EFFECT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY OF MANUFACTURING COMPANY IN RWANDA; A CASE STUDY OF CETRAF LTD (2018-2020)

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EFFECT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY OF MANUFACTURING COMPANY IN RWANDA; A CASE STUDY OF CETRAF LTD (2018-2020)

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ABSTRACT

The general objective of this study was to find out effect of working capital management on the profitability of manufacturing company in Rwanda. The specific purpose of this thesis were: To determine the effect of inventory management on profitability of CETRAF LTD, To establish the effect of cash management on profitability of CETRAF LTD, To ascertain the effect of account receivable management on profitability of CETRAF LTD, To examine the effect of account payable management on profitability of CETRAF LTD, To establish the moderating influence of ownership and stakeholders decisions on profitability of CETRAF LTD. For the case of this study, the total population was 445 employees of CETRAF Ltd but target population consisted of only 16 employees of CETRAF's office staff and board because they were the ones who provided useful information related to working capital management and profitability of manufacturing company. In order to facilitate the study to be well accomplished each objective of the study was investigated by using specific questions. The study applied the following tools of data collection; documentary and questionnaires. The results showed that there is a moderate correlation between Cash Management Practices and profitability as Pearson correlation is 0.889. The results showed that there is very strong correlation between accounts payable management and profitability as Pearson correlation is 0.884. In this research, the researcher confirmed moderate and positive relationship between accounts receivable management and profitability of CETRAF Ltd. Since the Pearson Correlation value was 0.743. The results showed that there is very strong correlation between Inventory Control management and profitability as Pearson correlation is 0.807. The p-value is 0.000, which is less than both standard significance levels of 0.05 and 0.01. The study established that there are positive relationships between working capital management on the profitability of manufacturing company in Rwanda. Based on these findings the study concluded that working capital management affects the profitability of manufacturing company in Rwanda. The suggestions that could be made for of CETRAF Ltd based on findings of the study is maintaining its current assets regularly and measuring its current liabilities in manner that will favor its profitability. CETRAF Ltd should keep optimum current assets in order to enhance the short-term debt-paying ability of the firm. Keeping a positive net working capital is very crucial to improve performance of company. Therefore, CETRAF Ltd have to struggle with maintenance of current assets exceeding the current liabilities.

Key words: *Working Capital Management, Profitability of Manufacturing Company.*

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INTRODUCTION

For almost few decades, worldwide working capital management was seen as an interim debt arising through credit sales and recorded as working capital management by the seller and accounts payable by the buyer (Barnett & Salomon, 2018). According to Caffasso (2011), optimum working capital management in a business is one that maximizes the value of a firm when the incremental rate of return (marginal rate of return) of an investment is equal to the incremental cost of funds (marginal cost of capital) used to finance the investment. Trade receivables securitization is another upcoming avenue of raising capital that brings the benefit of low cost and enables firms to streamline their financial statements and utilize the raised capital in a more prudent way to improve its credit rating and have better financial ratios which improves profitability of the firm (Kennedy, 2014).

The management of current assets (normally converted into cash within an account year) and current liabilities (generally discharged within a year) and the interrelationship that exists between them may be termed as working capital management. Excessive levels of current assets may have a negative effect on the firm's profitability whereas a low level of current assets may lead to lower level of liquidity and stock outs resulting in difficulties in maintaining smooth operations. Traditional concept of working capital is the different between assets and current liabilities. Thus working capital management is an attempt to manage and control the current assets and the current liabilities in order to maximize profitability and proper level of liquidity in business. Liquidity and profitability are two important and major aspects of corporate business life (Vataliya, 2009). The problem is that increasing profits at the cost of liquidity can bring serious problems to the firm. Therefore, there must be a trade-off between these two objectives (liquidity and profitability) of firms. One objective should not be at the cost of the other because both have their own importance. If firms do not care about profit, they cannot survive for a longer period. In other round, if firms do not care about liquidity, they may face the problem of insolvency or the manufacturing company ruptcy. For these reasons managers of firms should give proper consideration for working capital management as it does ultimately affect the profitability of firms. As a result company can achieve maximum profitability and can maintain adequate liquidity with the help of efficient and effective management of working capital. Inefficient financial management including working capital management may damage business enterprise's profitability. The efficient management of working capital is a fundamental part of the overall corporate strategy to create shareholders value (Nazir & Afza, 2008).

In addition, efficient working capital management leads to improve the operating performance of the business concern and it helps to meet the short term liquidity. Therefore, firms try to keep an optimal level of working capital that maximizes their value. In addition to that, the effective working capital management is very important because it affects the performance and liquidity of the firms. The main objective of working capital management is to reach optimal balance between working capital management components. Large inventory and generous trade credit policy may lead to high sales. Large inventory also reduces the risk of a stock-out. Trade credit may stimulate sales because it allows a firm to access product quality before paying. Another component of working capital is accounts payables, indicated that delaying payment of accounts payable to suppliers allows firms to access the quality of obtaining products and can be inexpensive and flexible source of financing (Deloof, 2003).

In many Africa firms today, it has revealed that liquidity position was thus a major issue that must be put into consideration by financial managers. The liquidity problem state can be reduced by increasing the current assets which can be done through working capital management increase (i.e increase in credit sales). When goods and services are sold under an agreement permitting the customer to pay for them at a later date, the amount due from the customer is recorded as working capital management ; so, receivables are assets accounts representing amounts owed to the firm as a result of the credit sale of goods and services in the ordinary course of business (Munene, 2018).

