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THE DETERMINANTS OF WORKING CAPITAL MANAGEMENT AND ORGANIZATIONAL EFFICIENCY: A CASE OF BRALIRWA LTD

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ABSTRACT

Proper Determinants of working capital management (WCM) is a prerequisite for any firm targeting consistent efficiency. Determinants of working capital management deals with the process of making resolutions that are relate to aspects of capital to be used in the day-to-day management of a business in the short financing of the organization and in its operations. The research aimed at assessing the effect of determinants of working capital management on organizational efficiency where BRALIRWA is the case study. The specific objectives were to investigate the effect of inventory management of on the efficiency of BRALIRWA, to establish how cash conversion cycle and account payable days affect the efficiency of BRALIRWA, and to establish the effect of Determinants of working capital management on the efficiency of BRALIRWA. Descriptive, explorative, correlation, and cross-sectional research designs were employed. The target population of the current study was 382 BRALIRWA employees. The sample size is 79 determined using Slovin's formula. Simple random sampling was used to select BRALIRWA population and Purposive sampling was used to recruit respondents in BRALIRWA. Primary data was obtained from study participants by use of a survey questionnaire which had questions linking Determinants of working capital management and efficiency. Secondary data was be collected by panel method through reviewing data from the annual financial statements of the targeted BRALIRWA. Primary and secondary data was be and cleaned. Erroneous questionnaires were set aside. The researcher entered data into the statistical package for social science (SPSS) Version 21 software in preparation for analysis. The study used a combination of descriptive and inferential (regression) analysis methods. Descriptive statistics was used to analyze primary data as well as offer descriptions of the secondary data while inferential statistics was used to analyze the secondary data with respect to enabling the researcher make conclusions as to how efficiency was be related to Determinants of working capital management. Descriptive statistics was used included measures of central tendencies, frequencies, and percentages. Findings were that BRALIRWA acknowledges and implements the use and follow-up of working capital determinants, this enhances the efficiency of BRALIRWA, however this has to be consistent and be day to day following up. Recommendations would be: BRALIRWA ought to guarantee the all out number of days taken before inventories are sold is limited so as to support the profits of the firm, BRALIRWA ought to likewise plan stock spending plans so as to keep up sufficient stock for smooth activities for the firm, The stock level ought to be explored consistently to guarantee ideal stock is kept up consistently, BRALIRWA ought to likewise set up a stock control framework to aids proficient administration of stock, BRALIRWA ought to normally audit payables the board arrangements to guarantee ideal credit is kept up consistently

Key terms : determinants , working capital ,management, organizational, efficiency

1.Introduction

1.1 Introduction

Determinants of working capital management take the form of setting the control Proper Determinants of working capital management (WCM) is a prerequisite for any firm targeting consistent efficiency. Determinants of working capital management deal with the process of making resolutions that are relate to aspects related to capital to be used in the everyday administration of a business. The process assists in ensuring that business operations and expenses are met through the sufficient management of the available cash flow. WCM basically aims at enabling firms to continue with their short-term operations with enough cash flows (Akoto, Awunyo-Vitor & Angmor, 2013). Generally, businesses engage in two investment forms; long haul and here and now venture. Long haul speculation relies on fixed capital or long-term funds for funding, while short-term investments rely on working capital management or short-term funds for their operations. Thus, working capital management is basic in the everyday administration and activities of business rehearses and subsequently, the successful administration of working capital management is extremely critical to the general administration of organizations as it determined the long-term investments and important component in company's financial decision-making (Akoto *et al.*, 2013).

Working capital management differs from current assets and liabilities and is composed of several variables (Mathuva, 2010). These includes: stock of cash, raw materials stock, finished goods stock, debtors value and other applicable short-term investments and advances. It is affected by factors such as nature of enterprise, manufacturing policy, operations, market condition, and availability of raw materials, price level changes and manufacturing cycle. The differences between the estimation of the present resources and that of the present liabilities combined with networking capital management are an indication of deficit working capital management, while the more current assets indicate surplus working capital management. The actions taken by a firm with respect to current resource and liabilities best clarifies working capital management administration. Therefore, understanding the variables and factors affecting the working capital management can help in streamlining WCM for the efficiency of a firm (Larson & Hammarlund, 2005).

In management, working capital management is essential for managers to know the determinants of organization in large, incorporate masterminding and controlling current assets and current liabilities in a way that unreasonable and insufficient speculations are eliminated in order to achieve efficiency of organization (Eljelly, 2004). Since the problem of any given company is to maximize profits, WCM is important in balancing between benefit and liquidity.

In the event that benefit increments to the detriment of liquidity, the risk exposure of the firm increases. High liquidity in firms denotes low risks and hence low efficiency and the vice versa (Ray, 2012), hence the significance of WCM. Raheman and Nasr (2007); Deloof (2013) separately provide that the administration of working capital management is essential to corporate back since it directly affects the liquidity and gainfulness of the firm. These show that most companies that want to maximize their value must keep optimal levels of working capital management.

Decisions related to WCM directly affect liquidity and efficiency (Appuhami & Ranjith, 2008) yet Brealey, Myres and Allen (2006) suggested that there is paucity of knowledge regarding the most appropriate liquidity levels that are brought about by the current assets with the aim of maximizing the value of the company. Raheman and Nasr (2007) observed that balancing working capital management and efficiency is a very important and still a dilemma to most managers in running organization and achieves goals. Further, most companies do not know the working capital management (WC) level that maximizes company value. arguments by Jape and Korde (2013) suggested that most of the existing literature on corporate finance was be directed towards capital budgeting and structure, and dividend decisions and hence suggesting that more attention was be on long-term investment as opposed to WCM which is a short-term investment decision process. Nevertheless, companies that have more liquidity have a high potential of investing in profitable opportunities and hence generate more cash flows for its future.

Several approaches have been connected in the organization of working capital management and the after effects have significantly influences the liquidity of firms and efficiency. Determinants of working capital management are guided by conservative and aggressive management policies that aim at creating balances in the current assets and liabilities. Aggressive policies composed on elevated amounts of settled resources and low interests in the present resources have the potential of generating more revenues for the firm. Again organizations are prone to have inadequate funds for managing the daily operations and short-term activities. Conservative policies are the opposite of aggressive policies and have fewer investments in settled resources and more in current resources (Wamugo, Muathe, and Kosimbei, 2014). With respect to the financing of working capital management, forceful approaches propose the maintaining of current liabilities in larger portions contrasted with long-haul obligations. The increase of the present liabilities is pegged on the enhancement of more liquidity resources in order to pay back earlier debts. However, current pay outs have low interest rates and thus have the ability to attract more savings. The conservative approach suggested that long-term debts are was be used differently with the current liabilities.

1.2 Statement of the Problem

According to Uwitonze (2016) during recent years, BRALIRWA in Rwanda have been facing several challenges that can be summarized as: inadequate skills, limited access to finance and management of resources, lack of access to markets and market information, the lack of management of cash, payables, receivables, and inventories, accrued debts, loss of assets, and accumulation of expenditures. As a result the aforementioned challenges, financial performance among the BRALIRWA have been a cause of major concern. Kicukiro District has major potentials in business and the trade network remains high across the commercial sector and hence spurring large-scale job creation especially among the women and youth (Kicukiro District Development Plan, 2013). Just like other areas in the economy, BRALIRWA are the backbone of the economic growth and development. Nevertheless, the BRALIRWA in the district face similar challenges as identified by Uwitonze (2016), and most especially the lack of management of cash, payables, receivables, and inventories, accrued debts, loss of assets, and accumulation of expenditures. Based on the above concept, some questions regarding the management of working capital management and its management in BRALIRWA arise. Among these questions include how the components relate to each other and the correlation and impact of these components on the success of a business.

Thus, it is evident that there exists a research gap regarding the appropriate management of capitals in BRALIRWA that can be enhanced if the management of working capital management is looked into keenly.

1.3. Research Objectives

1.3.1. General Objective

The main aim of the research was to determine the effect of working capital management determinants on efficiency of BRALIRWA Ltd.

1.3.2 Specific objectives

The specific objectives guiding the study are:

i. To investigate the effect of inventory management on the efficiency of BRALIRWA.

ii. To establish how cash conversion cycle and account payable days influence the efficiency of BRALIRWA.

iii. To determine the relationship between working capital management determinants and BRALIRWA efficiency.

