 2 Justification of variables*

VARIABLES	SOURCE	JUSTIFICATION
Return on Asset (ROA)	Akey, 2019	As a Dependent Variable
Return on Equity (ROE)	Akey, 2019	As a Dependent Variable
Current Ratio	Joshi, (2013)	As a working capital measure
Cash Ratio	Joshi, (2013)	As a working capital measure
Loan Ratio	Joshi, (2013)	As a working capital measure
Firm Size	Zigah <i>et al.</i> , 2018	As a control measure

Source: Author's Construction (2021)

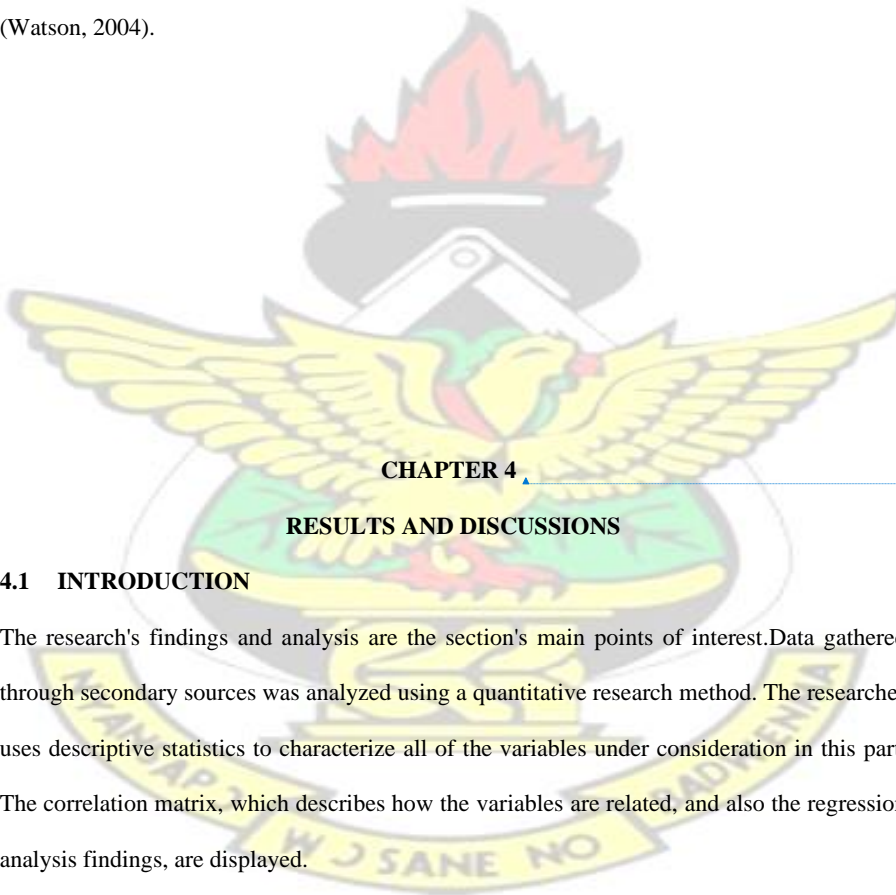
### 3.123.11 VALIDITY AND RELIABILITY

To provide relevant outcomes, research tools must be legitimate and dependable. When research tools measure what they're designed to assess, their validity is established. Internal consistency is also a factor in achieving dependability in a research instrument. To evaluate the research instrument's content validity for this study, an expert opinion will be sought. The unknown impact of modifying one variable over another is estimated by linear regression (Watson, 2004).

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## CHAPTER 4 RESULTS AND DISCUSSIONS

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### 4.1 INTRODUCTION

The research's findings and analysis are the section's main points of interest. Data gathered through secondary sources was analyzed using a quantitative research method. The researcher uses descriptive statistics to characterize all of the variables under consideration in this part. The correlation matrix, which describes how the variables are related, and also the regression analysis findings, are displayed.

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### 4.2 DESCRIPTIVE STATISTICS

In this section, the independent variables Loan Ratio, Cash Ratio, Current Ratio, and Control Variables are introduced together with the dependent variables Return on Asset and Return on

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Equity. Table 1 lists the variables of interest, such as firm size. The values for the mean, standard deviation, minimum, and maximum are all mentioned in the description over a ten-year period. The researcher looked at six financial institutions listed on the Ghana Stock Exchange from 2011 to 2020.