On the other hand, delaying of such payables can be expensive if a firm is offered a discount for the early offered a discount for the early payment. By the same token, uncollected accounts receivables can lead to cash inflow problems for the firm. A popular measure of working capital management is the cash

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conversion cycle, that is, the time span between the expenditure for the purchases of raw materials and the collection of sales of finished goods. The longer the time lags, the larger the investment in working capital, and also a long cash conversion cycle might increase profitability because it leads to higher sales. However, corporate profitability might decrease with the cash conversion cycle, if the costs of higher investment in working capital rise faster than the benefits of holding more inventories or granting more trade credit to customers. And the main cause of the failure of a business enterprise has been found to be the shortage of working capital, their mishandling, and mismanagement of working capital and underutilization of capacity (Vataliya, 2009). In general, working capital management is not only improving financial performance in today's cash strapped and uncertain economy, but it is the question of meeting firm's day to day operation.

The concept of working capital is used in two ways investment in current assets. Net working capital means the difference between current assets and current liability and therefore, represents that position of current asset which has to finance either from long term forms or the manufacturing company borrowing. The financing of current assets also involves a tradeoff between risk and return. A firm cans choose from short or long-term source of finances. If the firm used more of short-term form for financing both current and fixed assets it financing policy is considered aggressive and risky. It financing policy will be considered conservative. If it makes relatively more use in financing it assets. A balance approach is to finance permanent assets by long time success and temporally current assets by short-term sources of finance. „Theoretically short term debt is considered to be risky and costly to finance permanent current assets (Olaleye S., 2015). The working capital management deals with the levels of WC to optimum, because if concerns has inadequate opportunities and If the working capital is more than required then the concern will lose money in the form of interest on the blocked funds. Therefore, the Working Capital management plays a very important contribution in performance of a manufacturing company (Hollensen, 2011).

Selling on credit is one of the company's approaches in enhancing sales and it has turned up to be an enticement for customers in retaining the business relationship with the company and in time increase the company's profit (Barad, 2010), eventually optimizing the company's profit. The purpose of offering credit is to maximize profit (Damilola, 2005). Management of working capital management is complex as it forms an integral part of the marketing function as the granting of credit attracts customer thus resulting to increased sales and sales revenue (Cooper, 2008). Management of the working capital management asset is a complex task as it addresses the ramifications of practices and processes usually outside the sphere of the responsible manager, thus they may require liquidating their investments in securities. Whenever investors are certain of the possibility of selling out what they hold, as and when they want, they have a major incentive for investment as it guarantees mobility of capital in the purchase of assets (Makori & Jagongo, 2013).

Profit may only be called real profit after the receivables are turned into cash. The management of working capital management is largely influenced by the credit policy and collection procedure, in many organizations the growth in access to credit has led to a rising level of consumer indebtedness which is having a significant impact on business profitability (Kweri, 2011). Working capital management as a component of cash flow has a direct effect on the profitability of a business. Working capital management should not be limited to customers who are unable to pay; the key is for organizations to use early identification of accounts at risk to enable proactive management of a customer before they become the manufacturing company rupt (Barnett & Salomon, 2018).

In Rwanda, according to Rugorirwera (2018), management of working capital management has aimed at maintaining an optimal balance between each of the working capital management component, due to frequency failure in manufacturing company to improper management of working capital management. Management of working capital management offers the best opportunity for firms to compete in the market in order to offer the best quality of products right quantity of products to consumers. However, it is believed that there is an increase of problems of ineffective management account practices, products delayed, distorted, or too highly aggregated information that can easily undermine the efforts of companies with excellent research and development, production, and marketing activities

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(Mukeshimana, 2019). Based on this background the study was conducted on the effect of working capital management on financial profitability of manufacturing company in Rwanda; a case study of CETRAF LTD (2018-2020).

Objectives of Study

The general objective of the study was to establish the effect of working capital management on the profitability of manufacturing company in Rwanda.

Specifically, this study achieved the following objectives

- To determine the effect of inventory management on profitability of CETRAF LTD.
- To establish the effect of cash management on profitability of CETRAF LTD.
- To ascertain the effect of account receivable management on profitability of CETRAF LTD.
- To examine the effect of account payable management on profitability of CETRAF LTD.
- To establish the moderating influence of ownership and stakeholders decisions on profitability of CETRAF LTD.

Statement of the Problem

According to Ademola (2014) the principal objective of working capital management is to manage the company's current assets and current liabilities in such a way that a satisfactory of working capital is maintained. It is due to the fact that if the company cannot sustain an acceptable level of working capital management certainly may lead into what is termed insolvency and may end up into firm the manufacturing company ruptcy. It is commnly known that the proper management of working capital is essential for the company to remain liquid enough to meet its short term creditors. However, the issue with working capital is that it cannot be reduced to a minimum without operational compromises. This means that companies need to optmize and manage their working capital in a way that does not comproise future sales and profits. For example, companies that shorten their payment terms too much might have difficulties in selling their products. Most customers appreciate a longer payment period to improve their own working capital or the check product quality (Sendashonga, 2013).