1.4. Research questions

To attain the research objectives, this research was guided by the following research questions:

i. Does inventory management have any effect on efficiency of BRALIRWA?

ii. Does the time lag of cash conversion cycle and account payable days affect the efficiency of BRALIRWA?

iii. Is there any significant effect between determinants of working capital management and efficiency in BRALIRWA?

1.5. Significance of the study

The study was providing findings upon which strategy establishment can be based. Directors of BRALIRWA was utilize the discoveries of this examination to create vital arrangements that was see them embrace compelling strategies for overseeing WC to help their benefits. The study was show the extent to which WCM affects profits, hence, informing managers some of the areas they need to improve to achieve high profits. As such, based on the findings, managers were informed of the relevant areas of WCM that need change.

The concept of enterprising in Rwanda is growing implying that not much is known and hence the need to develop the concept with the aim of informing the population. The study was to expand existing knowledge and literature related to determinants of working capital management. Thus, policy makers and decision makers in financing BRALIRWA was rely on the findings to make decisions regarding their contributions to the survival of BRALIRWA.

The study was be significant to managers of BRALIRWA in Rwanda and its findings was offer information regarding the most effective ways of managing working capital

management for their businesses to operate efficiently and effectively. The discoveries of the examination were likewise being gainful to partners identity instructed on the significance of working capital management administration in the administration of a business resource. Finally, the study was to provide a platform through which future studies will be conducted.

1.6. Limitation of the study

Much focus of this study was being limited to BRALIRWA that also limits the generalization of the results to other firms outside the scope. The study was also limited to information provided by the respondents and hence the researcher was not able to ascertain the degree of truth in this information. Nevertheless, it was assumed that the respondents would offer information that was reliable.

2.REVIEW OF RELATED LITERATRE

2.1. Determinants of working capital management

Determinants of working capital management are pieces of the corporate fund that directly affects the liquidity and an association's performance (Raheman & Nasr, 2007). It involves the managing of the company's present resources and liabilities with an aim of bettering the efficiency of the firm (Hill, Kelly & Highfield, 2010). Further, working capital management involves the striking of the optimization and the balance between the inventory, account receivables, and payables in the organization (Nazir & Afza, 2007). The focus of the WCM is directed on the short-term financing and investment choices made by the firm (Sharma & Kumar, 2011). According to these explanations, Determinants of working capital is an important and vital part to the running of the organization, especially for the firms that manufacture, those that trade and distribute as the WCM in them has a direct effect on their liquidity and profits.

Deloof (2013) stated that an adequate WCM is essential for maintaining a maximum possible working capital management level, which is vital in the optimization of the wealth and value of the shareholders. Maximizing the wealth and value of the shareholders is one of the key objectives in companies. Even so, there is a need for the company to maintain a certain level of liquidity as a way of ensuring that the short-term obligations are sufficed upon need. For any firm to keep operating, it has to have profits. Of importance, the liquidity levels have to be maintained at a manageable level to help the firm avoid becoming bankrupt or facing insolvency.

For a firm to attain the optimum effect to WCM there has to be an efficient use of the resources in the firm, which is a role of the managers to ensure that cash in the firm is properly applied from day to day. A good WCM yields to a better cash flow, which in turn results in a minimal need for the external financial sources for the firm. The cash conversion cycle forms the main factor in WCM (Deloof, 2013). The cash conversion cycle in managing working capital management is the period that fast approaching gathering of cash from the merchandise and ventures that have been sold. When there is a long delay period in this cycle, the firm needs to have a good working capital management to meet its needs. This means that it has to seek external resources, which

sometimes have higher interests, which exposes the firm to a risk of defaulting on payments or incurring low profits.

2.2.Working capital management Cycle

Harper (2009) stated that a good working cycle helps a firm to strike a harmony between its income and expenditures, which causes the firm to maximize its working capital management. Working capital management is a fundamental piece of the development and productivity of an organization. Working capital management is essential in drawing the gray line between current assets and liabilities (Larson & Hammarlund, 2005). In such circumstances, the net working capital management is said to meet the distinction between the present resources and current liabilities.

The financial statement of a firm contains both the current assets and liabilities in managing organization. In this working capital management, current assets are the money expected to be raised by the firm for the year to improve the operations and efficiency of the firm. These assets are grouped under the receivables, prepaid expenses and inventories, cash, short-term investment and other equivalents of cash. Current liabilities are those obligations that are due in a period of one year. These kinds of liabilities are grouped as the trade payables, accrued liabilities and short-term debt (Penman, 2007; Lamberg & Valming, 2009). Both researchers and managers in small and big firms have had a concern about the working capital management.

Overall, the cycle of working capital management encompasses the transformation and alternating of the working capital management components. At the start, cash is converted to raw materials, which are be used to manufacture products and goes through other stages to reach its initial form. Through the actions of the fixed assets, the raw materials are changed to the work in progress and then into finished/final product, which is then sold on credit to debtors who are recorded as assets to the firm as they pay their dues at an agreed date (Lambrg & Valming, 2009). Therefore, this means that money is the underlying type of the working capital management. It is then transformed into many different stages where it takes different forms that include the addition of value and then turns to cash at the end of the cycle. This change of forms is what is referred to as the operations of the business.

Arnold (2008) states that the main reason for managing working capital management is to make an adjustment in the costs that affect the optimum cash levels, the raw materials and the final products. Also, in every state of the working capital management, there costs incurred, which represent the working capital management's opportunity cost. Lambrg & Valming (2009) stated that many businesses fail because of a lack of sufficient planning and control of the working capital management. Doshi (2009) simplified the working capital management by presenting five stages through which it goes through; the initial stage which is the cash itself, then raw materials, the raw materials are transformed to a work in progress, which is the third stage. The fourth stage is comprised of the finished goods, which result from the work in progress. The completed products are then sold on lay away or on cash to give rise to the final stage, which is cash, again.

Harper (2009) stated that a good working cycle encourages a firm to strike a harmony between its income and expenditures, which causes the firm to maximize its working capital management. The financial statement of a firm contains both the current assets and liabilities. Current assets here mean the assets from which the company is expected to raise money in a given financial year. These assets are grouped under the receivables, prepaid expenses and inventories, cash, short-term investment and other equivalents of cash. Current liabilities are those obligations that are due in a period of one year. These kinds of liabilities are grouped as the trade payables, accrued liabilities and short-term debt (Penman, 2007; Lambrg & Valming, 2009). Both researchers and managers in small and big firms have had a concern about the working capital management. Pass & Pike (1984) discovered that, unlike the larger firms, medium and small firms have relatively bigger capital contained in the current assets and liabilities. This is an indicator of a lack of uniformity in the structure of working capital management across the sectors.

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2.3 Inventory Management

Hilton (2014) states that inventory levels in a firm are one of the critical decisions made by the firms and retail businesses. Based on this, inventory can be said to be the quality of the goods and materials contained by the firm. The decision made for an inventory has to consider and create a balance between the cost of ordering, holding and shortage cost. Therefore, an appropriate budget is needed to maintain these levels optimum. In overall, there are many reasons that require a firm to keep an inventory. This inventory helps to meet the unseen demands, align the seasonal demands, and capitalize on the

discounts on price, avoidance of the price change effects and the provision of quality discount.

Inventory management is essential for any firms that desire to be competitive and effective in its operations (Nyabwanga & Ojera, 2012). Therefore, there is a need for effective management practices for the inventory for the firms to acquire competitiveness (Rajeev, 2008). Dimitros (2008) stated that effective management of the inventory includes the allocation of optimal inventory levels. Having excess inventory leads to extra holding costs like having to incur an unnecessary space, high risks of damage to the raw materials and loss. It also leads to a creation of a burden on the financials, which was affect the cycle of cash conversion. The keeping of optimum inventory levels as it has been expressed prompts a decrease in the supply cost, avoidance of value change and limits the likelihood of lacking raw materials at the point of need. The time spent in the cycle of working capital management is vital as there is a negative connection between the stock change and the execution of a firm. A short period for the conversion of inventory can lead to stock outs, which was in turn cause losses in sales and then a bad business performance (Rehman, 2006; Deloof, 2013).

