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WORKING CAPITAL MANAGEMENT PRACTICES AND FINANCIAL PERFORMANCE OF MANUFACTURING COMPANIES IN RWANDA
A CASE OF CIMERWA PLC

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A RESEARCH PAPER SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTERS DEGREE IN BUSINESS ADMINISTRATION ACCOUNTING AND FINANCE OF UNIVERSITY OF KIGALI

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ABSTRACT

The research aimed at assessing working capital management and financial performance of manufacturing companies. The specific objectives are; To examine the contribution of cash management on financial performance of CIMERWA PLC, To assess the contribution accounts payable management on financial performance of CIMERWA PLC ,To examine the contribution of accounts receivable management on financial performance of CIMERWA PLC, To analyze the effect of inventory management on financial performance of CIMERWA PLC To achieve the above objectives, a combination of documentation by analyzing annual financial reports of CIMERWA PLC were used. This researcher used correlational research design to assess whether there is a relationship between Working capital management and financial performance of CIMERWA PLC. The results obtained shown that there is positive correlation between working capital and financial performance of CIMERWA PLC, It was shown that working capital management contributed at 74% on financial performance. Maintaining a healthy net working capital is critical for a business's success. I recommend CIMERWA PLC, to maintain current assets over current liabilities,

Key words: Working Capital, financial performance, manufacturing companies

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1.INTRODUCTION

Working capital management is one of the most important topics in corporate finance; it relates to the operating investment of a firm and the way managers choose to finance it. This topic, mostly ignored by academics for years, is now gaining importance as we realize that financial markets are not as efficient as they were assumed to be, especially as firms expand outside the developed economies (Lorenzo Preve and Virginia Sarria-Allende, 2010).

In addition, some today's managers do neglect the organization's operating cycle thereby having longer debtors' collection period and shorter creditors' payment period and this deteriorates the companies' financial performance. This study provides a general framework that helps to understand working capital management in a comprehensive approach, linking operating decisions to their financial implications and to the overall business strategy in line with improving financial performance. This chapter is made up of the background of the study, statement of the problem, Objectives of the study, Research questions, scope of the study and significance of the study.The history of working capital management can be traced all the way back to the middle ages after industrialization of the Western World, Europe and Asia. Work completed by journeymen and apprentices were evaluated and inspected by the skilled worker to ensure that effective working capital management standards were met in all aspects of the finished product, ensuring the company's better performance in particular financial performance. As a result of high-quality working capital management between organizations, public and private sectors work under severe pressure to improve their performance.

In view that each company in America particularly in North America emphasized on maximizing performance that can be generated from their business operation, many American researchers had been conducting studies on the effect of capital structure and working capital management in determining the performance, which the results varies based on the study undertaken (Abenet Yohannes Hailu and Professor P. Venkateswarlu, 2016). In this study, working capital management components are analyzed on their effect towards the firm's performance. Meanwhile, in determining the firm's performance, the finance manager also needs to take into account the firm's working capital management, which basically means managing the firm's current assets and current liabilities at satisfactory level (Gill, 2010).

A study on a Japanese company named Suzuki Manufacturers in 2001 stated that the issue of a effective working capital calls for working capital management which is the administration of all components of working capital-cash, marketable securities, debtors (receivables) and stock (inventories) and creditors (payables) (Owizy, 2010). They further state that the financial manager must determine levels and composition of current assets by determining the right source to finance current assets and that current liability are paid in time.According to the studies produced by a body named International Financial Reporting Standards based in Switzerland, Europe; it is emphasized to always have timely production of financial reports that give much light on working capital. Ideally end of year working capital managements should be produced within at least three months following the end of the period to which the working capital management relate. Well managed working capital is not just a managerial accounting strategy focusing on maintaining efficient levels of both components of working capital, current assets and current liabilities, in respect to each other but a strategic ideal plan since once it is efficiently and effectively managed, it led to strong base hold of holistic continuous performance of the company (Paxton, 2002).

To the African Development Bank, most Sub Saharan African firms fail to catch up on the business market because some executive managers of such companies never pay much attention while making decisions relating to working capital and short-term financing. These decisions which are sometimes termed as working capital management, they involve managing the relationship between a firm's short-term assets and its short-term liabilities. The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow (India, 2014).

In Rwanda, despite the endeavor to maintain a good working capital by management, there continues to exist a declining level of working capital in form of inadequate cash inflow which cannot sustain daily cash needs

of the farm (Xavier, 2010). This in turn has led to inefficient client satisfaction in a way that a low level of working capital in form of cash receivables makes it difficult to meet short term debt obligations as well as operating expenses (PRINCE, 2011). Poor working capital particularly limited liquidity in the long run causes poor financial performance for the business as it cannot easily pay off creditors.

Like many developing countries around the globe, Rwanda is among the countries that press hard in encouraging both public and private institutions such as manufacturing companies to improve on means of how economic resources and human resources can be effectively and efficiently managed so as to better their performance. However, to note is that one of the commonest means that is being used in many Rwandan companies is effective working capital management together with the internal control system. Effective working capital management is used in strategic and day to day managerial decisions. Without this kind of the activity, organization can't perform to their required standards and in most cases missions and goals can't be met. CIMERWA PLC as established in order to deliver products of great importance to customers all over the country regardless to the distance while having a right manner of managing its working capital, that is why this company has a sound capital base to carry out their functions effectively.

With a heritage of over 38 years of changing the Rwandan landscape, CIMERWA is Rwanda's only integrated cement producer. Our production plant is located in Bugarama, Rusizi district in South Western border of Rwanda and our head office at Kimuhurura, Gasabo district.

This is the only cement company in Rwanda that mines raw materials, produces the clinker concentrate, packs and sells cement for general and civil construction. Some of our products are exported to neighboring countries such as DRC and Burundi.

At CIMERWA, we choose to partner with organizations that helped foster growth in our environment and help improve our societies. Therefore, we have partnered with key public and private institutions.

CIMERWA is 51% owned by PPC Ltd, Southern Africa's largest cement producer. PPC Ltd has been in the cement business for more than 100 years and is a public company listed on the Johannesburg Stock Exchange.

2 STATEMENTS OF THE PROBLEM

An ideal business needs sufficient resources to keep it going and ensures that such resources are maximally utilized to enhance its performance and overall performance. It has however been discovered that some methods that managers use in practice to make working capital decisions do not rely on the principles of finance, rather they use imprecise rules of thumb or poorly constructed models (Emery, Finnerty and Stowe, 2004).

This, however, makes the managers not to effectively manage the various mix of working capital component, which is available to them, and as such, the organization may either be overcapitalized or undercapitalized or worst still, liquidate.

Egbide (2009) discovered that large number of business failures in the past has been blamed on the inability of the financial manager to plan and control the working capital of their respective firms. These reported inadequacies among financial managers are still practiced today in many organizations in the form of high bad debts, high inventory costs etc., which adversely affect their operating performance (Egbide, 2009). Also, the fact that an organization makes profits is not necessarily an indication of effective management of its working capital because a company can be endowed with assets and performance but short of liquidity if its assets cannot readily be converted into cash. As such, there is shortage of cash available for the firm's utilization as at when due. Such an organization may run into debts that could affect its performance in the long run because the smooth running of operations of the organization comes to a sudden halt and it was not able to finance its obligations as at when due. Again, some managers do neglect the organization's operating cycle thereby having longer debtors' collection period and shorter creditors' payment period (Smith, 1973).

All the above constitute a problem of the investigation, hence, the need to study the working capital management and performance of CIMERWA PLC KIMIHURURA, GASABO district.

3.RESEARCH OBJECTIVES

This research paper has the following objectives which is to examine the working capital management practices and financial performance of CIMERWA PLC KIMIHURURA GASABO district. The specific objectives are to examine the contribution of cash management on financial performance of CIMERWA PLC, to examine the contribution accounts payable management on financial performance of CIMERWA PLC, to examine the contribution of accounts receivable management on financial performance of CIMERWA PLC and to analyze the effect of inventory management on financial performance of CIMERWA PLC.