The businesses' profitability was assessed using return on asset and return on equity. As shown in the table, the ratio of profit to assets, or return on asset (ROA), has a mean of 0.0384, a standard deviation of 0.23688, a maximum value of 0.163, and a minimum value of 0.002. This means that each cedi invested in the firm's assets can produce a return of about five pesewas on average (0.04). This poor return on asset value indicates that the sampled enterprises under study are not earning enough money based on their assets on average. This may be due to inefficient asset usage or bad asset management.

However, Return on Equity (ROE) which measures the ratio of net income to investors' equity can be viewed from the table as well, the firms included in the study have a mean of 0.52069. This can be taken to signify that, the firms included in the research generate a standard return of Ghc0.52 on every cedi of investment made by the shareholders.

The Loan Ratio also has a maximum value of 1.176 and a minimum value of 0.231, a mean of 0.56639, a standard deviation of 0.207232, and a range of values in between. This suggests that the financial company's apprentice can convert loans into cash in a matter of days. The mean value of the Cash Ratio is 0.283, and the standard deviation is 0.206706. This implies that the financial companies studied in this study have an average settle 20% debt with the available cash.

The current ratio, on the other hand, has a mean of 1.02151, a standard deviation of 0.940390, a maximum value of 6.695, and a minimum value of 0.166. This means, the financial institution in this study can pay off their trade creditors' debts with the available current asset.

The average size of the banks studied was 6.94175, with a standard deviation of 1.044741, a

maximum of 6.695, and a low 5.450. The table indicates that the average is around 6. This means that, in terms of total assets, the financial firm studied in this study are on average somewhat small.

**Table 3: Summary of Descriptive statistics**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	70	.002	.163	.03840	.023688
ROE	70	.142	1.271	.58328	.215738
LOAN RATIO	70	.231	1.176	.56639	.207232
CASH RATIO	70	.077	1.656	.28333	.206706
CURRENT RATIO	70	.166	6.695	1.02151	.940390
BANK SIZE	70	5.450	9.709	6.94175	1.044741
Valid N (listwise)	70				

Source: Author Construction (2022)

### 4.3 TREND ANALYSIS

The trend analysis for the variables under consideration is presented in this section.

#### 4.3.1 TREND ANALYSIS FOR RETURN OF ASSETS

Figure 4.1 displays the return on asset trend of the six Ghanaian financial firms listed on the Stock Exchange from 2011 to 2020 that were considered in this study. Return on asset is a profitability metric that measures how efficiently the economic resources of a business can produce revenue. As presented in the figure, the return on asset has been increase from 2011 to 2015, began to reduce to 2018 and increased in 2020.

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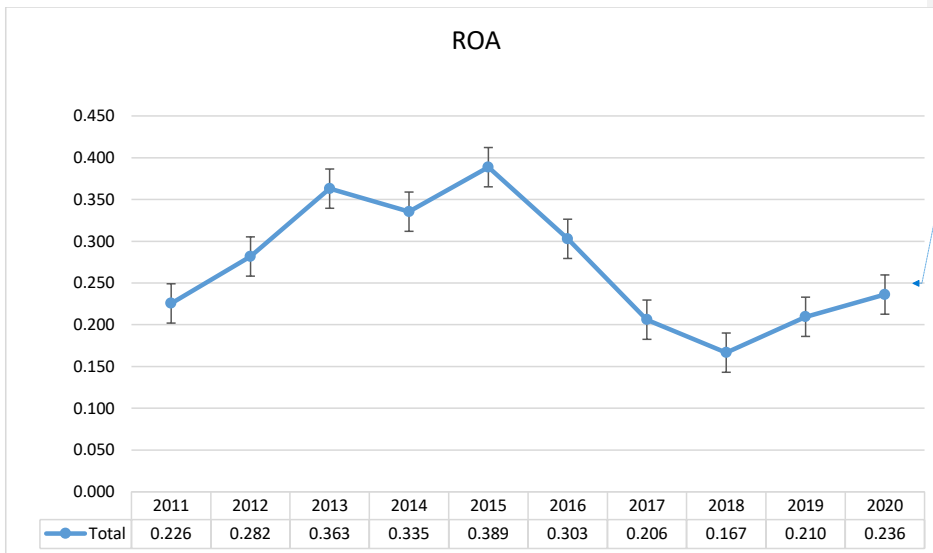
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**Figure 4.1** Trend for Return on Asset