Shah and Sana (2006) hold that investing in information technology produces a remarkable effect on the increase of the economic growth rate as evidenced in the 1990s. Many firms made a heavy investment in IT, which enabled them to better their efficiency in operation and coordination, which resulted in a reduction of the inventory levels. Technology that allows for easy relying of information allows the firms to act urgently to the indicators in the market, which leads to a decline in the costs of handling inventory. Information technology leads to an efficient inventory management that yields in the alignment of the company's tasks and a superior execution of the stock by the business (Frohlich & Westbrook, 2002; Vickery et al., 2003). Therefore, this is an indication of how investing in technology can lead to high inventory conversion and low costs in holding the inventory.

Stock-outs have far-reaching effects on business as they affect the firm, the retailers and the market consumers. They cause a delayed purchase, replacement of products or lead to an inability to purchase causing a negative implication to the consumer’s behavior on purchasing (Gruen & Corsten, 2007). According to Zinn and Liu (2008), stock-outs cause the consumers to resort to product substitute. The long-term effects of a stock-out can be that the business was end up losing its customers. For the loyal customers, they are also bound to lose their loyalty in case of a stock-out. Nyabwanga and Ojera (2012) state that recurring stock-outs cause the retailer to lose employee time and the customers as well; the manufacturers lose sales and the brand position. There is a need to have a proper inventory management policy to enhance the gainfulness of the firm to deflect the negative effect of stock-out (Sushma & Bhupesh, 2007). On the other hand, mismanagement leads to limited profits as capital is placed in unnecessary inventory.

Deloof (2013) stated that the monitoring of inventory is an important task. It causes a short inventory conversion period and saves on capital, which is then placed on other more profitable activities. Nyabwanga and Ojera (2012) stated that the frequency of monitoring inventory is dependent on the decision of the managers. The frequency can be on a daily basis, weekly, monthly or even quarterly; just as the management was decide. Depending on the decision of frequency, the action of a manager in improving the effectiveness of managing the working capital management is affected as well as the

inventory order. Inappropriate stock monitoring can cause overstocking. Which was affecting the business's financial liquidity and its ability to realize profits? Rajeev (2008) found out a positive relationship between the checking of the stock and the recurrence of requesting stock.

Stevenson (2008) gives a need to hold inventory. He states that inventory helps causes firm to enjoy the economies of scale through quantity discount and a reduction of the transportation cost. It helps a firm to avoid uncertainties that rise from demand, which leads to a disruption of the work in progress and over the long haul prompt lost the loyal customers. According to Stock and Lambert (2001), poor management of the inventory can be indicated by large quantities of irrelevant stock, an occasional lack of the storage space, a high number of cancelled orders, the high turnover rate for the customers and a declining relationship with intermediaries due to the cancellation of many orders. The ends result is that the firm's efficiency is affected.

The holding of the stock is accompanied by both benefits and costs. A wise administration of the working capital management seeks to balance the benefits and the costs of holding stock. The holding of stock allows the business to sell to their customers, different goods upon demand. On the other hand, holding stock leads to an incurring of costs in storage, which could have otherwise be was be used elsewhere to increase the firm's profits. There are four kinds of costs related to the inventory. They are ordering cost, cost of purchasing, stock-out cost and the cost of holding inventory (Atrill, 2006). If these costs are not well balanced, they affect the efficiency of the business. Monetary request amount demonstrate is one of the manners by which the stock levels are determined and maintained. The model is essential in establishing the right level of inventory to keep after considering the ordering costs, cost of stock-out and the total cost. Larger firms have readily taken this method unlike the small firms to help in the adoption of management judgment.

Also, the period of inventory conversion and the turnover ratio are essential to the management of inventory. These ratios help determine the efficiency with which the inventory is turned into cash. A high turnover ratio for the inventory is an indication of efficient inventory management; more inventories are converted to cash. A firm that experiences a high stock turnover ratio incurs fewer costs that relate to the stock. A low ratio means that the business is not selling its inventory fast enough to raise cash for the daily investment (Stickney, Weil, Schipper & Francis, 2010).

Further, a firm that has much inventory incurs storage costs. A slow rate in the turnover of the inventory could mean that the firm does not have a good business, or it offers a poor quality of goods for sales. It could also be that the goods have better alternatives in the market. The turnover ratio determines the number of sales a firm realizes during a certain period. It also indicates the collection of revenues and therefore, the possible profits the firm might realize. Also, a high turnover ratio of inventory indicates the efficiency of the management in coordinating the assets of the firm. This ratio is determined by isolating the cost of sold merchandise by the mean stock at a given period. Due to these, an expansion in the cost of sold products or bringing down the average inventory leads to an increase in the ratio (Stickney et al., 2010).

2.4 Cash conversion Cycle

Normally, in business, inventory has to be acquired to help in the creation of products. Often, the products created are sold credit, leading to the creation of debtors and creditors. Therefore, for the firm to pay creditors, it has to collect cash from the debtors. The cycle of cash conversionis measured in time (days), which a form takes to change the resources it has into the flow of cash. A firm that takes less time to sell its inventory and collect money for its debtors has a high liquidity and is able to invest in more other activities that can increase its return on investments. This cycle can also apply in determining the efficiency of management (Deloof, 2013). The researcher aims at probing into the time taken by the identified firms in their cycles of the working capital management and the cycle of money transformation to decide the effectiveness of overseeing working capital management.

Cash flow is an important aspect to a business as it determines the optimization of the incomes and helps in the minimization of the outflows to realize efficiency in the firm. According to Appuhami and Ranjith (2008), one of the methods that are used widely to determine dangers and the related come back with the administration of liquidity is the cycle of cash flow. Through this cycle, managers have the ability to tell the areas that require improvement to maximize the cash flow in the future. Further, this cycle is helpful in the identification of the short-term and long-term cash inflow and outflow, which can help the firm to plan to manage any shortage in cash or excess of it so as to establish a wide strategy to follow in making investments. Many firms better their financial performance through a reduction in the time of the money transformation cycle. The reduction is attained through the lessening the period of collection of cash and lengthening the period of credit payment (Anser & Malik, 2013).

According to Gentry, Vaidyanathan, Lee, & Wai (1990), the firm's market value is directly impacted by the cash conversion cycle. Also, Schilling (1996) identifies a positive connection between the money change cycle and liquidity. Filbeck & Krueger (2003) argues that an increase int eh rate of interest, for instance, leads to an expansion in the time of the money cycle. Additional to these, Nobanee et al. (2004) affirm that for a business to improve its performance, the conversion of inventory to cash should be done in the shortest time possible.

Jordan (2003) stated that cash cycle points to the period between the disbursement of cash and its collection. This period is covered with three components, which are the inventory period,

a period for the accounts receivable and a period for the payable accounts. The conversion of inventory is the period needed for the transformation of the crude material to completed merchandise and the eventual sale of the finished goods. The period of receivable accounts or the accumulation period focuses on the number of days needed to convert the receivable accounts to cash. Lastly, the payable accounts period is the normal time span taken to purchase work and crude materials and making payments for these items. The cash cycle is obtained from the subtraction of the payable accounts period from the total of the periods of the accounts receivable and the inventory period. While determining the period of inventory conversion, the inventory level is divided by sakes made on a daily basis. To distinguish the daily sales, the

accounts receivable are divided by the sales made in a day and the payable account is divided by the daily purchases to obtain the period of payable accounts.

Velnampy (2005) states that currently, many organizations incur large expenses for projects meant to generate income. These projects act as the source of profit for the organizations. Liquidity and efficiency are essential in the running of an organization. Therefore, it is important for firms to focus both on managing their projects to minimize the costs and optimize the income as well as in managing the liquidity. A lack of appropriate management of liquidity can prompt an expansion in the lack of money, upsetting the firm from achieving its obligation. There is a negative relationship among liquidity and profit. The cycle of money transformation, therefore, helps here in the evaluation of the working capital management to give rise to the best results.

One of the downsides of the cycle of cash conversion is the focus given to the periods ignoring the amount of cash place on a product (Richards & Loughlin, 1980). Some of the solutions that have been offered for this challenge are the use of the weighted money transformation cycle, which considers the time spent in the financial flow and the amount of cash invested in every stage. According to Gentry et al. (2009), the weighted money transformation cycle is every day weighted money resolved to stock payables and receivables with the subtraction of weighted days of financial flows that are delayed by the supplier. Shin & Soenen (2008) stated that the cycle of the weighted cash conversion is a complex process, which can be substituted with the net trade cycle.