4.LITERATURE REVIEW

4.1 Theoretical review

The theories were reached through different sources but mostly the written materials. The information helped the researcher to know much about the topic and it will pave a way for a researcher to have in place her own position as far as what others wrote about is concerned. The subsections below discuss fully the theories related to working capital management in manufacturing companies.

1.The Operating Cycle Theory

The operating cycle theory is one of the very important theories in working capital management. Operating cycle is one of the measures of efficiency of working capital management. It takes into cognizance the receivables and inventories related to working capital. The cycle traditionally commences from the receipt of raw materials to the collection of receivables from debtors of the stock sales produced from those raw materials. The traditional approach of relying on current or acid-test ratios as solvency indicators is quite defective compared to the operating cycle approach of relying on current or compared to the operating cycle approach where accounts receivables and inventory turnover measures are incorporated as useful in liquidity management. This is quite clear because Average Collection Period as a proxy for firm's average receivables investment is converted to cash. One critical aspect to note is that changes in collection and credit policy have a direct effect on the balance of accounts receivable outstanding, in relation to annual firm's sales (Richard & Laughlin, 1980). According to operating cycle theory when firms grant more liberal credit terms to its customers there is a higher tendency of having a bigger, but ultimately less liquid investment in cycle (that is, the inventory turnover) shows the number of times with which business firms converts the totality of their raw materials stock, their work-in-progress and ultimately the finished goods into product sales.

2.Agency Cost of Free Cash Flow Theory

Agency cost of free cash flow theory brings out the fact that organizations suffer agency costs as a result of free cash flow. This theory was put forth by Michael Jensen in 1986. It argues that managers are always tempted to pile up cash under their controls and make investment decisions which might not be in the best interest of shareholders. Corporate managers are the agents of shareholders, a relationship fraught weighed down by conflicting interests. Free cash flow is cash in excess of that required to fund all projects 17 that have positive net present values when discounted at relevant cost of capital (Jensen, 1986). Efficient working capital management is essential in order to avoid situations whereby managers mismanage the resources of the organization for their own interests. This theory is relevant to this study as it explains why the shareholders of a firm may opt to adopt conservative approach or aggressive working capital management approach bearing in mind the agency costs that they are likely to face.

3 .Cash Conversion Cycle Theory

The cash conversion cycle, which represents the interaction between the components of working capital and the flow of cash within a company, can be used to determine the amount of cash needed for any sales level.

Gitman (1974) developed cash conversion cycle as part of operating cycle which is calculated by adding inventory period to accounts receivables period and then subtracting accounts payables from it.
. Its focus is on the length of time between the acquisition of raw materials and other inputs and the inflows of cash from the sale of finished goods and represents the number of days of operation for which financing is needed. The CCC is a dynamic measure of ongoing liquidity management, since it combines both balance sheet and income statement data to create a measure with a time dimension (Jose and Lancaster, 1996). While the analysis of an individual firm 's CCC is helpful, industry benchmarks are crucial for a company to evaluate its CCC performance and assess opportunities for improvements because the length of CCC may differ from industry to industry. Therefore, the correct way is to compare a specific firm to the industry in which it operates (Hutchinson, 2007). The cash conversion cycle is used as a comprehensive measure of working capital as it shows the time lag between expenditure for the purchase of raw materials and the collection of sales of finished goods (Padachi, 2006). Day-to-day management of a firm 's short term assets and liabilities plays an important role in the success of the firm. Firms with growing long term prospects and healthy bottom lines do not remain solvent without good liquidity management (Jose and Lancaster, 1996) By approximating these three periods with the financial ratios of inventory days, trade receivables days and trade payables days, the length of the cash conversion cycle (CCC) is given by: CCC = Inventory days + Trade receivables days − Trade payables days Richards and Laughlin (1980) argued that traditional ratios such as current ratio, Quick acid test and cash ratios has not been able to provide accurate information about working capital and insisted on using ongoing liquidity measures in working capital management, where ongoing liquidity refers to the inflows and outflows of cash as a product of acquisition, production, sales, payment and collection process done over time. The firm 's ongoing liquidity is a function of its cash conversion cycle, hence the appropriateness of evaluation by cash conversion cycle, rather than liquidity measures. According to Arnold (2008) the shorter the CCC, the fewer are the resources needed by the company. So the longer the cycle the higher was the investment in the working capital. But also, a longer cycle could increase sales, which could lead to higher performance.

4.2 Empirical review

Harper (2009), many researchers in Europe particularly in France have reiterated that positive and promising relationship between differing indicators of financial performance and working capital management since a pioneering.

Pandey (2005) stated that a well-qualified and broadly experienced accounts manager can be worth his or her weight in gold in this field, ensuring the smooth running and steady growth of the business by means of skillful capital management. This may involve balancing the company's finances with attention to outstanding incomes, creditors and inventory, and a capable accounts manager was able to judge when it is prudent to buffer or bolster the company's working capital by taking on a short term loan.

Darlene (2012) urged that the appointment of an accounts manager, or interim financial consultant, can provide additional security by underpinning a company's growth rate with careful regulation of investment plans and efficient handling of profit. A well thought-out capital management strategy will also be able to identify the right time to move into the cash conversion period, where a company's assets are monetized, bearing in mind that it is not always possible to liquidate assets at short notice, or within a limited time frame.

(Huppert, 2010) managed to show a strong positive relationship between financial performance indicators and working capital management. He stated that companies with effective working capital management practices not only generate more cash from their businesses, but have more flexibility to take advantage of opportunities

as they arise and are less dependent on external financing. He added that working capital management was come effective once the management does everything transparently.

Harper (2009) urged that well-managed working capital is crucial to the running of a healthy and successful business. Since working capital is the cash available for the day-to-day running of the business, used to settle regular bills such as wages and supplies, and also covering unplanned costs and unexpected expenses, an important part of top management in a company is controlling the working capital and its cost structure. Gross working capital is the entire sum of a company's current assets; net working capital (NWC) stands for the company's current assets minus its current liabilities and represents the actual amount available at any given moment.

Ugandan writer Gill (2010) reiterated that good capital management ensures that the cash available to a business always exceeds its current liabilities. Otherwise, the business can risk running into problems associated with having a working capital deficit. In the short term this can damage the performance of the business and affect its operations. In the long term, poor working capital management can compromise a company's eligibility for business loans and damage its ability to attract potential investors (RS, 2014).
Paxton (2002) said that in order to protect a company from financial difficulties, and guard against bankruptcy, it is vital that a business has sufficient cash flow to pay its employees, service its debts, pay its liabilities without delay and react promptly and decisively to competition and changes in the market. An effective working capital management strategy should anticipate all of the above, and help to consolidate a company's gains thus far, whilst also paving the way for future successes (Korrapati, 2014)

4.3 Conceptual framework

A conceptual framework is a set of broad ideas and principles taken from relevant fields of inquiry and used to structure a subsequent presentation (Kombo & Tromp, 2009). This conceptual framework tries to reveal the explanation of the study. It shows the relationship between working capital management and its influence on financial performance of manufacturing companies. It is composed of two sides which are independent variable (working capital management practices) which is Cash management, Inventory management, Receivable management and Payables management and dependent variable (financial performance of manufacturing companies) which shall be measured by Performance, Liquidity, Solvency and Operating profit ratios.

1 Cash Management

Cash management is the planning and controlling cash flows into and out of the firm and cash balances owned by a firm (Pandey, 2004). Efficient cash management means reduction of the cash conversion cycle in such a way that cash can go fast through the cycle of activities (Soaga, 2012)This is expected to minimize costs such as lost opportunities due to lack of funds and interest costs. Cash management is more important than other current assets since cash is the most important asset that a firm holds (Uwuigbe, Uwuigbe & Ben-Caleb, 2012). It is essential to every firm with a craving to meet its short-term financial obligations. One of the standard measures of cash management is Cash Conversion Cycle (CCC) (Wanjiku, 2013). CCC is the period of time from buying raw material, converting to finished goods, sales products, and collecting accounts receivables (Mansoori & Muhammad, 2012). CCC represents the time required to convert cash investments in supplies into cash receipts from customers for goods or services rendered (Kroes & Manikas, 2014). It is calculated by the formula: CCC = ACP + ICP - APP. As CCC increases performance reduces and hence managers could create value for shareholders by reducing the cash conversion cycle (Raheman & Nasr, 2007).