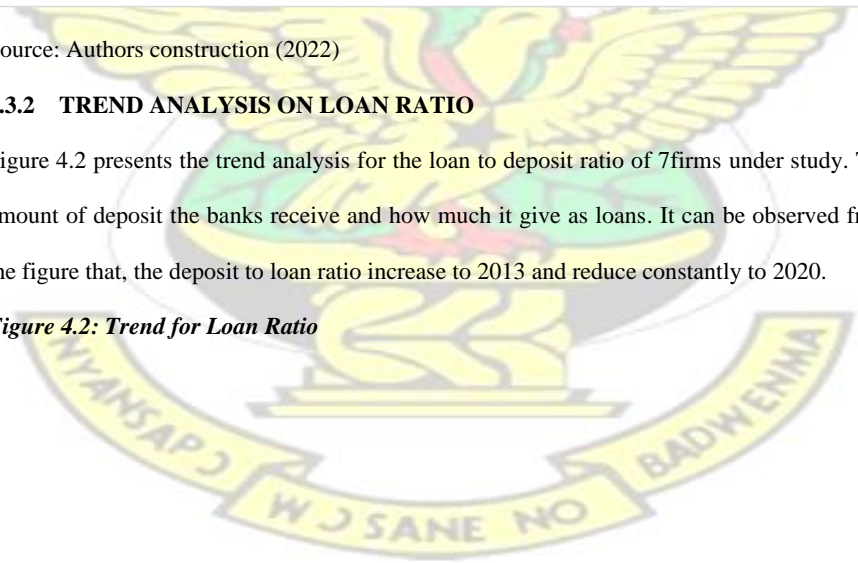


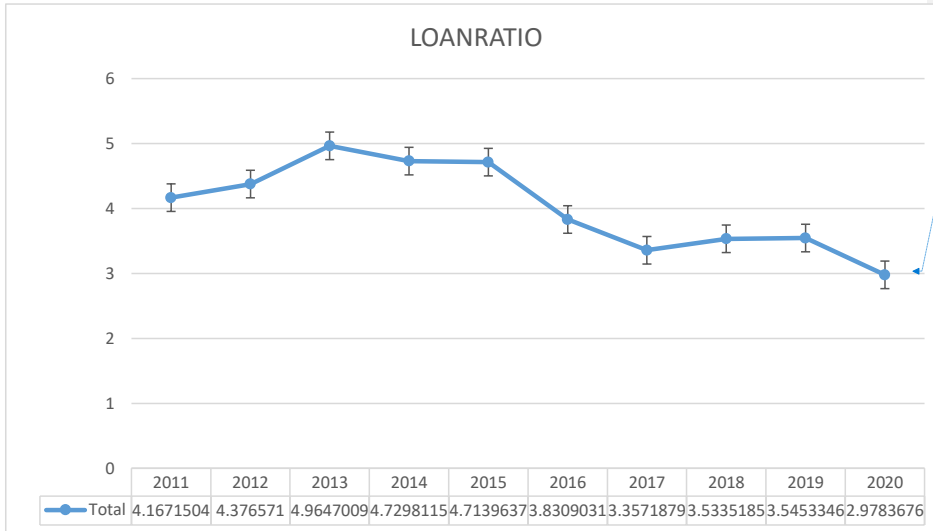
Source: Authors construction (2022)

**4.3.2 TREND ANALYSIS ON LOAN RATIO**

Figure 4.2 presents the trend analysis for the loan to deposit ratio of 7 firms under study. The amount of deposit the banks receive and how much it give as loans. It can be observed from the figure that, the deposit to loan ratio increase to 2013 and reduce constantly to 2020.

**Figure 4.2:** Trend for Loan Ratio





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Source: author's construction (2022)