In overall, the study of the cash conversion cycle in conjunction with its calculation can help in the adjustment of the policies that relate to credit sales and purchases; all of which affect the firm's efficiency. Further, it is helpful, in obtaining cash from the debtors. If the results obtained from the calculation done on the cash credit cycle indicate good cash liquidity, the existing policies are worthy to maintain. The calculations of the cycles are also essential in determining the business cash flow. Therefore, the cycles of cash conversion and cash flow statement come in handy in the analysis of the cash flow in a business (Graham & Smart, 2012).

Due to the positive effect of shortening the money change cycle, enhancing the working capital management administration efficiency, many methods can be employed can be was be used to lessen the length of the cycle period and lead to an improvement of the firm's profits. Some of the ways to abbreviate the money change period are the reduction of the costs of the inventory and improving the efficiency of the logistics and the process of production. Further, the reduction of the period of the collection of the receivables can also be achieved through the use of the lockbox plans and the use of the automatic electronic transfer systems. Also, the use of trade credit through making gradual payments to suppliers and the reduction of the accruals through paying them on a regular basis can help.

2.5 Account Receivable and Accounts Payable

ASECU (2013) states that the accounts receivable are the measure of the firm's unpaid claims from its previous customers and that the payment is due within a period of one year. This kind of account shows the extent to which the firm supplies the exchange credit. Then again, the accounts payable indicates the need for the firm on trade credit.

Pindado and Bastos (2012) state that during the time of financial difficulties, firms with many receivable accounts are likely to fail in serving they accounts due to their suppliers. This results in the inability of the suppliers to also pay their debts and thus the supply chain is constrained. The customers are also affected as they delay in paying their debts, which results in the lengthening of the working capital management cycle. The ultimate result is a delayed efficiency.

Management of the accounts receivable and payable is an expansive and significant field in corporate back in light of the fact that it directly affects the benefit of the business and the presentation to chance (ASECU, 2013). Demirguç-Kunt and Maksimovic (2001) express that in the Eurozone, which is Italy, Germany and France, the receivable accounts surpass the sum of assets for the firms. Conversely, Rajan and Zingales (2015) found out in the US that 18% of the sum assets of a company was be contained in the accounts receivable. This is an indication of the importance of conducting a management of the receivable accounts to help better the firm's efficiency.

The aim of managing the account receivables is to expand the abundance of the investors. Often, the current assets are measured in their present net value. There are three characteristics contained in the accounts receivable. They are the economic value, risk and futurity; all these points to the need of having an efficient management on the receivables (Emery, Finnerty, & Stowe, 2004). Berry and Jarvis (2006) state that the management of a firm needs to account for the factors like the investing in the collection of debts, the risk level a firm is ready to take and the costs related to the management of the receivable account, which include the administration costs, opportunity cost and the trade between the procurement of sales and the profits. This can be done while one is determining the optimum level of the accounts receivable. A policy that advocates for the decrease of the accounts receivable allows for an increase in the profits.

Kontus (2012) holds that the management of the receivable accounts should involve the determination of the policy of credit collection. A good credit policy should include four components. They are the credit period, the discount for early payments of credit, principles of credit, the policy of collection. Therefore, the focus in managing the receivable accounts should be on the kind of customers to receive credit, terms of credit and the debt collection framework. When the credit terms are tight, there was be a minimal investment in the receivable accounts and thus, there was be fewer bad debts.

Chambers & Lacey (2011) stated that the extension of credit to the customers should be done a comparison of the possible benefit and anticipated cost if the debt is not honored. The giving of credit is worthy despite the incurred cost since it leads to an establishment of loyalty from the customers. While making this kind of decision, it should be guided by the use of the marginal benefit and cost. Shim and Siegel (2007) suggested that firms should evaluate the ability of the customers to pay their obligations to lessen the probability of bad debt. This kind of evaluation needs a firm to consider the integrity of the offered collateral, the financial ability and the existing economic condition. When a company offers credit to too many customers or does not change its credit policy for long, it is bound to incur bad debts.

According to Brealey *et al.* (2006), the goods sold on credit in the balance sheet and the ledgers are called receivables. They are converted into cash after the period of credit elapses. In his argument, Brealey *et al.* (2006) confirm that a short credit period can lead to a shift in the loyalty of the customers, thus affecting the income sources. Nevertheless, other measures like the offering of discounts to customers that make early payments can be applied to shorten the credit period. Larsson & Hammarlund (2009) state that the need to shorten the credit period is that a longer credit period limits the firm from enjoying the cash inflow resulting from the sales. Further, a longer credit period exposes the customers to risks of becoming unstable financially. Wasiam and McAfee (2009) state that these reasons given above can be was be used to differentiate a company that has a good and efficient working capital management.

2.6 Efficiency

The generation of the revenues from the utilization of the assets is what is called financial performance that helps in the assurance of the association's benefit. Gainfulness demonstrates the financial health of a company. The ratio like the return on assets can be a good indicator of the financial performance of a firm. Oladipupo and Okafor (2013) stated that performance can be measured using different gauges. These gauges are the return on equity (ROE), return on assets (ROA), return on investments (ROI) and the ROIC. Traditionally, the measures applied included the operating profit, EBIT, revenue from the sales and the net profit (Sharma & Kumar, 2011). These measures are easy to use because the needed data is easily found in the financial reports that firms prepare on a yearly basis (Deloof, 2013). Ricci and Vito (2000) take note of the inclusion of control of the WC in the capital management as a way of establishing a balance between the risks and the profits. Many here and now resources muddle the installment of the fleeting liabilities. Further, bankruptcy is bound to occur in a firm that has many current liabilities.

2.7 Relationship between Working capital Management and Efficiency

Many studies have maintained that there is an inverse relationship between these two aspects at the micro and macro levels (Deloof, 2013; Oladipupo & Okafor, 2013). The management of the working capital management outcomes in an operational effectiveness in the firm and the adequacy of the cash flow that, which is essential for the effective short-term administration of benefits and liabilities. The administration of the firm should ensure a sufficient cash flow to eliminate any hindrances that may occur in the daily operations. The result was be that the financial and operational performance would have been improved (Afza & Nazir, 2009).

Apart from the main objectives of the firm of maximizing the shareholder wealth and the profits of the firm, firms also have an aim to maximize their working capital management to attain an optimal performance and efficiency in the operations (Eljelly, 2004). According to Arnold (2008), the excessive holding of the working capital management causes an imbalance in the working capital management components. The financial managers should as well make sure that the companies they run have sufficient cash flows to fund the firm’s operations and also be able to service the long-term debts.

2.8 Empirical literature

The empirical literature presents discoveries of diverse examinations done on the associations between the working capital management organization and efficiency. In this part, past studies and investigations and their results re-displayed according to the intentions the researcher was be studying, subsequently the titles inventory management, cash conversion cycle, accounts receivable and account payable days.

Samiloglo and Demirgunes (2008) found out a negative association amongst benefit and stock change period. The values for Accounts receivable days and inventory period was be (-0.056) and (-0.067) implying negative correlations and hence negative implications on the efficiency of the firm. The findings revealed that, the longer the periods of accounts receivable and inventory levels decreased the efficiency of the firm and lose of customer loyalty and focus.

It is clear as evidenced by M. Garcia *at al*., Determinants of working capital management has a positive and significant impact on the productivity of the firm and customer demand maintenance of medium-sized Spanish firms. The findings of the scholar from the study indicated high qualities between money transformation cycle and the number of periods of record receivable at 45% and the number of days if stock at 70%. The discoveries from the studies proposed that the directors could make hugeness by lessening their stock and diminishing the number of days for which their financial records was be exceptional.

Mathuva (2010) was be used a sample of 30 firms to examine the impact of WCM segments on the corporate benefits for the period 1993 to 2008. He utilized a regression to scrutinize the subsequent panel data. In his finds, he noted that the stock transformation time had positive statistical benefits for the unlisted firms (0.0043 (0.000***). The study done was be sufficient enough however its avoidance of some companies such as financial and related companies made it hard, to sum up, generalized findings to the company.

Nzioki *et al*., (2013) found Inconsequential linkage between stock change period and productivity among a cohort of 6 registered manufacturing companies in Kenya. Evidence utilized from financial reports of these companies from 2006 to 2010. Regression and correlation analysis employed to scrutinize the data collected. Findings from the study suggested that the stock turnover in days had an immaterial impact in the gross size of the firm (0.0050837 (0.87)). The discoveries recommended that stock turnover days have factual irrelevant impact in the gross working expenses. Hence, holding inventories brought about expenses to the firs as the assets attached to the inventories can't accumulate interests.