2 Inventory management

Inventory is an asset which firms must carry in order to provide goods to their customers in a timely fashion. It consists of raw materials, work in progress, finished goods, extra material and consumption materials. Inventory management is a challenging task for working capital managers who would like to reduce the inventory in order to minimize the cash conversion cycle and reduce costs (Rimo & Panbunyuen, 2010).

3 Receivable management

Efficient receivables management involves a shortened creditor's collection period, low levels of bad debts and a sound credit policy which often improves the businesses' ability to attract new customers and accordingly increase financial performance (Ross et al., 2008). According to Subramony (2009) efficient receivables management is characterized by a short creditor's collection period, minimized bad debts and a good credit policy improves the firm's ability to attract new customers and hence increases the firm's financial performance. Managing accounts receivable consists in managing the firm's receivables and inventory in order to establish a trade-off between risk and returns and hence contribute positively to value creation (Kennedy, 2014).

4 Account Payables Management

Managing account payables is a key part of working capital management. Trade credit is the simplest and most important source of short-term finance for many companies. The objective of payables management is to ascertain the optimum level of trade credit to accept from suppliers (Khan, 2013). Deciding on the level of credit to accept is a balancing act between liquidity and performance.

5. Measuring financial performance

According to Khan (1998), there are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales. Furthermore, the analyst or investor may wish to look deeper into working capital managements and seek out margin growth rates or any declining debt (KENTON, 2020)

a) Financial Performance

According to Huppert (2010), net business income is highly variable from year to year, and is closely tied to the size and efficiency of the operation. It also depends on the amount of debt the farm is carrying (Maker, 2014). The rate of return on farm assets is quite variable, too, but average long-term rates of 6 to 10percent have been common in Iowa. High-profit farms may average more than 12 percent, however, while low profit farms often realize a return of only 2 percent or less.

b) Measuring financial performance

According to Garry et al. (2003), one of the most important areas of your finances you should review is your performance. Most growing businesses ultimately target increased profits, so it's important to know how to measure performance. The key standard measures include the following:

Return on capital employed (ROCE)

Return on capital employed - this calculates net profit as a percentage of the total capital employed in a business. This allows you to see how well the money invested in your business is performing compared with other investments you could make with it, like putting it in the bank (Gill, 2010).

ROCE is a key measure of performance. It shows the net profit that is generated from every $1 of assets employed (Harper, 2009).

$$\text{ROCE} = \frac{\text{Net Profit}}{\text{Capital employed}} \text{ x } 100$$

ROCE is sometimes calculated using PBIT instead of net profit. Use whichever figure is given in the exam. Capital employed = total assets less current liabilities or total equity plus long-term debt. Capital employed may be based on net book value (NBV), gross book value or replacement cost. Use whichever figure is given in the exam. An increase in ROCE could be achieved by: Increasing net profit, e.g. through an increase in sales price or through better control of costs. Reducing capital employed, e.g. through the repayment of long term debt (Harper, 2009).

Return on asset (ROA)

This measure shows the return that the firm delivers to stockholders and the interest that the firm pays to lenders as the percentage of the firm's assets. It is defined as follows (Gibson, 2002).

$$\text{Return On Assets} = \frac{\text{Net Income to common Stock}}{\text{Total Assets}}$$

Return on equity (ROE)

This measure is financial ratio expresses a firm's net income as a percentage of its owner's equity or shareholders' equity. It is defined as follows (Gibson, 2002).

$$\text{Return on Equity} = \frac{\text{Net income to Stock}}{\text{Owner's Equity}}$$

Gross profit margin

Gross profit margin makes us know of how much money is made after direct costs of sales have been taken into account or the contribution as it is also known.

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Turnover}} \text{ x } 100$$

This is the gross profit as a percentage of turnovers. A high gross profit margin is desirable. It indicates that either sales price is high or that production costs are being kept well under control.

Net profit margin

This is the net profit (turnover less all expenses) as a percentage of turnovers. It is a much narrower measure of profits, as it takes all costs into account, not just direct ones. All overheads, as well as interest and tax payments, are included in the profit calculation.

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Turnover}} \text{ x } 100$$

Asset turnover

This is the turnover divided by the capital employed. The asset turnover shows the turnover that is generated from each $1 of assets employed.

$$\text{Asset turnover} = \frac{\text{Turnover}}{\text{Capital Employed}}$$

According to Harper, (2009), a high asset turnover is desirable and an increase in the asset turnover could be achieved by: Increasing turnover, e.g. through the launch of new products or a successful advertising campaign. Reducing capital employed, e.g. through the repayment of long term debt.

Operating margin - this lies between the gross and net measures of performance. For this reason, it is also known as the EBIT (earnings before interest and taxes) margin. **EBITDA** is Earnings before interest, tax and

depreciation adjustment or Earnings before interest, tax, depreciation and amortization. The two versions are entirely interchangeable.

b) Liquidity

Businesses with good liquidity typically have current ratios of at least 3.0 or higher. Businesses or other enterprises that have continuous sales throughout the year can safely operate with a current ratio as low as 2.0

Liquidity measures

According to Harper (2009), the main reason why companies fail is poor cash management rather than performance so it is vital that liquidity is managed. A company can be profitable but at the same time encounter cash flow problems. Liquidity and working capital ratios give some indication of the company's liquidity (Kaplan, Financial performance indicators, 2012).

Current Ratio

The current ratio is equal to:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$

The ratio measures the company's ability to meet its short term liabilities as they fall due. A ratio in excess of 1 is desirable but the expected ratio varies between the type of industry. A decrease in the ratio year on year or a figure that is below the industry average could indicate that the company has liquidity problems.

Quick ratio (acid test)

This is a similar to the current ratio but inventory is removed from the current assets due to its poor liquidity in the short term (Kaplan, Financial performance indicators, 2012).

$$\text{Quick Ratio} = \frac{\text{Current Asset} - \text{Inventory}}{\text{Current Liabilities}}$$

c) Solvency

Total debt-to-asset ratios tend to be higher for larger firms and for firms that specialize in livestock feeding. Ratios of 10 to 30 percent are common among many American firms, although many operate with little or no debt. A high debt load does not make firms less efficient, but principal and interest payments eat into cash flow. High efficiency firms are able to service a higher debt load safely. Two other ratios are commonly used to measure solvency.

Interest cover

$$\text{Interest Cover} = \frac{\text{Operating Profit}}{\text{Finance Cost}}$$

A decrease in the interest cover indicates that the company is facing an increased risk of not being able to meet its finance payments as they fall due. The ratio could be improved by taking steps to increase the operating profit, e.g. through better management of costs, or by reducing finance costs through reducing the level of debt.

Investors was interested in all of the above measures of liquidity, along with the following since they help them to know much about their vulnerability of their companies' liquidity

Earnings per Share (EPS)

EPS is a measure of the profit attributable to each ordinary share.

$$\text{EPS} = \frac{\text{Profit After Tax less Preference Dividends}}{\text{Weighted Average number of Ordinary Shares in Issue}}$$

For EPS to be truly meaningful, it must be set in context (Kaplan, Financial performance measures in the private sector, 2012). Is EPS growing or declining over time? Is there likely to be significant dilution of EPS? Is it calculated consistently?

Dividend cover

$$\text{Dividend Cover} = \frac{\text{Net Profit}}{\text{Dividend}}$$

A decrease in the dividend cover indicates that the company is facing an increased risk of not being able to make its dividend payments to shareholders (Stoner, 2003).

Dividend yield

Dividend yield = (Dividend per share/Current share price) × 100%.

This is one way of measuring the return to shareholders but ignores any capital growth / loss.

Earnings yield

Earnings yield = (EPS/Share price) × 100%. This is another one way of measuring the return to shareholders but, as with dividend yield, ignores any capital growth / loss (Khan, 1998).