By minimizing inventory levels a company might not be able to take advantage of a sudden upturn in their demand and miss out on sales. Also by deferring paymnents the company can incur heavy financing rates on their credit or miss out on discounts given for prompt payment. Bearing that in mind, can anyone confirm that proper working capital management makes a company more profitable than a competitor who does not manage its working capital? The basis for that should relate to the different metrics and processes that need to be improved to increase profitability through working capital management (Naser, *et al*, 2013). For the manufacturing sector in Rwanda, the following products recorded a negative growth: soaps (-6%), Paints (-22%), textiles (-18%), sugar (-18%) and flour production (-9%). The share of the industry sector to the GDP was 15%. It is projected that the manufacturing sector will grow by 4% in 2017 despite facing myriad challenges such as poor infrastructure, unreliable electricity, skills gap, high cost of finance; the opportunity cost due to the disequilibrium in finance issues, an proper use of resources where the short term finance used for a long term projects and some manufacturing companies their short term finance are not able to cover all companies‟ obligations and they affect the daily activities of those manufacturing companies. However, implementing best practices of Working capital management has becomes one of the most exciting and challenging operational areas of business (Ministry of Finance and Economic Planning report, 2014). In Rwanda an example may be taken referring to one manufacturing company, Chalom Paints that collapsed because of mismanagement and their liabilities were far outweigh their assets. Working capital management is important because decisions regarding the firm's short-term assets and liabilities have a significant impact on both the firm's profitability and its risk. Working capital decisions affect the firm's profits through their impact on sales, operating costs and interest expense. They affect the firm's risk through their impact on the variability of the firm's cash flows, the probability of not receiving the cash flows, and the ability to generate cash in a crisis (Ange, 2013).

However, some Rwandan industries are winding up due to ignoring management of working capital management in managerial performance process, lack of better knowledge about management of

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working capital management and many industries are in trouble which leads to low and negative financial profitability (Rugorirwera, 2018). This study aimed at assessing the effect of working capital management on financial profitability of manufacturing company in Rwanda; a case study of CETRAF LTD (2018-2020) and establishing the relationship between working capital management practices and financial profitability.

LITERATURE REVIEW

Theoretical Review

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 projectsthat have positive net present values when discounted at relevant cost of capital (Siddiqi, 1997). 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.

Trade-Off Model

Trade-off model demonstrates that firms decide their optimal level of cash holding by comparing the marginal cost and benefits of holding cash. Large investment in current assets under certainty would mean low rate of return on assets (ROA) of the firm, as excess investments in current assets will not earn enough return. A smaller investment in current assets, on the other hand, would mean interrupted production and sales, because of frequent stock-outs and inability to pay to its creditors in time due to restrictive policy. Various studies attempted to examine the relationship between working capital management and financial performance which embodied liquidity as a component and profitability (Deloof, 2003). The ultimate objective of any firm is to maximize profit. At the same time, preserving liquidity of the firm is an important objective too. The problem is that increasing profits at the cost of liquidity can bring serious problems to the firm (Agrawal, 2001).

Therefore, there must be a trade-off between these two objectives of firms. One objective should not be fulfilled at the cost of the other since both are important. If we do not care about profit, we cannot survive for a longer period. On the other hand, if we do not care about liquidity, we may face the problem of insolvency or the manufacturing company ruptcy. The firm must decide about the levels of current assets to be carried for which a firm's technology and production policy, sales and demand condition, operating efficiency is taken into consideration in the policy decision. It may follow a conservative risk-return trade-off. The rank correlation of liquidity and profitability are said to be inversely related to each other. It implies that as the liquidity increases and profitability decreases (Pandey, 2010). More aggressive working capital approaches are associated with higher return and higher risk while conservative working capital approaches are concerned with lower risk and lower return.

Keynesian liquidity preference theory

Another theory underpinning the study of working capital management approaches is Keynesian liquidity preference theory by economist John Keynes in 1936. The theory argues that when all other things are kept constant, investors prefer liquid investments to illiquid ones and will always demand a premium for investments that have longer maturity periods. According to this theory people hold cash or inventory for transaction, speculative, precaution, and compensation motives. The need for working capital to run the day-to-day business activities cannot be ignored. Entities have to invest enough of available funds in current assets for the success of its operations (Pandey, 2010).

Aggressive theory

This theory is applied where the firm plans to take high risk and where short term funds are used to a very high degree to finance current and fixed assets. This approach is characterized by low interest rates. However, it's important to note that that the risk associated with short term debt is higher than long term debt. This applies mostly to companies/ firms operating in a stable economy and is quite certain

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about future cash flows. A company with an aggressive working capital policy offers short credit periods to customers, holds minimal inventory and has a small amount of cash in hand. This policy increases the risk of defaulting due to the fact that a company might face lack of resources to meet short term liabilities but also give a high return as it's associated with high risk.

Working Capital Cycle

Theory The theory states that working capital management following a cycle depending on the kind of company under analysis (Brealey& Myers, 2002). Using such cycle, a company can determine its working capital needs at any point in time. By definition, the working capital cycle is that duration it takes for a company to convert its cash into raw materials or finished goods to the time it receives cash from its debtors.

Theories on working capital management

Working capital management involves the relationship between a firm's short-term assets and its short-term liabilities. The basic goal of working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. In relation to the relationship between working capital and profitability, there are mixed results from different scholars across the world. In the study conducted by Padachi (2006) on the trend in working capital management and its impact on firm's performance, it was found that high investment in inventories and receivables is associated with lower profitability. A case study conducted by Abdul and Nasir (2007) on working capital management and profitability of Pakistan firms, a strong negative relationship between variables of working capital management and profitability of the firm has been observed. The empirical results found by carpenter and Johnson (1983) revealed that there is a negative relationship between working capital policies and profitability. While Amir and Sana (2006) pointed out a negative relationship between working capital and profitability of the firm, Bradley and Rubach (2002) on trade credit and small business failures suggested that there is a relationship between poor working capital management and organizational failure. Anupchowdhury and Amin (2007) conducted a research on working capital management practiced in pharmaceutical companies listed on share stock exchange.