Okwo, Enekwe, and Ugwunta (2012) discovered that high stock turnover percentage connotes that a firm that sells more stock in a given period thus is more liquid to make ventures that was result into more income for the firm. The t-calculates of inventory turnover ratio showed -1.057 which indicated that inventory turnover ratio had a negative association with the net overall revenue. Be that as it may, the relationship was be not statistically significant. Nonetheless, the authors caution that it is not generally true to expect high stock in order to a have a high income. For instance, when an organization can have high percentages, however, make a low income due to different

factors. For example, when management expenses are poor then they could be running the company down with losses no matter the amount of stock sold.

Mistry (2012) assessed the determinants of productivity among the Indian car industry and set up that ITR had a positive huge relationship to the income made by firms in that industry (*t*-11.34173). These outcomes demonstrated that distinctive cases indicate diverse connection amongst ITR and gainfulness. It additionally demonstrates the absolute most contemplated divisions incorporate assembling, development, and other item enterprises. Little fixation is given to absolutely benefit ventures like the money related division or even the vitality area. However, studies still demonstrate the different and fluctuating affiliation s amongst ITR and profits.

Garcia-Teruel and Martinez-Solano (2007) in a study of small and medium size firms in Spanish found a negative association between the number of days account receivables was be collected, and the efficiency of a (-0.0002***) . This demonstrates incomes increase when the amount of day's debt claims decreased. A positive connection built up between firm liquidity and money related execution. This demonstrates executives should keep an ideal level of account holders, lenders, and stock levels. Spanish investigations proposed that shortening the money change cycle likewise increased the firm's productivity.

According to Raheman&Nasar (2007) examined the effects of Determinants of working capital management variables on efficiency of firms in Pakistan. Findings from the study suggested the existence of a negative relationship between working capital management administration factors and less wage (- 0.165). The discoveries proposed that an expansion in the money transformation cycle altogether lessened the pay levels of the firm.

2.9 Critical Review and Research Gap Identification

The study reviewed numerous empirical findings related to WCM and efficiency of firms. As illustrated in the analysis, the relationships between the variables being studied differ significantly depending on the case. For instance, various investigations recorded negative connections amongst WCM and productivity (Samiloglo & Demirgunes, 2008; Raheman & Nasr, 2007; Nzioki *et al.*, 2013) while others found positive relationship among components of WC and efficiency (Garcia-Teruel & Martinez-Solano, 2007; Akoto *et al.,* 2013). As such, different cases present different results, hence, the need to study Rwandan BRALIRWA as a case to establish the kinds of relationships different factors of WCM have over profits.

Several studies like Kimeli (2012); Nzioki *et al.* (2013); Muchina and Kiano (2011); and Makori and Jagongo (2013) was be done on the Kenyan sector in the insurance, manufacturing, dairy, BRALIRWA and construction industries. Though these studies found significant relationships between components of WC and efficiency, they was be not conducted in Rwanda, hence, did not take care of country specific factors that may affect WCM in Rwanda like economic growth. Mathuva's (2010) study also researched the relationship of working capital management administration and productivity among 30 firms recorded on the NSE. His study concentrated on the non-service firms for the period ranging from 1993 to 2008. This means that Mathuva did not give emphasis to service firms despite their unique challenges. It is clear that the literature affirms

negative relationship, in some cases, and positive relationship in others between components of working capital management and efficiency. However, as to whether which findings can be replicated in the Rwandan context remains an issue this study aimed to uncover.

3.Reseach methodology

3.1 Introduction

The chapter presents the research design; target population, the sample size and collection of data procedures and analysis are presented hereafter.

3.2 Research Design

This study used descriptive, explorative, correlation, and cross-sectional research designs. Rubin and Babbie (2009) explained exploratory research as that which established insights into a problem and provides better understanding of the item being studied. Thus, a researcher is able to hypothesis the activities surrounding the research. Given that the study is aimed as assessing the effects of WCM of the efficiency of BRALIRWA, the researcher used exploratory design to understand the link and connections between the two variables and hence contextualizing the nature of their relationship. A cross sectional study design is selected due to its ability to allow the generalization of a number of study parameters. A cross sectional design is selected in order to enable the researcher to examine effect of working capital management determinants and financial performance of BRALIRWA. The design helped by the descriptive that enabled the researcher to present some tables in frequency and standard mean of the variables in the study.

3.3. Target population

The target population under the study is 382 employees of the case study, because, in their daily operations, they need working capital management for effective management of the company.

3.4 Sample design

3.4.1. Sample Size

The sample of the study was selected using Slovin's formula that is presented as follows:

$n=N/ ((1+N (e)^2)$

n=calculated sample size, N=target population and e the error term.

$n=382/ (1+382(0.1)^2$

n=79

As shown in the above calculations, the total sample size is n = 79 staff of BRALIRWA. The questionnaire was be distributed randomly in all the departments that governs BRALIRWA

3.4.2 Sampling Technique

The BRALIRWA was selected using simple random sampling and purposive sampling which was based on the judgment of the researcher that the selected sample population bear the ideal characteristics of the study and have the potential of responding to the research questions adequately.

3.5. Collection of data Methods

This study collected primary and secondary data. Primary data was obtained from study participants by use of a survey questionnaire which had questions linking Determinants of working capital management and efficiency. Secondary data was collected by panel method through reviewing data from the annual financial statements of the targeted BRALIRWA.

During the collection of data process, A structured questionnaire used to collect primary data from the respondents. The questionnaire was chosen due to its ability to provide the study with high validity and it is highly reliable when structured according to the research objectives. Besides, a research questionnaire is cheap to administer, and can be e used to collect data from a large number of respondents effectively (Brown & Suiter, 2012).

3.5.1 Documentary Review

Secondary data was be collected by panel method through reviewing data from the annual financial statements of the targeted BRALIRWA. Of interest to the researcher was the annual income statement and the balance sheets of the targeted BRALIRWA.

3.5.2 Administration of Collection of data Instruments

Before conducting the study, the researcher sought permission from Mount Kenya University and the targeted BRALIRWA. Upon being granted the permission to conduct the study, the researcher administered the collection of data tools. In this case, the questionnaires were distributed to the respondents at their respective offices upon an agreed time by both the respondent and the researcher. The researcher also requested for any accessible documents as required completing the study.

3.5.3 Reliability and Validity

The reliability of the research questionnaire was established using a reliability test that assessed the consistency of the research tool. The Cronbach's alpha (α) coefficient evaluated using SPSS reliability test used (α) values of between 0.9 and 0.6 denoted acceptable levels of internal consistency. A pilot study was also conducted to establish the accuracy of the study and any issues recorded during piloting assessed and corrected.

Validity was be guaranteed by ensuring that the content matches the research questions and items being evaluated by the study. The construct validity of the research questionnaire was censured by guaranteeing that items was consistent with the theoretical predictions of the study. Vetting and peer reviews by supervisors and panelist during proposal defense also guaranteed the validity of the questionnaire.

3.6 Data Analysis Procedure

Primary and secondary data was sorted and cleaned. Erroneous questionnaires were set aside from those to be analyzed. The researcher then entered data into the Statistical Packages for Social Sciences (SPSS) Version 21 software in preparation for analysis. The study was be used a combination of descriptive and inferential (regression) analysis methods. Descriptive statistics was used to analyze primary data as well as offer descriptions of the secondary data while inferential statistics was used to analyze the secondary data with respect to enabling the researcher make conclusions as to how efficiency related to Determinants of working capital management. Descriptive statistics was used to include the measures of central tendencies, frequencies, and percentages.

4.Findings And Discussion

4.1 Introduction

This part displays the examination discoveries in a sequential request dependent on the goals. The primary segment of the part displays the statistic attributes of respondents and the subsequent area presents field discoveries. The important discussion and findings to the discoveries are additionally given.

4.2. Demographic characteristics of respondents

The statistic qualities of respondents included sexual orientation, total understanding of respondents in their particular divisions, level of training of the respondents, the quantity of years that the BRALIRWA had been in activity, and the modern area of the BRALIRWA is analyzed below.

Table 4. 1: Gender of respondents

Gender	Frequency	Percent
Female	25	31.6
Male	54	68.4
Total Respondent	79	100.0

Source: The researcher (2020)

The table 1 above indicates that 31.6% of the respondents were female and 68.4% were male. The distribution was dominated by the male gender, which reflected the actual gender constitution of finance staff members in most BRALIRWA in Rwanda.