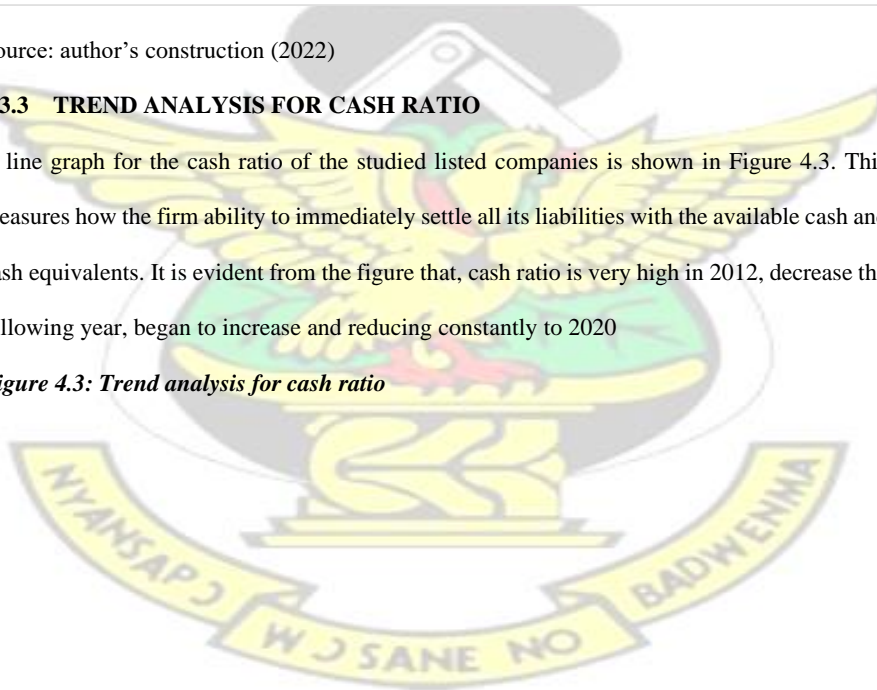
### 4.3.3 TREND ANALYSIS FOR CASH RATIO

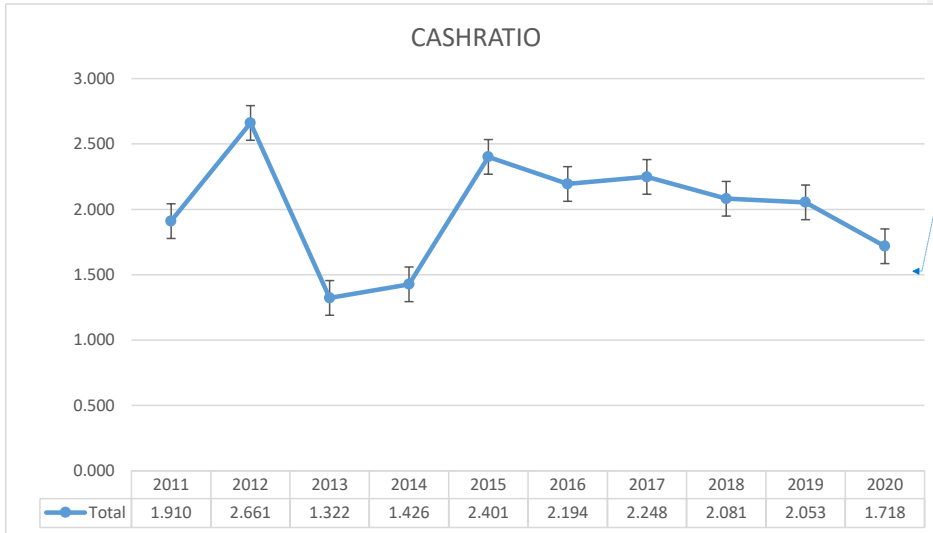
A line graph for the cash ratio of the studied listed companies is shown in Figure 4.3. This measures how the firm ability to immediately settle all its liabilities with the available cash and cash equivalents. It is evident from the figure that, cash ratio is very high in 2012, decrease the following year, began to increase and reducing constantly to 2020

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Figure 4.3: Trend analysis for cash ratio





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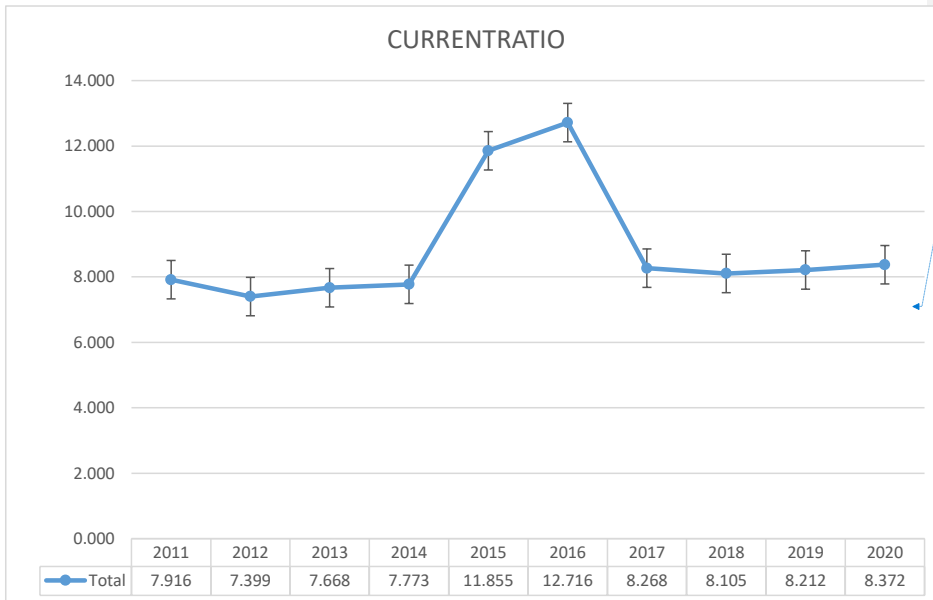
#### 4.3.4 TREND ANALYSIS OF CURRENT RATIO