According to Smith & Sell (2008), wide range of surveys have been used to study working capital policies overall and the practices to manage different components of net working capital separately. Cash and marketable securities, working capital management, inventories, and accounts payable and short-term loans have been studied. These surveys show that most of the companies have informal policies for working capital management. The most important action in working capital management is the collection of working capital management followed by efficient inventory management.

Cash management practices

Davidson (2002) defined cash management as a term which refers to the collection, concentration and disbursement of cash. It encompasses a company's level of liquidity, management of cash balance and short term strategies. Pindado (2004) also defines cash management as part of working capital that makes up the optimal level needed by a company. Bort (2004) noted that cash management is of importance for both new and growing businesses. Companies may suffer from cash flow problems because of lack of margin of safety in case of anticipated expenses such that they experience problems in finding the funds for innovation or expansion. Further Bort (2004) alludes that effective cash management is the fundamental starting point to ensure that the company's finances are in strong position.

According to Bort (2004), cash is the lifeblood of the business. The key to successful cash management lies in tabulating realistic projections, monitoring collections and disbursements, establishing effective billing and collection measures, and adhering to budgetary parameters because cash flow can be a problem to the business organization. Gitman (2008) offers theoretical positions drawn from observations and consulting experience on the fact that a firm can improve its cash management efficiency by collecting working capital management as soon as possible. The most obvious way of bringing forward cash inflows, would be to press debtors for earlier payment although this policy will result in goodwill and problems with customers.

Gitman (2008) advocates for cash budget as another cash management tool. It is used by the firm to estimate its short term requirement with particular attention being paid to planning for

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surplus cash or for cash shortages. Kirkman (2006) arrived at the same idea by highlighting that as a component of implementing an effective cash management program, a cash flow statement called a cash budget may be prepared. Afza & Nazir (2007) asserts that budgets are the financial road map companies' use, when planning business expenses and tracking the cash flow throughout the business year.

Cash includes money at hand, petty cash, the manufacturing company account balance, customer cheques; it includes also a portion of unutilized portion of an overdraft facility or line of credit. Taani (2011) defined cash management as a term which refers to the collection concentration and disbursement of cash. It encompasses a company's level of liquidity, management of cash balance and short term strategies. Mathuva (2013) also defines cash management as part of working capital that makes up the optimal level needed by a company. Nobanee, *et al,* (2011) noted that, cash management is of importance for both new and growing businesses. Companies may suffer from cash flow problems because of lack of margin of safety in case of anticipated expenses such that they experience problems in finding the funds for innovation or expansion. Weak cash flow makes it difficult to hire and retain good employees.

Inventory management

Inventory is the raw material, work in progress goods and completely finished goods that are considered to be the portion of a business' assets that are ready or will be ready for sale. Inventory control systems have been of concern for many years to business firms worldwide. Inventory control systems play a crucial role in enhancing effectiveness and efficiency in handling inventory of business firms. Companies have been continually in search for sources of sustainable competitive advantage in their operations. Therefore, there is need for business enterprises to embrace effective inventory management practices in order to improve their competitiveness. In 1980s inventories of raw materials, work in progress components and finished goods were kept as a buffer against the possibility of running out of needed items (Salawati, Tinggi, &Kadri, 2012). However, large buffer inventories consume valuable resources and generate hidden costs (Salawati, Tinggi, &Kadri, 2012). Too much inventory consumes physical space, creates a financial burden, and increases the possibility of damage, spoilage and loss (Nyabwanga&Ojera, 2012). On the other hand, too little inventory often disrupts business operations. Managers act rationally in managing their inventory efficiently if they are convinced that the practice enhances firm performance (Block & Geoffrey, 2008). Traditionally, inventories of raw materials, work-in-progress components, and finished goods were kept as a buffer against the possibility of running out of needed items. However, large buffer inventories consume valuable resources and generate hidden costs. Inventory management leading to inventory reduction has become the primary target, as is often the case in just-in-time (JIT) systems, where raw materials and parts are purchased or produced just in time to be used at each stage of the production process. This approach to inventory management brings considerable cost savings from reduced inventory levels. As a result, inventories have been decreasing in many firms (Chen *et al.,* 2005).According to Chen *et al.* (2005), firms with abnormally high inventories have abnormally poor stock returns. On the other hand, firms with abnormally low inventories have ordinary stock returns. In addition, firms with slightly lower than average inventories perform best over time. Inventory management leads to inventory reduction, as is often the case in JIT. Fullerton *et al.* (2003) give support that firms that implement higher degrees of JIT manufacturing practices should outperform competitors who do not; it was also found that a positive relationship exists between firm profitability and the degree to which waste-reducing production practices, such as reduced set-up times, preventive maintenance programs and uniform workloads are implemented.

Eroglu & Hofer (2011) argue that inventory leanness is the best inventory management tool. Lean production itself considers inventory as a form of waste that should be minimized and it has become synonymous with good inventory management. Cannon (2008) introduces contradictory perspective that inventory performance should not be measured as a robust indicator of overall performance. Cannon (2008) also indicates that when the effects of time are taken into account, turnover improvement on average has a slightly negative effect on ROA. Additionally, the author stressed that setting various stock levels and maintaining minimum inventory levels reduces the

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cost of possible interruptions in the production process or of loss of business due to the scarcity of products, reduces supply costs, and protects against price fluctuations, among other advantages thereby increasing firm profitability and enabling efficient liquidity. This implies that retailers' trade off gross margin for inventory turns to achieve similar return on inventory investment since, if inventory turnover ratio is lower than targeted given the level of gross margin, then management should be alarmed with this inefficiency.