Table 4. 2: Experience of respondents

Years	Frequency	Percent
Less than 5 Years	19	24.1
5 - 10 Years	44	55.7
11 - 20 Years	15	19.0
Over 20 Years	1	1.3
Total of respondents	79	100.0

Source: The researcher (2020)

As indicated in Table 2 of the research findings, 24.1% of the respondents had worked in the finance and accounts department for less than 5 years, 55.7% had worked in the department for 5 – 10 years, 19.0% had worked in the department for 11 – 20 years, and 1.3% had worked in the department for over 20 years. The distribution was dominated by respondents that had worked as accountants and finance staff for a period of 5 – 10 years. Given the importance of experience to reporting accurate information, the findings were relevant as an experience of above 5 years was deemed significant to the quality of data collected from the respondents.

Table 4. 3: Respondent's analysis by education

Education Level	Frequency	Percent
Secondary	1	1.3
Diploma	11	13.9
Bachelor's Degree	58	73.4
Master's Degree	6	7.6
Doctorate Degree	3	3.8
Total respondents	79	100.0

Source: The researcher (2020)

The table3 above shows that, 1.3% of the respondents had attained secondary school education level, 13.9% had attained diplomas, 73.4% had attained bachelor's degree, 7.6% had attained Master's degree, and 3.8% had attained Doctorate degree. The distribution was dominated by respondents who had attained bachelor's degree, hence suggesting that the sample was equipped with necessary technical knowledge and skills to provide information that was deemed significant to the study.

Table 4. 4:Duration of BRALIRWA's Operations in Years

Duration in Years	Frequency	Percent
Less than 1	7	8.9
2 - 5 Years	36	45.6
6 - 10 Years	19	24.1
More than 10 Years	17	21.5
Total	79	100.0

Source: The researcher (2020)

As indicated in Table 4, 8.9% of the BRALIRWA had been in operation for less than 1 year, 45.6% had been in operation for 2 -5 years, 24.1% had been in operation for 6 – 10 years, and 21.5% had been in operation for more than 10 years. The distribution was dominated by BRALIRWA that had been in operation for between 2 and 5 years suggesting that the researcher was able to capture important information regarding the operations of these BRALIRWA.

4.2 Presentation of Findings

The researcher sought to establish the efficiency of the respective BRALIRWA by assessing the ability of the respondents to agree or disagree with numerous statements regarding WCM and predictors of efficiency. The findings of the research are presented hereafter in tables

Table 4. 5: Responses Regarding WCM and BRALIRWA Efficiency Factors

	N Valid	SA	A	N	D	SD	Mean	Std. Deviation
High rates of Return on Assets for the company.	79	43	23	12	1	0	4.3671	.78736
Increased sales revenue.	79	29	45	5	0	0	4.3038	.58517
Improved the Net Profit of a firm.	79	49	18	11	1	0	4.4557	.78115

Source: The researcher (2020)

As showed in table 5 respondents concurred with the announcements; Proper determinants of working capital administration practices have guaranteed high paces of Return on Assets for the organization (mean 4.36, sdv 0.78); utilizing sound determinants of working capital administration results practices to expanded deals income of a firm (mean 4.30, sdv, 0.58); and effective determinants of working capital administration practices improves the Net Profit of a firm (mean 4.45, sdv 0.78). The discoveries avowed that respondents were without a doubt mindful of the significance of WCM and the effect that legitimate administration of WCM had on the productivity of their company.

The researcher further sought to establish the efficiency of the respective BRALIRWA by having the respondents rate the ROA, ROI, and NPM. Findings were as recorded in Tables 4.7, 4.8, and 4.9

Table 4. 6: Responses Regarding the Rate of Return on Assets (ROA) of Respective BRALIRWA

Rate	Frequency	Percent
5 - 20%	27	34.2
20% and Above	52	65.8
Total respondents	79	100.0

Source: The researcher (2020)

34.2% of the sampled BRALIRWA staff, confirmed 5 – 20% rate that WC determinants have effect on ROA and 65.8% on ROA 20% and above. These findings suggested that the ROA rates of most of the samples BRALIRWA were above 20%, an indication that the businesses were profitable. As indicated in table 6

Table 4. 7:Responses Regarding the Rate of return on investment (ROI) of Respective BRALIRWA

Rate	Frequency	Percent
5 - 20%	25	31.6
20% and Above	54	68.4
Total	79	100.0

Source: The researcher (2020)

As indicated in Table7 , 31.6% of the sampled BRALIRWA had 5 – 20% rate of ROI, and 68.4% had a ROI rate of 20% and above. These findings suggested that the ROI rates of most of the samples BRALIRWA were above 20%, an indication that the businesses were profitable.

Table 4. 8: Responses Regarding the Net Profit Margin (NPM) of Respective BRALIRWA

Rate	Frequency	Percent
5 - 20%	8	10.1
20% and above	71	89.9
Total	79	100.0

Source: The researcher (2020)

As indicated in Table 4.8 10.1% of the sampled BRALIRWA had 5 – 20% rate of NPM, and 89.9% had a NPM rate of 20% and above. These findings suggested that the NPM rates of most of the samples BRALIRWA were above 20%, an indication that the businesses were profitable.

Table 4. 9: Effect of Inventory management and efficiency of the firm

	N Valid	SA	A	N	D	SD	Mean	Std. Deviation
Adequate inventory is available.	79	51	22	2	4		4.5190	.78219
optimal stock is maintained	79	47	24	5	3		4.4557	.78115

Efficient Inventory control system	79	56	20	3	2	4.6709	.54823
increasing the company's efficiency	79	44	18	7	6	4.1646	1.1813
specific level of inventory maintained	79	58	16	5	3	4.6709	.59316
inventory level frequently	79	50	20	9	2	4.5190	.69542
improves the company's efficiency	79	58	17	4	4	4.6835	.56714

Source: The researcher (2020)

as demonstrated in Table 9, respondents emphatically concurred with the announcements; the expansion in stock improved the productivity of the organization (mean 4.68, sdv 0.56); the organization set explicit degrees of stock to be kept up (mean 4.67, sdv 0.59); the organization adjusted its stock level as often as possible (mean 4.51; sdv 0.69); stock spending plan is set up to guarantee satisfactory stock was accessible for smooth tasks of the firm (mean 4.51, sdv 0.78); and stock control framework aided effective administration of stock (mean 4.67, sdv 0.54). Respondents concurred with the announcements; the degree of stock was looked into to guarantee ideal stock was kept up (mean 4.45, sdv 0.78) and the executives of stock was significant for expanding the organization's productivity (mean 4.16, sdv 1.18).

Table 4. 10: Responses Regarding Inventory Management Techniques

Techniques	N Valid	SA	A	N	DS	SD	Mean	Std. Deviation
My organization avoids spoilages	79	49	22	2	4	2	4.3284	.92749
My organization avoids dead stock	79	47	24	5	3	1	4.1343	.86857
My organization saves on storage	79	55	17	4	2	1	4.0149	.84374

Source: The researcher (2020)

Respondents were provided with statements to assess the inventory management techniques in their respective organizations. As indicated in Table 10, respondents agreed with the statements that the respective inventory management practices included, avoiding spoilages (mean 4.32, sdv 0.92), avoiding dead stock (mean 4.13, sdv 0.86), and saving on storage (mean 4.01, sdv 0.84).

Table 4. 11: Responses Regarding Cash conversion Cycle and Efficiency of BRALIRWA

	N	SA	A	N	DS	SD	Mean	Std. Deviation
	Valid							
Increasing the company's efficiency.	79	42	19	13	3		4.2152	1.02120
Set target cash conversion	79	53	23	2	1		4.6203	.60561
Cash conversion frequently.	79	27	21	18	7		3.7089	1.24192
Increase quick liquid	79	36	23	14	6		4.1266	.96565
Reduced average collection period	79	44	18	7	6		4.164	1.18138
Holding inventory reduced	79	58	16	5	2		4.6709	.59316
The time lag of cash maintained	79	50	20	9	2		4.5190	.69542
The number of inventory days set by the organization reduced.	79	51	22	2	4		4.5190	.78219
Increased cash	79	47	24	5	3		4.4557	.78115

Source: The researcher (2020)

As showed in Table11, respondents emphatically concurred with the announcements; the organization sets an objective money transformation cycle (mean 4.6, sdv 0.60), The normal time of inventories decide the money change cycle (mean 4.6, sdv 0.59), the time slack of money transformation cycle and record payable days influence the proficiency levels (mean 4.5, sdv 0.69), the money transformation cycle is controlled by the quantity of stock days set by the organisation (mean 4.5, sdv 0.78), and the association has short money transformation cycle days, which expands the working capital administration produced (mean 4.4, sdv 0.78). Respondents concurred with the announcements; The normal accumulation time frame decides the money transformation cycle (mean 4.1, sdv 1.18), the administration of money change cycle was significant for expanding the organization's productivity (mean 4.2, sdv 1.02) and increment in real money change cycle improved the organization's effectiveness (mean 4.12, sdv 0,96). Respondents communicated unbiased reactions with the announcement the organization changed money transformation cycle as often as possible (mean 3.7, sdv 1.24).