The ability of the corporation to pay short-term debt or debt that is due within a year is trended in Figure 4.4. It is observe from the graph that the firms can use 80% of its current asset to offset current liabilities within a year between the period of 2011 to 2014 and increase to 120% 2016, meaning the can pay their debt and have 20% remaining, then decreased to 80% in 2016 constant through to 2020, as seen in the graph.

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Figure 4.4 Trend analysis for current ratio



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#### 4.4 CORRELATION ANALYSIS

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Correlation analysis is used to determine the degree of the link between the independent variables (loan ratio, cash ratio, and presently ratio) and the dependent variables in order to satisfy the study's objectives (Return on Asset and Return on equity). Using numerical coefficients, this method determines the degree and kind of connection between two variables. The size and direction of the coefficient, as well as the form and nature of the link or association, indicate whether a direct or indirect relationship exists between any two variables. A positive coefficient suggests that the two variables have a direct relationship, a negative coefficient, on the other hand, denotes that they have an adverse relationship. A positive association indicates that both variables move in lockstep; for example, if one variable rises, the other rises as well, and vice versa.

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An adverse relationship, on the other hand, indicates that as one of the variables rises, the other falls. The range of correlation coefficients is -1 to 1. When it comes to correlation, the greater the association between the two variables, the larger the absolute value of the coefficient. As a result, the 0.7 correlation coefficient is greater than the 0.2 correlation coefficient. Table 2 provides the correlation matrix with ROA and ROE as the dependent variables. As shown in Table 2, all the independent variables were negatively correlated with the return on assets except the cash ratio which is positively correlated with a value of 0.037. This means that the cash ratio move in the same direction as a return as a result of their direct relationship. This implies that as the independent variables (loan ratio) grow by 0.001, Return on asset, the dependent variable, rises by 0.037.

Also, loan ratio, current ratio and firm size were negatively linked to the dependent variable (return on asset) with a value of -0.012, -0.75 and -0.272 respectively. As a result, the independent variables (loan ratio, current ratio, and firm size) increase by 1 percent the dependent variable also decreases by -0.012, -0.75 and -0.272 respectively. However, the independent variables were all positive correlated with Return on Equity except current ratio. This is interpreted to mean that, loan ratio, cash ratio, and bank size are positively related to Return on Equity as a result of the move in same directions. This implies that, as the independent variables (loan ratio, cash ratio and bank size) increase by 1%, return on equity increase by 0.216, 0.083 and 0.237 respectively.

However current ratio moves in adverse direction with Return equity. A grows 0.001 in current ratio will lead to decrease of -0.005 in return on equity.



CURRE	Correlation	-.075	-.005	-.030	-.426	1.000	-.150
NTRAT	Coefficient						
O	Sig. (2-tailed)	.539	.966	.807	.000	.	.214
	N	70	70	70	70	70	70
BANKS	Correlation	-.272	.237	-.145	.087	-.150	1.000
ZE	Coefficient						
	Sig. (2-tailed)	.023	.048	.230	.472	.214	.
	N	70	70	70	70	70	70

Source: researchers' computation

#### 4.5 REGRESSION RESULTS

In order to analyze the effects of loan ratio on the profitability of listed financial companies in Ghana, ascertain the relationship between cash ratio and profitability of listed financial firms in Ghana, and finally evaluate the impact of current ratio on the profitability of listed financial firms in Ghana, a regression analysis is used to determine whether or not the independent variable and the dependent variables understudied have a relationship. When Return on Asset (ROA) is used as the dependent variable in a regression, the results are shown in Table 5. The results of the regression using the dependent variable Return on Equity (ROE) are shown in Table 8.