Operating Profit

According to Morgan (2003), operating profit is a measure of income that tells investors how much of revenue will eventually become profit for a company. The profit earned from a firm's normal core business operations. This value does not include any profit earned from the firm's investments (such as earnings from firms in which the company has partial interest) and the effects of interest and taxes. Also known as "earnings before interest and tax" (EBIT) or "operating income" (Maybank BHD Financial Performance Analyis, 2019).

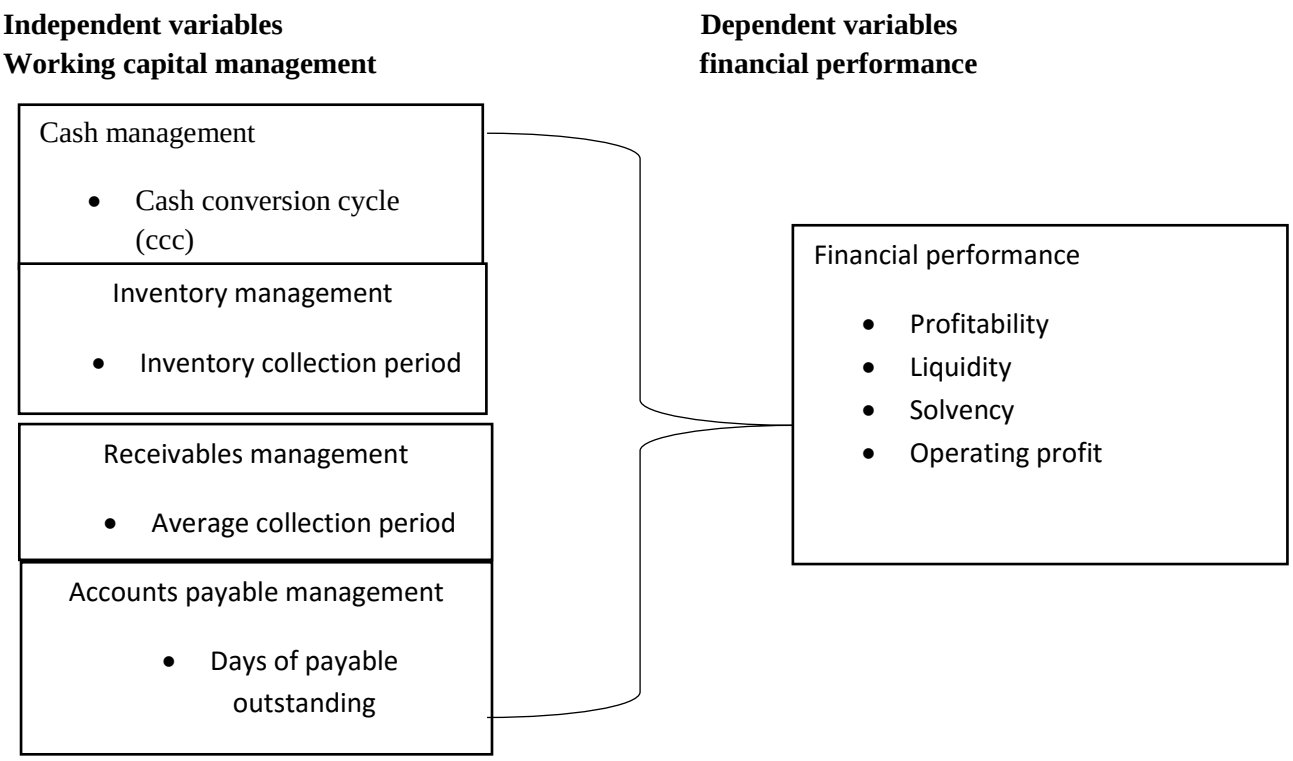
Operating Profit formula

Operating profit = Operating Revenue - COGS - Operating Expenses – Depreciation & Amortization.

Improving financial performance

According to Harper (2009), the dominant rationale of any company's management and staff is to improve the firm's financial performance by reducing the costs.

Figure1: Conceptual framework



(Source: Researcher, 2022)

5. RESEARCH METHODOLOGY

This chapter discusses how the researcher gathered the data, the nature of data that was collected, where data was collected and how it was analyzed. It presents the methods and the methodological techniques and approaches that have been applied in data collection, study population, sampling techniques, validity and reliability the data analysis methods as well as problems encountered in the study.

5.1 Research design

Grinnell and William (1990) define research design as a structural framework of various research methods as well as techniques that are utilized by a researcher that looks into the correlations between two or more variables. The researcher used correlational research design to assess whether there is a relationship between Working capital management and financial performance of CIMERWA PLC.

5.2 Study population

Target population is the group about which the researcher would like to make statements based on conditions and concerns under the study (Henry, 1990) In line with this the target population will be the one company CIMERWA PLC

5.3 Sample size and Sampling techniques

(John, 2020) Defined a sample as a set of entities drawn from a population with the aim of estimating characteristics of the population. Cramer and Howitt (2004) further define a sample size as the number of cases or entities in the sample studied. They suggested that the question of an appropriate sample size is a complex issue which depends on many factors. One significant factor is the researchers' expectations of the trend of responses. Therefore, this study used the sample of 4 staff members to represent others.as the researcher used the census sampling approach.

The sampling technique in this study the researcher used the census sampling approach.According to (KABERA, 2009), census sampling approach to the one in which only some of the representative items of the population are selected and the data are collected from them. Instead of collecting information for and from all the units of population. The researcher therefore preferred to use census sampling approach because the population size which included the staffs in accounting & finance and procurement & logistics departments were not accessible, due to limited time. The researcher met the representatives of the above departments just for confirmation statement on the items in financial statements of CIMERWA PLC.

5.4 Source of data

1 Secondary data

Secondary data is usually extracted from the original data and often the examination of the study same one else has carried out on a subject or an evaluation of commentary or summary of primary material (Avdrey, 1987). The researcher used secondary data for this research, which was extracted from different textbooks, other previous research documents in the same field and mainly from the Annual financial reports of CIMERWAPLC. from 2018-2021.

5.2 Data Processing

After collecting data, the researcher continued to process, analyze and interpret the data. The researcher exercised good care *to* ensure that reliable data are collected because all her efforts would end in vain if the data were not properly processed and analyzed. Thus, the following task took place during the process of data processing.

6. DATA ANALYSIS, DATA PRESENTATION AND INTERPRETATION OF FINDINGS

6.1Data analysis

The researcher used the Statistical Package for Social Sciences (SPSS) version 16 in coming up with the statistical analysis for the study. Naale et al. (2006) urged that SPSS is one of the most widely used available and powerful statistical software packages that covers a broad range of statistical procedures, which allows a researcher to summarize data determine whether there are significant differences between groups, examine relationships among variables, and graph results.

6.2 Model Description

The frequency, percentage, and percentage of each variable studied were all used in descriptive analysis to create the final results.

1. Regression analysis

This study made use of a multiple regression model:

$Y = \alpha+\beta1X1+\beta2X2+\beta3X3+\beta4X4+ €$

Y=Dependent variable –Performance

α=Constant

€=Error

β =Coefficient of the Disbursement

X1= Cash management

X2 = Accounts payable management

X3 = Accounts receivable management

X4 = Inventory management

The model used in the study took the form below:

$Y= \alpha+\beta1X1+ \beta2X2+ \beta3X3, \beta4X4 +ę$

Where: Y= Financial Performance as measured by performance, liquidity, Operating profit and solvency.
α= Constant Term β= Beta Coefficient –These measures how many standard deviations a dependent variable will change, per standard deviation increase in the independent variable.

2.Analysis the Working Capital Management practices of CIMERWA PLC

The truth remains that any successful organization you see is an organization that has overtime mastered the art of managing its working capital.
Working capital is simply the difference between a company's current assets and its current obligations, the ideal management of which provides a balance between growth, performance, and liquidity.