Table 4. 12: Responses Regarding Accounts Payable Days and Efficiency of BRALIRWA

	N Valid	SA	A	N	DS	SD	Mean	Std. Deviation
To avoid liquidity risks.	79	45	19	10	3	2	4.3165	.96800
Timely supply of goods and services.	79	54	22	2	1	1	4.2152	.69191
Efficiency payable Mgt.	79	31	19	17	7	5	4.0886	.93630
Set specific level of accounts payable.	79	36	23	14	6	2	4.0380	.88351
Payable altered frequently.	79	46	17	7	5	4	4.3544	.86288
Increased brand image/credibility	79	58	16	4	1	3	3.9494	1.1646

Source: The researcher (2020)

As demonstrated in Table 12, respondents concurred with the announcements; creditor liabilities arrangements have empowers the organization to stay away from liquidity dangers (mean 4.31, sdv 0.96); Accounts payable installments are observed so as to guarantee opportune stock of merchandise and ventures (mean 4.21, sdv 0.69); Management of records payable is significant for expanding the organization's effectiveness (mean 4.08, sdv 0.93); The organization set a particular degree of records payable (mean 4.03, sdv 0.88); and The organization adjusts its records payable much of the time (mean 4.35, sdv 0.86). Respondents concurred with the announcement increment in records payable improves our organization's productivity (mean 3.94, sdv 1.16).

4.2.3 Correlation Analysis

The third research objective was to set up the connection between determinants of working capital management and the efficiency of BRALIRWA in Kicukiro District, Rwanda. A basic connection investigation was completed to set up the connection between determinants of working capital administration (stock administration, money transformation cycle, creditor liability days) and proficiency (return on resources, degree of profitability, net revenue).

Table 4. 13: Correlation Analysis

		Inventory Management	Cash conversion cycle	Accounts Payable Days	Return on Assets	Return on Investment	Net Profit Margin
Inventory Management	Pearson Correlation	1	.131*	.885*	.761**	.104*	.008*
	Sig. (2-tailed)		.049	.035	.001	.021	.043
	N	79	79	79	79	79	79

Cash conversion Cycle	Pearson Correlation	.131*	1	.099**	.852*	.929*	.177*
	Sig. (2-tailed)	.049		.000	.021	.010	.019
	N	79	79	79	79	79	79
Accounts Payable Days	Pearson Correlation	.885*	.099**	1	.708*	.788*	.575**
	Sig. (2-tailed)	.035	.000		.043	.031	.000
	N	79	79	79	79	79	79
Return on Assets	Pearson Correlation	.761**	.852*	.708*	1	.084	.200
	Sig. (2-tailed)	.001	.021	.043		.464	.077
	N	79	79	79	79	79	79
Return on Investment	Pearson Correlation	.104*	.929*	.788*	.084	1	.223*
	Sig. (2-tailed)	.021	.010	.031	.464		.049
	N	79	79	79	79	79	79
Net Profit Margin	Pearson Correlation	.008*	.177*	.575**	.200	.223*	1
	Sig. (2-tailed)	.043	.019	.000	.077	.049	
	N	79	79	79	79	79	79

Source: The researcher (2019)
*. Correction is significant at the 0.005 level
**. Correction is significant at the 0.01 level

As shown in Table 13, the findings indicated a positive correlation between inventory management and ROA (r =.761**, p = .001), inventory management and ROI (r =.104*, p = .021), and inventory management and NPM (r =.008*, p = .043). All the correlations were statistically significant given that the p values were < 0.05 and < 0.01. There were positive correlations between cash conversion cycle and ROA (r =.852*, p = .021), cash conversion cycle and ROI (r =.929*, p = .010), and cash conversion cycle and NPM (r =.177*, p = .019). All the correlations were statistically significant given that the p values were < 0.05 and < 0.01. There were positive correlations between accounts payable days and ROA (r =.708*, p = .043), accounts payable days and ROI (r =.788*, p = .031), and accounts payable days and NPM (r =.575**, p = .000). All the correlations were statistically significant given that the p values were < 0.05 and < 0.01. However, the relationship of NPM and ROA predicted by the variables on determinants of working capital management is not significant given that the p value (.077) was < 0.05.

Collineriality diagnosis was conducted in SPSS in order to test for multicollinearity among the independent variables. Multicollinearity is a problem in correlation analysis model when the variance inflation factor (VIF) is near or above 5.

Table 4. 14: Multicollinearity Diagnosis

Model		Collinearity Statistics	
		Tolerance	VIF
1	Accounts Payable Days	.989	1.011
	Inventory Management	.989	1.011

a. Dependent Variable: Cash conversion Cycle

Source: The researcher (2020)

As indicated in Table14, findings from the multicollinearity diagnosis revealed that the VIF factors for all the variables was below 5 (VIF 1.011) and hence there was no multicollinearity between variables.

A multilinear regression analysis was carried out to determine the influence of the independent variables (inventory management, cash conversion cycle, account payable days) on the dependent variables (Return on Assets, Return on Investments, and Net Profit Margin). Findings were as documented in Tables 4.16, 4.17, and 4.18.

Table 4. 15: Regression Model, Return on Assets

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.733[a]	.537	.445	.48600	1.687

Table 14 , indicates a. Predictors: (Constant), inventory management, cash conversion cycle, account payable days

b. Dependent Variable: Return on assets

Source: The researcher (2020)

As indicated in Table 4.16, the R^2 of the model was .537 with the adjusted R^2= -.445 when return on assets was regressed against the independent variables. The Durbin-Watson d = 1.687 was between the two critical values of 1.5 < d < 2.5

Table 4. 16: Regression Model, Return on Investments

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.760[a]	.577	.564	.61514	2.114

a. Predictors: (Constant), inventory management, cash conversion cycle, account payable days

b. Dependent Variable: Return on investments

Source: The researcher (2020)

As indicated in Table 16, the R^2 of the model was .577 with the adjusted R^2=-.564 when return on investments was regressed against the independent variables. The Durbin-Watson d = 2.114 was between the two critical values of 1.5 < d < 2.5.

Table 4. 17: Regression Model, Net Profit Margin

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.792[a]	.627	.553	.46595	1.5346

a. Predictors: (Constant), inventory management, cash conversion cycle, account payable days

b. Dependent Variable: Net profit margin

Source: The researcher (2020)

As indicated in Table 17, the R^2 of the model was .627 with the adjusted R^2=.553 when net profit margin was regressed against the independent variables. The Durbin-Watson d = 1.5346 was between the two critical values of 1.5 < d < 2.5.

The Durbin Watson (DW) statistic is a test for autocorrelation in the residuals from a statistical regression analysis. The Durbin-Watson statistic always has a value between 0 and 4. A value of 2.0 means that there is no autocorrelation detected in the sample. Autocorrelation means that the errors of adjacent observations are correlated. If the errors are correlated, then least-squares regression can underestimate the standard error of the coefficients. Underestimated standard errors can make your predictors seem to be significant when they are not. The findings suggested that the return on assets, return in investments, and net profit margin variables met the assumptions and there was no first order linear auto-correlation in the data.

Table 4. 18: ANOVA Results, Return on Assets

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	.558	3	.186	.292	.000[b]
1	Residual	47.796	75	.637		
	Total	48.354	78			

a. Dependent Variable: Return on Assets

b. Predictors: (Constant), inventory management, cash conversion cycle, account payable days

Source: The researcher (2020)

Table18 displays the F-test of the ANOVA results on return on assets with F = .78 and .292 degrees of freedom of the test, suggesting that the test was highly significant, and was thus assumed that there was a linear relationship between the variables in the model. The probability of .000 indicated that the model was significant in predicting the influence of determinants of working capital management management on ROA of BRALIRWA in Kicukiro District given that the p value was < 0.05 and < 0.01.