##### 4.5.1 REGRESSION RESULTS WITH ROA AS THE DEPENDENT VARIABLE

To effectively conduct the stationarity of the variables of WCM on the profitability of listed financial corporations in Ghana, a regression diagnostics test model was used. This diagnostic test was used to see if the logistic regression assumptions were met for all of the variables. For an instant, if the assumption on the variance between the residuals and regression estimates are constant or not constant. The analysis of variance in the study shows the reliability and the

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accuracy. This is accomplished by taking into account the residual mean value of the model and the regression mean square value. The model is regarded as accurate and reliable for predicting variables when the regression mean square value surpasses the residual value. The regression's mean square and the residual mean square are obtained by dividing each of the sums of square by the degree of freedom respectively. The f value included in the analysis of the variance table is obtained by dividing the regression mean square value by the residual mean square. Table 4.5 represents the Significance (Sig), Freedom (F), and the mean of square (Ms) on the variables of working capital management on the profitability of Ghanaian Listed financial businesses. From Table 4.3, It is possible to figure out that the regression's mean square value of 0.019 equal to the residual value of 0.019, making the model therefore accurate and reliable.

**Table 5 ANOVA**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.019	4	.005	16.059	.000 <sup>b</sup>
	Residual	.019	65	.000		
	Total	.039	69			

a. Dependent Variable: ROA

b. Predictors: (Constant), BANKSIZE, CASHRATIO, LOANRATIO, CURRENTRATIO

**Source: researchers' computation**

Based on the feasibility assessment regression model to test the hypothesis, the value of the coefficient of determination ( $R^2$ ) shows a value of 0.497 percentile units or 49%. This means that WCM has a high level of meaningful effect on the profitability of manufacturing enterprises.

**Table 6 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705 <sup>a</sup>	.497	.466	.017308

a. Predictors: (Constant), BANKSIZE, CASHRATIO, LOANRATIO, CURRENTRATIO  
 Source: researchers' computation

The results presented in the table specify that loan ratio cash ratio current ratio and bank size have a considerable impact on the financial firms used in this study's return on asset variable. The ratios were all found to have a positive and significant association on Return on asset with the exception of bank size.

**Table 7 Regression results with ROA as the dependent variable**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.027	.016		1.653	.103
	LOANRATIO	.012	.010	.107	1.189	.239
	CASHRATIO	.025	.010	.221	2.435	.018
	CURRENTRATIO	.020	.003	.657	7.151	.000
	BANKSIZE	-.004	.002	-.173	-1.905	.061

a. Dependent Variable: ROA

Source: Researchers' computation

#### 4.5.2 REGRESSION RESULTS WITH ROE AS THE DEPENDENT VARIABLE

A regression diagnostics test model was utilized to successfully conduct the stationary of the factors of working capital management on the profitability of listed financial businesses in Ghana. This diagnostic test was used to see if the logistic regression assumptions were met for all of the variables. For an instant, if the assumption on the variance between the residuals and regression estimates are constant or not constant.

The analysis of variance in the study shows the reliability and the accuracy. This is accomplished by taking the regression to the mean square value and a residual mean value of the model into account. When the regression mean square value is higher than the residual value makes the model accurate and reliable for predicting variables. The regression's mean square and the residual mean square are obtained by dividing each of the sums of square by the degree of freedom respectively. The f value included in the analysis of the variance table is obtained when you divide the regression mean square value by the residual mean square. Table 6 represents the Significance (Sig), Freedom (F) and the mean of square (Ms) on the variables of working capital management on the profitability of Ghanaian registered financial banks. From Table 6, It is possible to understand that the regression's mean square value of 0.112 is less than the residual value of 1.171, making the model therefore slightly accurate and reliable.

**Table 8 ANOVA**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.112	4	.028	1.551	.198 <sup>b</sup>
	Residual	1.171	65	.018		
	Total	1.283	69			

a. Dependent Variable: ROE

b. Predictors: (Constant), BANKSIZE, CASHRATIO, LOANRATIO, CURRENTRATIO

**Source: Researchers' computation**

Based on the feasibility assessment of regression model to test the hypothesis, the value of the coefficient of determination ( $R^2$ ) shows a value of 0.280 percentile units or 28%, which indicates that, there is a high level of significant influence of financial firms' working capital management on their profitability.