Table 6.1: Trend cash and cash in hand of CIMERWA PLC

Years	2018	2019	2020	2021
Cash at Bank	8,120,420	8,137,241	13,330,241	14,288,649
Less: loss allowance	-8,762	-13,661	-25,912	-49,076
Cash in hand	451	1,840	610	888
Total cash and cash in hand	**8,112,109**	**8,125,420**	**13,304,939**	**14,240,461**
Trend cash and cash in hand	**-**	**0.002**	**0.637**	**0.070**

Source: Own calculation based on annual reports of the years 2018 – 2021

The table 6.1 indicates that CIMERWA PLC has been effective in managing cash as they budgeted to close the year. In 2018 the cash at bank was 8,112,109, loss allowance was -8,762 and cash in hand 451, Cash at Bank 8,137,241 in 2019, 13,330,241 in 2020, 14,288,649 in 2021. This indicates that this company has been effective in cash management as one of the components of working capital management because they achieved the targets of cash balance and they did not exceed the target highly because it could also be very bad if they had kept much money than what is needed. So this shows that CIMERWA PLC was optimizing the level of cash.

Table 6.2: Trade and other receivables

	2018 Frw'000	2019 Frw'000	2020 Frw'000	2021 Frw'000
Trade receivables	2,552,202.40	2,560,510	3,965,175	1,840,474
Less: loss allowance	-472,645.99	-371,847	-432,320	-340,840
Net trade receivables	2,079,557.79	2,188,663	3,532,855	1,499,635
Prepayments	3,203,822.64	4,392,235	2,104,909	2,310,378
Advances to related parties	292,956.20	40,829	191,930	211,260
Other receivables	26,735.76	-	10,313	19,280
Total prepayments and other receivables	3,523,513.21	4,433,064	2,307,153	2,540,917
Total receivables	**5,603,071**	**6,621,727**	**5,840,007**	**4,040,552**
Trend	**-**	**0.18**	**(0.12)**	**(0.31)**

Source: CIMERWA PLC, Annual Report, 2018-2021

The above table 6.2 contains the information which showing that CIMERWA PLC has been effective in managing receivable as one of the components of working capital because they tried to minimize the level of receivable at the end of the year. This indicates that there has been effectiveness in working capital management because CIMERWA PLC has tried to remain with lower level which means that the operating cycle of the company could not be stopped as long as most of receivables have been recovered during the financial year. Trade and other receivables contain a net impairment loss of RWF 6.621,727 in 2019, 5,840,007 Frw in 2020 and 4,040,552 Frw in 2021 from contracts with customers, which is included in selling

and distribution expenses. Prepayments at 30 October 2022 included amounts of Frw 2 billion (2019: Frw 1.9 billion) relating to advance payments for factory spare parts, capital expenditure for expected crusher improvements and insurance prepayments. In the opinion of the directors, the carrying amounts of trade and other receivables approximate their fair values.

Table 6.3: Trade and other payables

	2018 Frw'000	**2019 Frw'000**	**2020 Frw'000**	**2021 Frw'000**
Trade payables	2,781,241	4,670,836	4,360,453	3,717,443
Amounts due to plant contractors	137982	211,000	216,329	102,272
Customer deposits	2173924	1,848,867	3,408,296	918,138
Statutory liabilities	427204	78,976	669,774	1,888,139
Leave pay accrual	239959	325,350	376,209	802,824
Provision for litigations	23576	-	36,963	-
Bonus accrual	-	590,406	-	-
Other payables	46,012	189,201	72,138	59,109
Total payables	**5,829,898**	**7,914,636**	**9,140,162**	**7,487,925**
Trend	**-**	**0.36**	**0.15**	**(0.18)**

Source: CIMERWA PLC, Annual Report, 2018-2021

The carrying amounts of the above trade and other payables approximate their fair values. The table 6.3 above shows that the trade and other payables, the results shows that the trade payables were 4,670,836 in 2019, 4,360,453 in 2020 and 3,717,443 in 2021, amounts due to plant contractors was 211,000 in 2019, 216,329 in 2020 and 102,272 in 2021. Customer deposits were 1,848,867 in 2019, 3,408,296 in 2020 and 918,138 in 2021. This shows that the mean is extremely high and there is strong evidence of the fact and homogeneity of responses, and the payment period allowed by your suppliers to your company is reasonable. There is strong evidence to support the existence of the fact and homogeneity of responses, as shown by this result

Table 6.4: Inventories

	2018 Frw'000	2019 Frw'000	2020 Frw'000	2021 Frw'000
Spare parts	2,713,175	4,307,340	7,385,645	6,996,296
Works in progress	1,478,915	469,588	1,231,017	3,813,586
Fuel oil	35,343	395,451	292,245	91,137
Coal	246,870	2,371,960	1,286,476	636,589
Raw materials	426,260	650,954	182,057	1,099,170
Finished goods	133,624	390,081	144,398	344,569
Paper bags	132,202	236,110	447,759	340,900
Other consumables	203,891	458,933	978,152	525,760
Provision for inventories	(411,019)	-812,812	-1,043,194	-1,059,868
Total inventories	**4,959,261**	**8,467,605**	**10,904,555**	**12,788,139**
Trend	**-**	**0.71**	**0.29**	**0.17**

Source: CIMERWA PLC, Annual Report, 2018-2021

This information illustrates that CIMERWA PLC has been effective in inventory management because they held only the inventory needed and the excess was not too much since they exceeded to the budget at the rate of 29% and 17% at the end of the year 2020 up to 2021 respectively. Therefore, this shows that CIMERWA PLC is effectively managing its inventory as they are kept neither less than needed inventories nor too much more than what is needed but they are optimizing the inventory level from one year to the next. This helped them to continue growing in terms of finance. The cost of inventories is based on standard cost and weighted average cost, and includes expenditure incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses. During the year, expensed inventory amounted to Frw 43,831 million (2019: Frw 43,247 million) for inventories carried at net realizable value. This is recognized in cost of sales. Inventories increased by 17% to Rwf 12.8 billion Rwf 10.9 billion). This is due to increase in critical spare parts and equipment such as transformer, inlet, and outlet seals for regular plant maintenance.

6.3 Trend of Current asset at CIMERWA PLC

In accounting, a current asset is any asset reasonably expected to be sold, consumed, or exhausted through the normal operations of a business within the current fiscal year or operating cycle (whichever period is longer). The Current assets are those assets which was converted into cash within the current accounting period or within the next year as a result of the ordinary operations of the business. They are cash or near cash resources. For banks, these include Cash and balances with central bank, Treasury bills and due from other banks, prepaid expenses, and short-term loans (overdraft). The table below presents amount of current assets of CIMERWA PLC:

Table 6.5: Trend of current assets of CIMERWA PLC, Main Branch (Rwf'000)

current assets	2018	2019	2020	2021

Inventories	4,959,261	8,467,605	10,904,555	12,788,139
Share capital contribution receivables				
Current income tax recoverable	35,443	97,718	109,168	122,277
Trade and other receivables	5,603,071	6,621,727	5,840,007	4,040,552
Cash and cash equivalents	8,120,420	8,137,106	13,330,241	14,288,649
Total current assets	**18,718,195**	**23,324,156**	**30,183,971**	**31,239,617**
Trend	**-**	**0.25**	**0.29**	**0.03**

Source: CIMERWA PLC, Annual Report, 2018-2021

The table 6.5 shows the current asset of CIMERWA PLC during the period of study. As its shows in the above table the current asset CIMERWA PLC composed by Inventories in 2019 and 2020 at this stage the company increased to the opportunity present by these types of assets at that time. In 2018-2019 the inventories varied from 25%, in 2019 to 2020 the inventories where the variation was 29% of variation and 3% in 2020-2021. The company's approach to manage liquidity is to ensure, as Far as possible, that it will always have sufficient liquidity to meet its liabilities when due. Under both normal and stressed conditions, without incurring unacceptable losses or risks damage to the company's reputation.

6.4 Current liabilities of CIMERWA PLC

In this section the researchers put the element of each current liability as the part of working capital. In accounting, current liabilities are often understood as all liabilities of the business that are to be settled in cash within the fiscal year or the operating cycle of a given firm, whichever period is longer. Current liabilities are obligations that are settled by current assets or by the creation of new current liabilities. The following table shows current Liabilities of CIMERWA PLC during the period of the study. The following tables show the total current liability during the period of study.