Receivables management

Accounts receivable refer the unpaid claims a firm has over its customers at a given time, usually comes in the form of operating line of credit and is mainly due within a relatively short time period(up to one year). The volume of accounts receivable indicates firm's supply of trade credit while accounts payable shows its demand of trade credit. The study of accounts receivable and accounts payable during periods of financial crisis is an important topic, particularly when the global economy is going through a credit shock. During global financial crisis, characterized by high liquidity risk faced by the the manufacturing company s, trade credits may increase, operating as a substitute for the manufacturing company credits, or decrease acting as their complement. (Dettoratius, *et al*, 2013).

Efficient receivables management augmented by a shortened creditor's collection period, low levels of bad debts and a sound credit policy often improves the businesses' ability to attract new customers and accordingly increase financial performance hence the need for a sound credit policy that will ensure that value is optimized (Lazaridis & Dimitrios, 2005). Costs of cash discounts and costs of managing credit and credit collections constitute the carrying costs associated with granting a credit which increase when the amount of receivables granted are increased. Lost sales resulting from not granting credit constitute the opportunity cost which decrease when the amounts of receivables are increased (Lazaridis & Dimitrios, 2005).

Theories on profitability

Profitability refers to the difference between income and expenses. One important measure of profitability is net farm income. Return on equity capital and total assets can be calculated and compared to interest rates for loans or rates of return from alternative investments. Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important (Watson, 2017). There are different financial ratios related to both the owners and depositors used to measure the profitability of financial institutions. However, the following two ratios are the most important earnings ratios used in assessing the profitability.

Return on assets

The return on assets ratio, often called the return on total assets, is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets. In other words, the return on assets ratio or ROA measures how efficiently a company can manage its assets to produce profits during a period. The return on assets ratio formula is calculated by dividing net profit by average total assets (Yazdanfar, 2014).

$$\text{Return on Asset Ratio} = \frac{\text{Net Profit}}{\text{Total Assets}} * 100$$

Return on equity

The return on equity ratio or ROE is a profitability ratio that measures the ability of a firm to generate profits from its shareholders investments in the company. In other words, the return on equity ratio shows how much profit each dollar of common stockholders' equity generates.

Formula

The return on equity ratio formula is calculated by dividing net profit by shareholder's equity.

$$\text{Return on Equity Ratio} = \frac{\text{Net Profit}}{\text{Shareholde}^{r}\text{s equity}} * 100$$

Return on sales

Return on sales (ROS) is a ratio widely used to evaluate an entity's operating performance. It is also known as "operating profit margin" or "operating margin". ROS indicates how much profit an entity makes after paying for variable costs of production such as wages, raw materials, etc. (but before interest and tax). It is the return achieved from standard operations and does not include unique or one off transactions. ROS is usually expressed as a percentage of sales (revenue). (Odhiambo*et al*, 2018).

Calculations of ROS commonly use operating profit before deducting interest and tax (EBIT); using

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income after-tax is less common.

$$\text{Return on Sales} = \frac{\text{EBIT}}{\text{Sales}} * 100$$

Net profit margin

Net profit margin shows a return on every unit of sale after taking into account both cost of sale and expenses (Kakuru, 2017). Net profit margin ratio is measured by dividing profit after tax by sales and it can be illustrated as below. Net profit Margin $= \frac{\text{Profit after tax}}{\text{Sales}}$

Empirical review

Based on the tradeoff model, the correlation of liquidity and profitability are said to be inversely related to each other. This means that company managers must decide about the levels of current assets to be maintained at each time. Smith & Sell (2008) suggested that the management of working capital is important because of its effects on a firm's profitability and risk and consequently the shareholder's wealth. Working capital management ensures sufficient cash flow to meet short-term debts. Previous studies on working capital management and firms' performances have reported linear relationship between working capital approaches and firms' profitability (Deloof, 2003). The findings of these studies indicate that firms' working capital management approaches have significant relation to net income. Empirical evidence has indicated mixed results on the risk/return tradeoff among working capital approaches. Afza & Nazir (2007) investigated the traditional relationship between working capital management approaches and a firm's profitability and their result contradicted those of Deloof (2003) as they produced a negative relationship between aggressive working capital policies and profitability.

Furthermore, efficient management of working capital is a fundamental part of the overall corporate strategy in creating the shareholders' value (Deloof, 2003), and firms try to keep an optimal level of working capital that maximizes their value (Afza & Nazir, 2007). Aminu (2003) alludes that working capital management is an essential tool in the success story of any firm in terms of profitability. A good or positive working capital enables a firm to access finance from short-term creditors and even long term creditors. In the long-run, creditors seek firms with a positive working capital since it serves as an assurance of loan repayment. The issue of a positive working capital calls for working capital management which, according to Pandey (2004), is the administration of all components of working capital-cash, marketable securities, debtors (receivables) and stock (inventories) and creditors (payables). Further, Pandey (2004) states 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.

Smith & Sell (2008) contends that the goal of working capital management is to ensure that the firm is able to continue its operation and that it has sufficient cash flows to satisfy both maturing short-term debt and upcoming operational expenses. This will obviously have significant effect on the firm's profitability (Smith& Sell, 2008). Cash management is the movement of funds through financial institutions to optimize liquidity. It is the management of corporate funds to increase interest income earned by maximizing investments and reducing interest paid by minimizing borrowings (Abioro, 2013).