**Table 9 Model Summary 2**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.295 <sup>a</sup>	.087	.031	.134248

a. Predictors: (Constant), BANKSIZE, CASHRATIO, LOANRATIO, CURRENTRATIO

**Table 10 Regression results with ROE as the dependent variable**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.311	.127		2.445	.017
	LOANRATIO	.135	.079	.205	1.698	.094
	CASHRATIO	.114	.081	.173	1.411	.163
	CURRENTRATIO	-.005	.021	-.031	-.246	.806
	BANKSIZE	.015	.016	.118	.970	.336

a. Dependent Variable: ROE

Source: Researchers' computation

#### 4.6 DISCUSSION OF RESULTS

The study's goal is to investigate the impact of WCM on the profitability of Ghanaian Listed Financial businesses. Keeping in mind the study's primary goal, which is to determine how much the loan ratio affects the profitability of Ghanaian financial institutions, this study finds out that loan ratio have no significant influence on return on asset as shown in Table 5 recording a value of 0.239. Also, loan ratio has no significant effect on return on equity as loan ratio recorded 0.094 shown in Table 8. As per the findings of this study, loan ratio has no significant impact on either ROA or ROE, the results demonstrate that loan ratio has no substantial impact on the profitability of financial institutions in Ghana. The finding of this study with respect to loan ratio contradicts with the findings of Almazari (2014). But the findings of this studies agree with the findings from the study done by Hoang (2015).

The second objective of this study was to establish a relationship between the cash ratio and the financial organizations listed in Ghana that are profitable. This study reveals a strong correlation between cash ratio and return on asset (ROA). Moreover, return on equity and cash ratio showed a little positive correlation (ROE). This demonstrates how the cash ratio and the financial institutions' profitability in Ghana are related.

This study's third objective was to determine how current ratios affected the profitability of publicly traded banking institutions in Ghana. Table 5 showed that the current ratio, which recorded 0.000, less than 0.05, had a strong positive correlation with return on asset (ROA). A value of 0.806, which was significantly greater than the 0.05 significance level, for the current ratio indicated a positive but insignificant relationship with return on equity (ROE), as shown in Table 8.

Firm size as a control variable showed no significant effect on return on asset (ROA) after recording a value of 0.061 according to Table 5. Company size also registered a return on equity (ROE) value of 0.336, indicating that it had little no impact on the financial enterprises in Ghana's profitability.

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#### 4.7 SUMMARY OF CHAPTER

This chapter looked into how WCM affected the financial institutions included in Ghana's financial sector's profitability. The chapter looks at how WCM and industry-wide trend analysis affect the financial enterprises in Ghana that are publicly traded in terms of profitability. The study examined how various WCM parameters affected the financial performance of Ghana's publicly listed banking businesses. In this chapter, the stationary of the determining factors on the profitability of listed financial businesses in Ghana was established using the Regression Diagnostics Test.



### CHAPTER 5

#### SUMMARY, CONCLUSION, AND RECOMMENDATIONS

##### 5.1 INTRODUCTION

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This chapter serves as a summary of the thesis and the findings, which provided concrete advice and addressed the study issues. The chapter also elucidates the recommendations which policymakers can implement to align better measures to improve Ghanaian financial firms' working capital management

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## 5.2 SUMMARY OF THE FINDINGS

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The study's main goal was to look at how working capital management affected the financial businesses in Ghana that are publicly traded from 2011 to 2020 in terms of profitability. To do this, the study concentrated on the effect of loan ratio on the profitability of listed financial companies in Ghana, the relationship between cash ratio and profitability of Ghana's listed financial institutions as well as how current ratio affects these firms' profitability. Nonetheless, Return on Asset and Return on Equity were used to gauge profitability. The sentences that follow provide an overview of the main findings.

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### 5.2.1 EFFECT OF LOAN RATIO ON PROFITABILITY

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According to the correlation matrix, loan ratio has a -0.012 negative connection with return on asset (ROA) and a 0.216 positive correlation with return on equity (ROE). Also, the correlation matrix shown that loan ratio has no significance on ROA and ROE of the financial firms in Ghana as loan ratio recorded 0.0919 for ROA and 0.073 for ROE.

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From the regression analysis, loan ratio did not have any significant effect on ROA as it recorded 0.239 when ROA was used as the dependent variable. Loan ratio also recorded 0.094 when ROE was used as the dependent variable. This shows that both values are above the 0.05 significance threshold making loan ratio not to have any significant effect on both ROA and ROE.