Table 6.6: Current liabilities of CIMERWA PLC 2018-2021 in (000 Rwf)

	2018	**2019**	**2020**	**2021**
Trade and other payables	5,829,898	7,914,636	9,140,162	7,487,924
Bank borrowings	8,121,801	8,594,315	8,978,828	10,958,029
Amounts due to related parties	228,062	239,623	580,585	1,158,817
Current lease liability	-	-	12,720	14,911
Total current liabilities	**14,179,761**	**16,748,574**	**18,712,295**	**20,586,127**
Trend of current liabilities	**-**	**0.18**	**0.12**	**0.10**

Source: CIMERWA PLC, Annual Report, 2018-2021

The table 6.6 shows the current liabilities during the period of the study. In 2018 the current ratio was 14,179,761, in 2019 the current liabilities were 16,748,574 Rwf, in 2020 was 18,712,295 Frw while in 2021 and 20,586,127 Frw. CIMERWA PLC has much amount of due to company. Differed tax at CIMERWA PLC is recognized on all temporary difference between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for trades and other payables purposes, expect difference relating to the initial recognition of assets or liabilities in a transaction that is not a business combination, and which affect neither accounting nor taxable profit.

6.5 Current ratios of CIMERWA PLC from 2018 - 2021

This ratio is calculated according to BNR instruction and it shows the ability of banks to pay short-term obligations when fall due. The current assets of CIMERWA PLC included: cash in hand, due from companies, loan and advanced, other assets, financial investment available for sales. The current liabilities included customer deposits, due to banks, tax payables, and other payable. It computed as follows:

Table 6.7: Current ratios of CIMERWA PLC from 2019 - 2021

Years	2018	2019	2020	2021
Current assets (1)	22,169,092	18,718,195	23,324,156	30,183,971
Current liabilities (2)	13,702,737	14,179,761	16,748,574	18,712,295
Current ratio ½	**1.62**	**1.32**	**1.39**	**1.61**

Source: CIMERWA PLC, Annual Report, 2018-2021

The table 6.7 shows that CIMERWA PLC was able to meet its current liabilities at the rate 162%, 132%, 139% and 161% at the end of the financial years 2018- 2021 respectively this indicates that CIMERWA PLC has been managing working capital. This shows that from 2018 and 2021 CIMERWA PLC increased its current assets as an indicator of increasing capability of pay off the liabilities at rate of 162% and 161% while from 2019-2020 CIMERWA PLC meet the regulation of current ratio of 1:1 but the rate of payment current liabilities is low compared to other years. Generally, it is mentioned that the company's current assets are greater than current liabilities for that company have enough amount to be used to purchase furniture and other office materials on using cash and other company operations. Therefore, working capital management is done effectively in this company.

6.6 Working capital of CIMERWA PLC

Working capital is required to run business smoothly and efficiently in the context of set objectives. It is no doubt that no organization can achieve its goal without proper use of working capital. It means money invested on working capital should be neither more nor less because both the position of working capital affects not only liquidity but also Performance of the organization. The investment decision should be made on any type of current assets by considering their role in company and determining which one is more beneficial to the company and which is not. The following table shows the amount of working capital of CIMERWA PLC Company of the study period.

Table 6.8: Working capital of CIMERWA PLC in Rwf "000"

Years	2018	2019	2020	2021
Current assets (1)	22,169,092	18,718,195	23,324,156	30,183,971
Current liabilities (2)	13,702,737	14,179,761	16,748,574	18,712,295
WC=CA-CL	**8,466,355**	**4,538,434**	**6,575,582**	**11,471,676**

Source: CIMERWA PLC, Annual Report, 2018-2021

The table 6.8 clearly shows the current assets against current liabilities and working capital condition of CIMERWA PLC from the year 2018-2021. Working capital condition of the company is at unsatisfactory level. Short term liabilities percentage decreased only in 2019 and 2020 meaning in these years the company was using more trade payables than short term loan to finance its current assets. Obviously, the company's management has adopted the moderate or matching policy to finance its current assets.

6.7 Analysis the financial performance of CIMERWA PLC

Working capital is used to assess corporate liquidity (Naser et al. 2013). Working capital management is considered to be a vital issue in financial management decision and it has its effect on liquidity as well as on Performance of the firm.

6.7.1. Analysis of the Performance ratio of CIMERWA PLC

Performance ratios measure the efficiency with which the company uses its resources. The more efficiency, the greater is its performance. It is useful to compare a company's performance against that of its major

competitors in its industry. A number of different profit ratios can be used, such as return on assets, net interest margin ratio, expenses ratio, return on capital ratio, operating profit ratio, etc. Due to time limitation, the researcher has only analyzed return on assets ratio and net profit margin ratio.

1. Net profit margin

Net profit margin is the percentage of revenue left after all expenses have been deducted from sales. The measurement reveals the amount of profit that a business can extract from its total sales. The net sales part of the equation is gross sales minus all sales deductions, such as sales allowances.

Table 6.9: Net profit margin

	2018 Frw'000	**2019 Frw'000**	**2020 Frw'000**	**2021 Frw'000**
Profit after tax	-1,492,894	3,454,386	4,120,140	1,951,740
Sales	50,214,228	62,237,529	63,092,204	67,373,754
Net profit margin	**(0.030)**	**0.056**	**0.065**	**0.029**

Source: CIMERWA PLC, Annual Report, 2018-2021

According to the four-year financial summary acquired from CIMERWA PLC calculation show that CIMERWA PLC's Net profit margin was in 2018 the net profit margin was negative, in 2019 by 5.6%, but in 2020 increased net profit by 6.5%, in 2021 start to increase significantly, the net profit margin was 2.9%. In general table 6.9, shows that CIMERWA PLC's net profit margin has been increased due to the working capital management as seen on the table from 2018 up to 2021. This situation was caused by decrease of CIMERWA PLC's profit and that decreased was caused by the consequences of COVID 19 and also more technical employees were needed, in 2019 its inventory has been increased and the cost related to inventory also increased i.e in 2019 inappropriate working capital management was a key cause of that situation. Despite the impact of the COVID-19 including a 45 day national lockdown. The growth in revenue is attributed to strong demand post COVID-19 lockdown driven by some large infrastructure projects such as national classrooms construction by the Ministry of Education. Cost of Sales increased reduced compared with the previous year. This increase is primarily due to the timing difference of the plant improvement initiatives undertaken in the November 2019 maintenance compared to the previous year where the maintenance was undertaken in April 2018. The contribution of working capital management to the net profit margin, the use of EOQ has been contribute significantly to the performance of CIMERWA PLC, EOQ help to minimize cost of goods sold and others relevant costs associated with inventory parts, EOQ help to control cost.

Table 6.10 Return on Assets in CIMERWA PLC

Formula	**2018 Frw'000**	**2019 Frw'000**	**2020 Frw'000**	**2021 Frw'000**
Net Income	-1,492,894	3,454,386	4,120,140	1,951,740
Total asset	110,761,546	109,915,280	112,252,496	109,569,545
ROA	**(0.013)**	**0.031**	**0.037**	**0.018**

Source: CIMERWA PLC, Annual Report, 2018-2021

The table 6.10 represents the return on asset during the research period from 2018-2021 were 3.1%, 3.7%, and 1.7%. ROA means that 100 Rwf invested in asset CIMERWA PLC has generated 3.1 Frw in 2019, 100 Rwf invested in asset from 2020 generated 3.7 Frw while 100 Rwf invested in asset obtained 1.7 Frw from 2021. This shows that shareholders received a loss of 1.3 Frw where CIMERWA PLC buy many assets and

expended more expenses. This shows that CIMERWA PLC is profitable since there is a persistent increase of return on average assets because of application of working capital management and the researcher's advice CIMERWA PLC to increase return on assets in order to payback the interest of its shareholders.