Inventory management is one of the strategies employed by organizations as a way of having an edge/ competitive advantages over others and a way of maximizing profits at large. The main objective of Inventory management is to acquire the right quantity and quality of materials at the right time, at the same time keeping the cost of holding stock as low as possible so as to fully acquire the benefits of managing Inventory (Smith& Sell, 2008). Inventory management has its associated costs like acquisition costs among others. The costs has an impact on the profitability performance of any organization. However if these costs are well managed and controlled then there are high chances of maximizing profits due to the fact that cost management is the major determinant of profit maximization. It should be noted that for instance stocks running out, associated with interruption in the productions process, failure or delays in fulfilling customer needs which also further lead to loss of customers, incompetent personnel, among others and hence these reduce the volume of sales which definitely leads to low profit margins Inventory management with the use or help of the tools and control inventory systems/ techniques, profit maximization will be achieved. Therefore inventory management

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costs are supposed to be kept low in order to reap the benefits of holding inventory (Deloof, 2003). All in all inventory management is a very important aspect in the organizations performance because, if it's not considered, then the profits of the organization will not be realized(Smith& Sell, 2008).

The purpose of keeping stocks of raw materials and work-in-progress is to ensure cyclical production processes, economies of scale and reduction of risks involved in the uncertainty of delivery quantities and times; and to reduce the impact of seasonality in supply and demand. In turn, finished products are kept in stock to ensure continuity of sales; failure to do so results in reduced profits and harms the reputation and competitive position of a company (Michalski 2008). However, keeping stocks also involves the need to incur various costs, e.g. warehousing, handling and transport costs, insurance, losses of goods held in stocks, and costs of lost profits resulting from the tying-up of capital in stocks (Lozano *et al.* 2017). This means that in addition to the logistics and demand factors, the financial aspect is of crucial importance to inventory management. The relevant literature includes a series of papers documenting the considerable impact of inventory performance on corporate financial profitability.

Cash management uses the knowledge of funds movement through the the manufacturing company ing system, coupled with the manufacturing company ing services and other financial products, to optimize liquidity. With the use of basic cash management tools and techniques, cash becomes a corporate asset that contributes directly to the bottom line. Whether a company is flush with cash or experiencing a shortfall of funds, good cash management is critical to the success of every company. The trade-off theory of liquidity suggests that firms target an optimal level of liquidity to balance the benefit and cost of holding cash (Almazari, 2013).

Mismanagement of working capital leads to adverse effects. Lamberson (1995) identifid that company the excess working capital leads to inflation and inadequate working capital leads to deflation. Hence, working capital management permits the carrying of inventories at a level that would enable a business to serve satisfactorily the needs of customers and enables a company to operate its business more efficiently because there is no delay in obtaining materials etc. because of credit difficulties and enables a business to with stand periods of depression smoothly (Abioro, 2013). The adequacy of cash and other current assets together with their efficient handling virtually determine die survival or demise lifeblood and the controlling nerve center of a business. In adequate working capital is a business ailment. If a business maintains an adequate amount of working capital it not only gets rid of die dangers of short working capital but also enjoys a good rating and receives cash discount on its payments. It can pass a period of depression without much difficulty.

Lazaridis & Tryfonidis (2006) also explored the relationship between accounts receivables management and profitability for the companies listed in the Athens Securities Exchange taking into consideration a sample of one hundred and thirty one listed firms. The researcher conducted the study between the years 2001-2004. When a regression analysis was conducted on the results it showed a statistically significant association between profitability (which was measured using the gross operating profit), and the CCC. He concluded that optimization of the CCC by managers could increase 14 shareholder value. There was also a statistically significant relationship between the firms profitability and efficiency of its trade receivables.

Afza and Nazir (2009) made an attempt to investigate the traditional relationship between receivables management policies and a firm's profitability for a sample of 204 nonfinancial firms listed on Karachi Stock Exchange (KSE) for the period 1998-2005.The study found significant difference among their receivables requirements and financing policies across different industries. Moreover, regression results found a negative relationship between the profitability of firms and the degree of aggressiveness of receivables investment and financing policies.

Finally, Waweru (2011) carried out a study on the relationship between receivables management and the value of companies quoted at the NSE. The study used secondary data obtained from annual reports and audited financial statements of companies listed on the NSE. A sample of 22 companies listed on the NSE for a period of seven years from 2003 to 2009 was studied. The 27 average stock price was used to measure the value

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

of the firm. The regression models indicated that there was some relationship between receivables management and the firm‘s value while the result of the Pearson correlation indicated a negative relationship between average cash collection period, inventory turnover in days, cash conversion cycle and the value of the firm.

Accounts payable management helps in retaining a positive cash flow, which is vital to maintain the profitability of the business in Melbourne. It involves paying the bills on time and within the timeline specified by the vendor or supplier. If the payments are made in advance or within the specified timeframe, the supplier may offer cash discounts, which can improve the cash flow and profitability. When a business is able to get such discounts from all the vendors and suppliers, the total capital gathered can accumulate into a big amount and add to the profitability. In addition, it puts the entrepreneur in a better position to make financial decisions (Abioro, 2013).