Table 4. 19: ANOVA Results, Return on Investments

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.178	3	.059	.262	.042[b]
	Residual	16.911	75	.225		
	Total	17.089	78			

a. Dependent Variable: Return on Investment
b. Predictors: (Constant), inventory management, cash conversion cycle, account payable days

Source: The researcher (2020)

Table 19 displays the F-test of the ANOVA results on return on investments with F = .78 and .262 degrees of freedom of the test, suggesting that the test was highly significant, and was thus assumed that there was a linear relationship between the variables in the model. The probability of .042 indicated that the model was significant in predicting the influence of determinants of working capital management management on ROI of BRALIRWA in Kicukiro District given that the p value was < 0.05 and < 0.01.

Table 4. 20: ANOVA Results, Net Profit Margin

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.503	3	.168	1.887	.040[b]
	Residual	6.687	75	.089		
	Total	7.190	78			

a. Dependent Variable: Net Profit Margin
b. Predictors: (inventory management, cash conversion cycle, account payable days

Source: The researcher (2020)

Table 20 displays the F-test of the ANOVA results on return on investments with F = .78 and 1.887 degrees of freedom of the test, suggesting that the test was highly significant, and was thus assumed that there was a linear relationship between the variables in the model. The probability of .040 indicated that the model was significant in predicting the influence of Determinants of Working capital management on NPM of BRALIRWA in Kicukiro District given that the p value was < 0.05 and < 0.01.

Table 4. 21: Regression Analysis, Coefficients – Return on Assets

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.647	.985		3.704	.000
	Inventory Management	.152	.193	.092	.783	.036
	Cash conversion Cycle	.046	.198	.028	.234	.016
	Account Payable Days	.067	.311	.026	.214	.031

a. Dependent Variable: Return on assets

Source: The researcher (2020)

The regression model derived from Table 21 was as follows:

$Y= 0.647+ 0.092X_1 + 0.028X_2 + 0.026X_3$, Where Y is Return on Assets; X_1 is Inventory Management; X_2 is Cash conversion Cycle; and X_3 is Account Payable Days. The significance level of the independent variables was less than 0.05 ($P<0.05$) which explains the influence of independent variables to the ROA. The significance level was; inventory management (.036), cash conversion cycle (.016), and account payable days (.031). The regression model provided a statistical control through which the study established the influence of each predictor variable. For this study, holding all variables at zero was result in a positive influence of 0.647 on return on assets. A unit change in inventory management would result in 0.092 increments in return on assets when all other independent variables are reduced to zero, a unit change in cash conversion cycle would result in 0.028 increments in return on assets when all other independent variables are reduced to zero, and a unit change in account payable days would result in 0.026 increments in return on assets. The results also indicated that the coefficients for each independent variable were non-zero. This meant that all the independent variables influenced the return on assets.

Table 4. 22: Regression Analysis, Coefficients – Return on Investments

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.904	.362		8.027	.000
	Inventory Management	.028	.052	.071	.534	.045
	Cash conversion cycle	.017	.061	.063	.275	.036
	Account Payable Days	.043	.058	.085	.737	.043

a. Dependent Variable: Return on investment

Source: The researcher (2020)

The regression model derived from Table 22 was as follows:

$Y= 0.904+ 0.028X_1 + 0.017X_2 + 0.043X_3$, Where Y is Return in Investments; X_1 is Inventory Management; X_2 is Cash conversion cycle; and X_3 is Account Payable Days. The significance level of the independent variables was less than 0.05 ($P<0.05$) which explains the influence of independent variables to the ROI. The significance level was; inventory management (.045), cash conversion cycle (.036), and account payable days (.043). The regression model provided a statistical control through which the study established the influence of each predictor variable. For this study, holding all variables at zero was result in a positive influence of 0.904 on return on investments. A unit change in inventory management would result in 0.028 increments in return on investments when all other independent variables are reduced to zero, a unit change in cash conversion cycle would result in 0.017 increments in return on investments when all other independent variables are reduced to zero, and a unit change in account payable days would result in 0.043 increments in return on investments. The results also indicated that the coefficients for each independent variable were non-zero. This meant that all the independent variables influenced the return on investments.

Table 4. 23: Regression Analysis, Coefficients – Net Profit Margin

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.428	.228		15.069	.000
	Inventory Management	.031	.033	.119	.930	.035
	Cash conversion Cycle	.040	.038	.136	1.062	.022
	Account Payable Days	.057	.036	.175	1.558	.012

a. Dependent Variable: Net profit margin

Source: The researcher (2020)

The regression model derived from Table 23 was as follows:

$Y= 0.428+ 0.031X_1 + 0.040X_2 + 0.057X_3$, Where Y is Net Profit Margin; X_1 is Inventory Management; X_2 is Cash conversion Cycle; and X_3 is Account Payable Days. The significance level of the independent variables was less than 0.05 ($P<0.05$) which explains the influence of independent variables to the NPM. The significance level was; inventory management (.035), cash conversion cycle (.022), and account payable days (.012). The regression model provided a statistical control through which the study established the influence of each predictor variable. For this study, holding all variables at zero was result in a positive influence of 0.428 on net profit margin. A unit change in inventory management would result in 0.028 increments in net profit margin when all other independent variables are reduced to zero, a unit change in cash conversion cycle would result in 0.017 increments in net profit margin when all other independent variables are reduced to zero, and a unit change in account payable days would result in 0.043 increments in net profit margin. The results also indicated that the coefficients for each independent variable were non-zero. This meant that all the independent variables influenced net profit margin.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Determinants of working capital administration the board is especially significant on account of little and medium-sized organizations. A large portion of these organizations' benefits are as present resources. Likewise, current liabilities are one of their principle wellsprings of outer account. In this unique circumstance, the goal of the ebb and flow research has been to give observational proof about the impacts of determinants of working capital management on the effectiveness of an example of BRALIRWA in Rwanda. Determinants of working capital management are significant part in firm money related administration choice. When working capital administration is overseen inappropriately, apportioning all that could possibly be needed of it was rendering the

board non-productive and lessens the advantages of momentary speculations. Then again, if working capital administration is excessively low, the organization may miss a great deal of productive speculation openings or endure transient liquidity emergency, prompting debasement of organization credit, as it can't react successfully to brief capital necessities.

The discoveries showed a negative connection among effectiveness and the money change cycle, which was utilized as a proportion of determinants of working capital administration the board productivity. Along these lines, it appeared that operational productivity directed how BRALIRWA proprietors acted as far as dealing with the working capital administration of the firm. It was seen that lower proficiency is related with an expansion in the number long stretches of records payables. The above could prompt the end that less gainful firms stand by longer to take care of their tabs exploiting credit period conceded by their providers. The negative connection between money change cycle and firms' effectiveness proposes that less beneficial firms was seek after an abatement of their funds trying to decrease their money hole in the money transformation cycle. Similarly, the negative connection between number of days in stock and corporate effectiveness recommends that on account of an unexpected drop in deals went with a blunder of stock was lead to tying up overabundance capital to the detriment of productive activities.

5.2 Recommendations

From the finding of the examination, it tends to be suggested that;

1. BRALIRWA ought to guarantee the all-out number of days taken before inventories are sold is limited so as to support the profits of the firm.

2. BRALIRWA ought to likewise plan stock spending plans so as to keep up sufficient stock for smooth activities of the firm.

3. The stock level ought to be explored consistently to guarantee ideal stock is kept up consistently.

4. BRALIRWA ought to likewise set up a stock control framework to aids proficient administration of stock.

5. BRALIRWA ought to normally audit payables the board arrangements to guarantee ideal credit is kept up consistently.

6. Payables ought to be checked to guarantee opportune stock of merchandise and ventures in BRALIRWA.

7. BRALIRWA should likewise look for credit offices so as to sufficiently back its tasks.

8. BRALIRWA should take longer period to settle account payables so as to build effectiveness.

5.3 Suggestions for Further Studies

There is a lot to be done about determinants of working capital administration the board in Rwanda in future. The investigation recommends that further research be led on a similar subject with various organizations. The extent of further research might be reached out to the working capital administration parts the board including attractive protections.

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