Table 6.11: Return on Equity in CIMERWA PLC

Formula	**2018 Frw'000**	**2019 Frw'000**	**2020 Frw'000**	**2021 Frw'000**
Net income	-1,492,894	3,454,386	4,120,140	1,951,740
Total Equity	52,346,541	55,627,600	57,579,340	61,699,480
ROE	**(0.029)**	**0.062**	**0.072**	**0.032**

Source: CIMERWA PLC, Annual Report, 2018-2021

During the research period from 2018-2021, ROE ratio is the following: -2.9%, 6.2%, 7.2% and 3.2% respectively. It means that 100 Frw invested by shareholders generated the 2.9 Frw in 2018, 6.2 Frw from 2019, 100 Frw invested by shareholders generated 7.2 Frw from 2020, and 100 FRW invested by shareholders generated 3.2 Frw respectively. This shows that shareholders received a loss of 2.9 Frw where CIMERWA PLC spent more expenses compared to the other years while from 2019-2021 CIMERWA PLC meet the regulations. This shows that CIMERWA PLC is profitable since there is a persistent increase of return on average equity as a result of application of working capital management and the researcher's advice CIMERWA PLC to increase return on assets in order to payback the interest of its shareholders.

Table 6.12: Current ratio Analysis

Years	**2018**	**2019**	**2020**	**2021**
Current assets (1)	22,169,092	18,718,195	23,324,156	30,183,971
Current liabilities	13,702,737	14,179,761	16,748,574	18,712,295
Current ratio ½	**1.62**	**1.32**	**1.39**	**1.61**

Source: CIMERWA PLC, Annual Report, 2018-2021

The table 6.12 shows, that the ratio was under 2:1 because of the short-term borrowings and loans in different years because it was 162, 132, 139 and 161 in their respected years i.e., 2018-2021.A ratio equal to or near 2:1 is considered as a standard or normal or satisfactory. However, the rule of 2:1 should not be blindly used while-making interpretation of this ratio. Firms having less than 2: 1 ratio may be having a better liquidity than even firms having more than 2: 1 ratio.

This is because of the reason that current ratio measures the quantity of the current assets and not the quality of the current assets. If a firm's current assets include debtors which are recoverable or stocks which are high-moving. This ratio was sufficient because of the good quality of current assets (no obsolete stocks or stocks slow-moving stocks and all debts were recoverable). The performance was achieved because of good inventory management techniques i.e EOQ, JIT which help to maintain the necessary stock and its conversion into short debts and cash being done quickly to avoid under or over stocking.

Table 6.13: Quick ratio analysis

	2018 Frw'000	**2019 Frw'000**	**2020 Frw'000**	**2021 Frw'000**
Current asset	22,169,092	18,718,195	23,324,156	30,183,971
Inventory	4,959,261	8,467,605	10,904,555	12,788,139
CA-INV.	**17,209,831**	**10,250,590**	**12,419,601**	**17,395,832**
Current liabilities	13,702,737	14,179,761	16,748,574	18,712,295
QR	**1.26**	**0.72**	**0.74**	**0.93**

Source: CIMERWA PLC, Annual Report, 2018-2021

Briefly, this ratio indicates the ability of the company to meet its short-term obligation. From the table 6.13 above in 2018 the ratio was 126, in 2019 the ratio was 72, in 2020 was 74 and in 2021 was 93, this ratio shows that the degree to which quick asset can used to meet quick obligation. The findings shows that the quick ratio has fallen from 1.26 in 2018 to 0.93 in 2021. It must mean that most the current assets are locked up in stocks over time. The ideal standard quick ratio is 1: 1, which means that the CIMARWA PLC is not able to meet its immediate current liabilities; it may lead to technical solvency. Hence, one should take steps to reduce the investment in the inventory. This ratio shows that the working management was play a big role in the payment of short-term obligations of the company compared to other current asset because the manufacturing companies cannot exist without working capital so that good working capital help the company to overcome its quick obligation.

Table 6.14: Inventory Turnover time period(days)

	2018 Frw'000	**2019 Frw'000**	**2020 Frw'000**	**2021 Frw'000**
Inventory	4,959,261	8,467,605	10,904,555	12,788,139
Average inventory	3,306,174	5,645,070	7,269,703	8,525,426
Cost of goods sold	49,593,393	45,552,598	49,593,393	49,656,151
Inventory turnover ratio (COGS/AI)	**15.0**	**8.1**	**6.8**	**5.8**
Inventory turnover time period (365 days)	**15 days**	**8 days**	**7 days**	**6 days**

Source: CIMERWA PLC, Annual Report 2018-2021

The above table 6.14 shows that in 2018 CIMERWA PLC needed 15 days to turn its inventory into sales. In year 2018 the CIMERWA PLC has increased this value to 15 days, in 2019 company need 8 days to turn its inventory into sales while in 2020 days reduced up to 7 days, indicating that a company has been intensifying its sales. The inventory turnover is an important indicator of the firm's efficiency. Usually a high inventory turnover indicates efficient management of inventory because the more the stock are sold, the less amount of money required to finance the inventory and it help the company to take few days to turn its inventory into sales, low inventory turnover ratio indicates poor inventory management cause the company to take long time to turn its inventory into sale, in 2018 the inventory turnover time period is high because of low inventory turnover ratio, this cause the company to take many days (more than 2 weeks) to turn its inventory into sales. The company's management is interested in keeping its inventory turnover ratio high because it takes a few days to turn its inventory into sales. Like in 2018 CIMERWA PLC used 15 days to turn its inventory sales, generally CIMERWA PLC used few days to turn its inventory into sales due to use of inventory management system (EOQ, JIT). And this shows that CIMERWA PLC buy less stock, more often. Also this shows that CIMERWA PLC must keep inventory to meet a month's demand, rather than whole year's, it can be take on less risk and invest less capital in products that may not necessarily sell.

Table 6.15:Account receivable turnover (days)

	2018 Frw'000	**2019 Frw'000**	**2020 Frw'000**	**2021 Frw'000**
Trade and other receivable	5,603,071	6,621,727	5,840,007	4,040,552
Average gross receivable	4,748,365	5,611,633	4,949,158	3,189,003
Sales	50,214,228	62,237,529	63,092,204	67,373,754
Account receivable turnover ratio	**10.58**	**11.09**	**12.75**	**21.13**

Account receivable turnover time period	**35 days**	**33 days**	**29 days**	**17 days**

Source: CIMERWA PLC, Annual Report 2018-2021

Table 6.15above shows that accounts Receivable Turnover time period in 2018 was 35 days and it means that the company was able to collect its receivables in 33 days in 2019, In 2020 the company was able to collect their receivables in 29 days its receivables while in 2021 indicating that the company needed 17 days to collect its receivables 2018 and 35 days in so the higher the values of account receivable turnover ratio the more efficient is the management of credit. Inventory is the one that converted into account receivable without inventory management system CIMERWA PLC was no able to sell its inventory on credit. This shows that from 2018-2020 the ratio is low because is exceed the standard regulations of 35-29 days while from 2021 the ratio is desirable, as it indicates that the company's collection of accounts receivable is frequent and efficient. This shows that CIMERWA enjoys a high-quality customer base that is able to pay their debts quickly, it follows a conservative credit policy of returning receivables within 20-10 day's policy.