Accounts payables, which arise directly from the business's operations, represent a valuable source of internal spontaneous short term financing that is unsecured and flow of cash (Scherr, 2019). Accounts payable is the largest for cash outflow in many firms (Gallinger and Healey, 2017). They are also a notable source of interest free financing (Fraser, 2016). Accounts payable comes in due to the unsynchronized timing of allocation of goods and the services, to the extent that payment occurs after receiving goods and services, credit, which is a source of funds, has been created by Asch and Kaye, (2019,). Accounts payable is likely to fluctuate with changes in operating activities (Hill and Sartoris, 2012). Accounts payables are suppliers whose invoices for services or goods have been processed but not yet settled. Alternatively, trade credit denies the organization discount paid which can be considered as an implied cost. To add on that, trade credit may ruin the reputation of the company if supplier is not paid. Petersen and Rajan, (1997), say, delaying payments to suppliers makes a company to evaluate the quality of the goods bought and a low-fee and flexible supply of investment for the company then again, credit in change is a herbal supply of investment that lowers the amount needed in financing the sums secured up in the inventory and accounts of clients. Dolfe & Koritz (1999) say a company’s short-term debt is very much determined by the money paid and the main part of this cash flow consists of accounts payables. Changing the routines which can give the company great savings, usually in the form of interest and a reduction on penalty interest and step to better the payment process is to retain firm funds in a safe account for long until payment to get interest is possible. The cash flow of accounts receivables gives rise to short-term reserved earnings and at times short-term shortages in companies’ liquidity, coming up with a need for short-term financing, and it is hence important to have a well-functioning payment routine (Larsson & Hammarlund, 2007).

It’s far taken into consideration to be suitable phrases to apply powerful credit that is given to the company. Paying earlier than the due date incurs loss in shape of non-interest for the company and if price is paid now not on time penalties are paid in terms of interests on expense incurred. (Karlsson, 1997) Nevertheless, one should keep in mind that firms with severe liquidity problems can also deliberately delay payments to suppliers while waiting for cash flows from clients. This exact becomes adjustment between the price of short-term financing and the cost of penalty interest. As the financial turbulence and the decrease in economic growth can have a negative impact on firms.

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Conceptual Framework

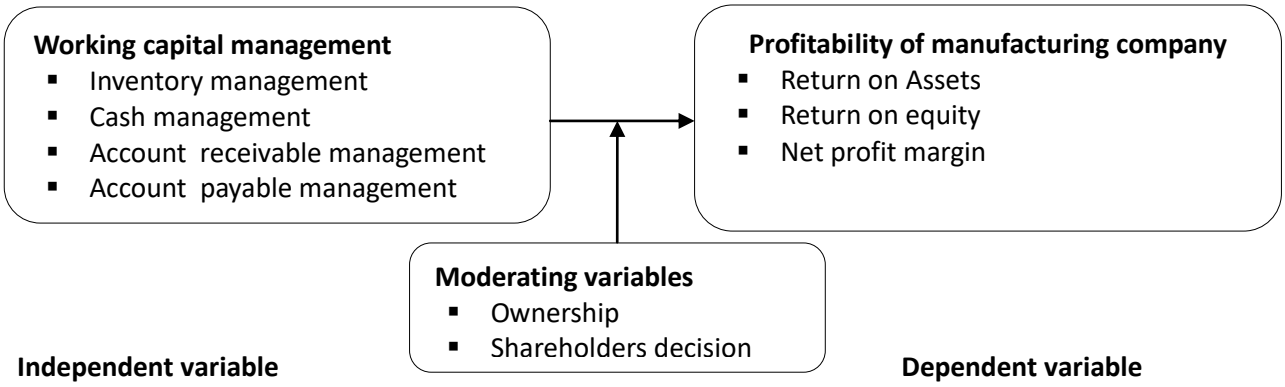

Figure 1: Conceptual Framework Model

Based on the conceptual framework model above, "working capital management" is conceptualized as independent variable and is indicated by are inventory management, cash management, account receivable management, account payable management while "manufacturing company' profitability" is conceptualized as dependent variable indicated by return on assets, return on equity and net profit margin. However, the relationship between these variables is moderated by moderating variable namely ownership and shareholder decision.

METHODOLOGY

For the purpose of this study, a descriptive case study research design used. In this study, the total population was 445 employees of CETRAF Ltd but target population consist of only 16 employees of CETRAF's office staff and board because they were the ones who provided useful information related to working capital management and profitability of manufacturing company. Purposive simple sampling technique was used. The potential respondents under this research totaling 16 respondents of CETRAF's official staff and board.

Study variables data analysis

This section presented the findings and discussion in the order of the five specific objectives of the study. Frequencies and descriptive statistics were presented first followed by inferential statistics. The questionnaire responses were based on a liker scale which was coded with numerical values for ease of data analysis. The values assigned to the liker were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree and stud based on mean and deviation.

Effect of inventory management on profitability of manufacturing company

The first objective of the study was to determine the influence that inventory management have on profitability of manufacturing company in Rwanda. The objective was assessed by use of statements which were on the questionnaire where the respondents indicated their degree of agreement with the statements.

Inventory management and profitability

The researcher sought to assess the perception of respondents on the inventory management on the manufacturing company profitability. The respondents were asked whether strongly agreed, agree, neutral, disagreed and strongly disagree with the statement concerned with inventory management on the manufacturing company income. The results were summarized in table 1.

Table 1: Perception of the respondents on inventory management and profitability

Statement	Mean	ST D
The firm maintains optimum inventory level	4.41	0.45
The firm has set various stock levels	4.32	0.36
The firm orders economic quantities when purchasing	4.33	0.42
The firm has a defined level of inventories for raw materials	3.94	0.46
The firm has determined optimal batch sizes	3.75	0.46
The firm reviews inventory levels periodically	4.26	0.82
The firm keeps accurate inventory records	4.07	0.72
The firm has installed an inventory control system	3.68	0.64

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Table 1 revealed the perceptions of the respondents on inventory management and the profitability of manufacturing company. Table revealed the results of 16 respondents that have completed the questionnaire out of 16 distributed and analysis based on mean and standard deviation. The firm maintains optimum inventory level ($\bar{X}$ =4.41 and SD=0.45) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm has set various stock levels ($\bar{X}$ =4.32 and SD= 0.36 this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm orders economic quantities when purchasing ($\bar{X}$ =4.32 and SD= 0.42) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses. The firm has a defined level of inventories for raw materials ($\bar{X}$ =3.93 and SD=0.46) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm has determined optimal batch sizes ($\bar{X}$ =3.75 and SD= 0.46 this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm reviews inventory levels periodically ($\bar{X}$ =4.26 and SD= 0.82) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses.