### 5.2.2 EFFECT OF CASH RATIO ON PROFITABILITY

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The cash ratio and return on asset (ROA) have a positive correlation of 0.037 and a negative correlation of -0.083, respectively, according to the correlation matrix. Also, the correlation

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matrix shown that cash ratio has no significance on ROA and ROE of the financial firms in Ghana as cash ratio recorded 0.764 for ROA and 0.497 for ROE.

From the regression analysis, cash ratio has significant effect on ROA as it recorded 0.018 when ROA was used as the dependent variable. Cash ratio also recorded 0.163 when ROE was used as the dependent variable. This shows that both values are above the 0.05 significance threshold making cash ratio not to have any significant effect on both ROA and ROE.

### **5.2.3 EFFECT OF CURRENT RATIO ON PROFITABILITY**

The correlation matrix shows that the current ratio has a negative correlation of -0.075 with return on asset (ROA) and -0.005 with return on equity (ROE). Also, correlation matrix shown that current ratio has a significance on ROA but no significance effect on ROE of the financial firms in Ghana as current ratio recorded 0.537 for ROA and 0.966 for ROE. From the regression analysis, current ratio did have a significant effect on ROA as it recorded 0.00 when ROA was used as the dependent variable. When ROE was employed as the dependent variable, the current ratio recorded 0.806, indicating a negligible impact on ROE.

### **5.3 CONCLUSION**

By completing its goals and responding to the research questions, the study was successful in reaching its intended audience. According to the study's findings, working capital management has minimal influence over the financial enterprises listed on the Ghana Stock Exchange's profitability. This was shown by the fact that the only variables that have a significant impact on simply ROA are cash and current ratios. Yet, the return on assets was unaffected by the lending ratio. In conclusion, the loan ratio has little bearing on the financial institutions' profitability that are listed on the Ghana Stock Exchange (GSE). Yet, the profitability of financial institutions with GSE listings is influenced by the cash ratio and current ratio.

### **5.4 LIMITATION OF THE STUDY**

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The study could not be expanded to include all authorized banks in Ghana due to the  
critical for data collecting. Because just six (6) listed banks on the Ghana Stock Exchange  
were taken into account in this study, its conclusions may be considered restricted. As a result,  
the study's conclusions might not be broadly applicable to all other Ghanaian banks. These  
constraints do not, however, reduce the quality of this study.

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## **5.5 RECOMMENDATION**

**5.4** The study's findings have been synthesized to provide nuanced and complete  
recommendations covering organizational strategy and industrial practices, research,  
academia, and policy enhancement.

### a) organizational strategy and industrial practices,

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Effective working capital management for companies may have advantages including  
preserving a high degree of customer confidence, enhancing the payment of short-term  
obligations, and enhancing financial success. According to the study's results, managers  
of banks in Ghana should give adequate attention to working capital management  
component, especially, cash ratio and current ratio to optimal working capital levels in  
their bank bearing in mind the positive significant relationship between them (cash ratio  
and current ratio) and Return on Asset.

### Academics and Research

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**b.** The study emphasizes the need for more investigation into the complex linkages between  
working capital management and profitability in the context of research and academia,  
taking sector-specific dynamics into account. It is recommended that scholars do further  
investigation into the various segments of the manufacturing sector in order to identify  
particular variations in the influence of working capital elements on financial outcomes.  
Academic institutions can also help spread information by encouraging cooperation

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between industry practitioners and scholars. This cooperative strategy can aid in the creation of useful insights and solutions to the changing problems Ghanaian manufacturing companies confront.

c. Policy Enhancement

From a policy standpoint, regulators and legislators must take into account how working capital management techniques affect the manufacturing industry's general health and competitiveness. It is imperative for policymakers to take into consideration the distinct obstacles and prospects encountered by manufacturing enterprises and formulate rules that foster optimal approaches to working capital management. Policymakers may enhance the industrial sector's resilience and sustainability in Ghana by coordinating policies with the study's conclusions. Also the banks should invest more in technology and maximize utilization of information technology such as electronic banking system for better performance.

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**5.55.6 RECOMMENDATION FOR FURTHER STUDY**

Further research studies to be conducted on the same topic or similar topics should consider increasing the number of firms and the number of years. This will contribute to more generalizable and more reliable finding results. AlsoIn addition, further studies should explore the various WCM policies of the organizations, compare and contrast. Further studies could endeavour in the manufacturing sector to look into the inventory management impact of WCM

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