6.8 Relationship between working capital management practices and financial performance of CIMERWA PLC

The researcher has also presented the findings on the correlation between working capital management and financial performance. Findings are presented in Table 6.16

Table 6.16: Correlation analysis

		CM	APM	ARM	IM	P
CM	Pearson Correlation	1	.789	.654*	.805	.889**
	Sig. (2-tailed)		0.000	0.00	0.000	0.000
	N		4	4	4	4
APM	Pearson Correlation		1	.861**	.713**	. 884**
	Sig. (2-tailed)			0.000	0.000	0.000
	N			4	4	4
ARM	Pearson Correlation			1	.490**	. 734**
	Sig. (2-tailed)				0.000	0.000
	N				4	4
IM	Pearson Correlation				1	. 807**
	Sig. (2-tailed)					0.000
	N					**4**
P	Pearson Correlation					1

Where CM: Cash Management : Accounts Payable Management, **ARM** : Accounts Receivable Management
IM : Inventory management, **P** : Financial Performance

There is a strong correlation between Cash Management and performance, as shown by the correlation table, which shows a Pearson correlation of 0.889 between the two variables. As you can see it's significantly greater than the 0.05 and 0.01 levels of significance. This shows that only the firm's size as measured by Cash

Management has a significant impact on the performance out of the determinants considered. The results of the correlation table show that Accounts payable management and performance have a strong correlation of 0.884, according to the table. As you can see, it's significantly greater than the 0.05 and 0.01 levels of significance. Only the size of a manufacturing company as measured by account payable management has a significant relationship with performance, according to this analysis.The results of the correlation table shows that Accounts receivable management and performance have a strong correlation of 0.734 according to the table. As you can see, it's significantly greater than the 0.05 and 0.01 levels of significance. Only the size of a manufacturing company as measured by account payable management has a significant relationship with performance, according to this analysis. According to the correlation table, Inventory management and performance have a strong correlation of 0.807 according to Pearson. As you can see, it's significantly greater than the 0.05 and 0.01 levels of significance. This shows that only the size of a manufacturing company, as measured by Inventory management, has a significant relationship with performance out of all the factors taken into consideration.

Table 6.17: Correlation between Working capital management and financial performance

		Working capital management	**Financial performance**
Working capital management	Pearson Correlation	1	.740**
	Sig. (2-tailed) N	 4	.000 4
Financial performance	Pearson Correlation	.740**	1
	Sig. (2-tailed) N	.000 4	 4

. **Correlation is significant at the 0.01 level (2-tailed).

The table:6.17 presents the Pearson correlation coefficient between independent and dependent variables. Statistical evidence depicts that there is a positive high correlation between independent variable as working capital management and dependent variable which is financial performance which is equal to 0.740. This means that there is a significance relationship between Working capital management and financial performance. It was shown that working capital management contributed 74% on financial performance.

Table 6.18: Multiple regression

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	12.809	1.838		12.413	.000
	Cash Management	.806	.054	.382	1.594	.018
	Account payable management	.739	.113	.372	2.122	.051
	Accounts receivable management	.819	.672	.310	2.855	.006
	Inventory management	.707	.212	.038	.330	.042
a. Dependent Variable: Performance						

$Y = \alpha+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+ €$

Y=Dependent variable – Financial Performance

α=Constant

€=Error

β =Coefficient of the Disbursement

X_1= Cash management, X_2 = Accounts payable management, X_3 = Accounts receivable management and X_4 = Inventory management.

Y = 12.809 + 0.806 (Cash Management Practices) +0.739 (Account payable management) +.819 (Accounts receivable management) +0.707 (Inventory management) + €.There will always be a constant factor of 12.809 that determines financial performance, according to the regression equation. For every unit increase in cash management, financial Performance increases by 0.806, as explained by the other variables.

There will always be a constant factor of 12.809 that determines financial performance, according to the regression equation. Accounting payable management increases financial Performance by 0.736 for every unit increase, as explained in the above tables. There will always be a constant factor of 12.809 that determines performance, according to the regression equation. Each unit increase in Accounts receivable management increases Performance by 0.819, according to the other variables. There will always be a constant factor of 12.809 that determines performance, according to the regression equation. Each unit increase in Inventory management increases Performance by 0.707, according to the other variables

7.DISCUSSION CONCLUSION AND RECOMMENDATIONS

7.1 Discussion

Basing on the objectives, the researcher discussed the following:

1. To examine the contribution of cash management on financial performance of CIMERWA PLC

There will always be a constant factor of 12.809 that determines financial performance, according to the regression equation. For every unit increase in cash management, financial Performance increases by 0.806, as explained by the other variables

2 To assess the contribution accounts payable management on Financial performance of CIMERWA PLC

There will always be a constant factor of 12.809 that determines financial performance, according to the regression equation. Accounting payable management increases financial Performance by 0.736 for every unit increase, as explained in the above tables.

3. To assess the contribution accounts receivable management on Financial performance of CIMERWA PLC

There will always be a constant factor of 12.809 that determines performance, according to the regression equation. Each unit increase in Accounts receivable management increases Performance by 0.819, according to the other variables.

4. To analyze the effect of inventory management on financial performance of CIMERWA PLC

There will always be a constant factor of 12.809 that determines performance, according to the regression equation. Each unit increase in Inventory management increases Performance by 0.707, according to the other variables.

7.2 RECOMMENDATIONS

On the basis of the study's findings, recommendations for CIMERWA PLC include regular maintenance of current assets and measuring current liabilities in a way that favors performance.

To improve the firm's short-term debt-paying capacity, CIMERWA PLC should maintain maximum current assets.

Maintaining a healthy net working capital is critical for a business's success. To maintain current assets over current liabilities, CIMERWA PLC must work hard.

7.3 CONCLUSION

Based on the study findings the study concludes that working capital management practices have significant impact on financial performance of CIMERWA PLC. ROA means that 100 Rwf invested in asset CIMERWA PLC has generated 3.1 Frw in 2019, 100 Rwf invested in asset from 2020 generated 3.7 Frw while 100 Rwf invested in asset obtained 1.7 Frw from 2021. This shows that CIMERWA PLC is profitable since there is a persistent increase of return on average assets because of application of working capital management and the researchers' advice CIMERWA PLC to increase return on assets in order to payback the interest of its shareholders. The Pearson correlation coefficient between independent and dependent variables. Statistical evidence depicts that there is a positive high correlation between independent variable working capital management and dependent variable which is financial performance which is equal to 0.740.

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APPENDICES

	2018	2019	2020	
Net Trade Receivables	5,603,071	6,621,727	5,840,007	
Trade Accounts Receivable net of VAT	4,748,365	5,611,633	4,949,158	
Monthly Revenue	**Total**	**Total**	**Total**	
Sales current year	50,214,228	62,237,529	63,092,204	
Sales prior year -1	48,763,544	50,214,228	62,237,529	
Sales prior year -2	35,721,968	48,763,544	50,214,228	
Sales attributable to Debtors balance	**Remain**	**Remain**	**Remain**	**Remain**
Sales current month	4,748,365	5,611,633	4,949,158	
Sales prior year -1	3,441,104	4,748,365	5,611,633	
Sales prior year -2	1,537,945	3,441,104	4,748,365	
No of days sales in debtors	**Days**	**Days**	**Days**	**Days**
Number of days in current month	3	3	2	3
Number of days left from prior month - 1	-	-	-	
Number of days left from prior month - 2	-	-	-	
Total Days sales in debtors	**3**	**3**	**2**	**4**
Ave days per month	30	30	30	
(using total annual turnover method)				
Net Trade Receivables	4,831,787	6,112,399	6,230,867	
Net Trade Receivables net of VAT	4,094,735	5,179,999	5,280,396	

Inventory days	**2020**	**2019**	**2018**	**2017**
Total inventory	10,904,555	8,467,605	4,959,261	4,426,232
Cost of Sales (COS)	49,593,393	45,552,598	39,420,681	33,373,235
Transport (Delivery charges)				
Total adjusted COS	49,593,393	45,552,598	39,420,681	33,373,235
Days in inventory	**80**	**68**	**46**	**48**
Total debtors and inventory	**111**	**98**	**76**	**67**
Creditors days				
Trade payables	9,140,162	7,914,636	5,829,898	5,255,728
Capex accrual	-	-	-	-
Gross Trade Creditors	9,140,162	7,914,636	5,829,898	5,255,728
Gross Trade creditors net of VAT	7,745,900	6,707,319	4,940,592	4,454,007
Cost of Sales (COS)	49,593,393	45,552,598	39,420,681	33,373,235
Transport (Delivery charges)	-	-	-	-
Less: Depreciation	(7,930,337)	(7,266,860)	(7,349,278)	(7,458,503)
Less: Payroll costs and directors fees				
Less: Group Fees				
Total "Purchases"	41,663,056	38,285,738	32,071,403	25,914,732
Ave purchases per day	114,145	104,892	87,867	70,999
Creditors days	**68**	**64**	**56**	**63**
Net working capital days	**43**	**34**	**19**	**4**