The firm keeps accurate inventory records ($\bar{X}$ = 4.07 and SD=0.72) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm has installed an inventory control system ($\bar{X}$ = 3.68 and SD = 0.64) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses. This is indicated that inventory management influence profitability of manufacturing company in CETRAF Ltd. These findings are in line with Abioro (2013) who identified that inventory control helps organization to establish the proper inventory levels through the economic order quantity and to keep track of this level through inventory control system. Kotabo (2002) also stressed that proper inventory controls also require an organization to undertake stocking and use appropriate method to value stock so as not to under or over state profits.

Account receivable management on profitability of manufacturing company

The respondents were asked whether the statement concerned with account receivable management on profitability of manufacturing company. The results were summarized in the table 2.

Table 2: Account receivable management and profitability of manufacturing company

Statements	Mean	SD
The firm maintains optimum debtors level	3.89	0.41
The firm investigates the credit worthiness of customers who want credit facilities	4.28	0.42
The discount given to your customers depend on the credit period allowed	3.97	0.33
The firm has set agreeably credit policy	3.76	0.44
The firm frequently reviews levels of accounts receivables	3.85	0.45
The firm frequently reviews the levels of bad debts	4.84	1.06
The firm regularly writes to customers reminding them to pay their debts	3.93	0.37
The firm allows cash discounts to customers to induce them pay promptly	4.12	0.38

Data on table 2 show responses on statements regarding the effects of account receivable management on the profitability of manufacturing company, based on mean and standard deviation. The firm maintains optimum debtors level ($\bar{X}$ =3.89 and SD=0.41) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm investigates the credit worthiness of customers who want credit facilities ($\bar{X}$ =4.28 and SD= 0.42 this shows that there is good mean and strong evidence of the existence of the fact and homogeneity of responses, The discount given to your customers depend on the credit period allowed ($\bar{X}$ =3.97 and SD= 0.33). this is indicates

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that account receivable management influences to generate income of CETRAF ltd .

The firm has set agreeably credit policy ($\overline{X}$ =3.76 and SD=0.44) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm frequently reviews levels of accounts receivables ($\overline{X}$ = 3.85 and SD = 0.45) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm frequently reviews the levels of bad debts ($\overline{X}$ =2.84 and SD= 1.06) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses.

The firm regularly writes to customers reminding them to pay their debts ($\overline{X}$ = 3.93 and SD=0.37) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm allows cash discounts to customers to induce them pay promptly ($\overline{X}$ = 4.12 and SD = 0.38) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses. This shows that there was more agreement with the statements regarding the ability of account receivable management influence profitability

These findings are in line with Agrawal (2001) who identified that accounts receivables are one of the most important parts of working capital. Emery (2004) identified that receivables often represent large investment in asset and involve significant volume of transactions and decisions.

Cash management on profitability of manufacturing company

The respondents were asked whether the statement concerned with cash management **on** profitability of manufacturing company. The results were summarized in the table 3.

Table 3: Perception of the respondents on Cash management and profitability

Statement	Mean	ST D
Current assets are maintained at a higher level than the current liabilities	4.41	0.45
The firm accelerates cash collection	4.32	0.36
The firm delays payments of liabilities	4.33	0.42
The firm prepares cash budgets and forecasts	3.94	0.46
The firm keeps proper cash books and petty cashbook	3.75	0.46
The firm always prepares a cash budget	4.26	0.82
The firm has an optimum cash balance policy	4.07	0.72
Cash and marketable securities are maintained at a higher level than the current liabilities	3.68	0.64
The firm has been aided by Cash flow prediction in financial planning	3.99	0.77
Liquidity ratios are maintained at optimal level	4.10	0.49

Table 3 revealed the perceptions of the respondents on cash management and the profitability of manufacturing company. Table revealed the results of 16 respondents that have completed the questionnaire out of 16 distributed and analysis based on mean and standard deviation. Current assets are maintained at a higher level than the current liabilities ($\overline{X}$ =4.41 and SD=0.45) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm accelerates cash collection ($\overline{X}$ =4.32 and SD= 0.36 this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm delays payments of liabilities ($\overline{X}$ =4.32 and SD= 0.42) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses. The firm prepares cash budgets and forecasts ($\overline{X}$ =3.93 and SD=0.46) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm keeps proper cash books and petty cashbook ($\overline{X}$ =3.75 and SD= 0.46 this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm always prepares a cash budget ($\overline{X}$ =4.26 and SD= 0.82) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses.

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

The firm has an optimum cash balance policy ($\overline{X}$ = 4.07 and SD=0.72) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, Cash and marketable securities are maintained at a higher level than the current liabilities ($\overline{X}$ = 3.68 and SD = 0.64) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses, cash management has led to return on assert, return on equity and net profit margin. The firm has been aided by Cash flow prediction in financial planning ($\overline{X}$ =3.99and SD= 0.77) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses. This indicated that cash management effect the profitability of CETRAF Ltd. Liquidity ratios are maintained at optimal level ($\overline{X}$ =4.10 and SD=0.49) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses. This is indicated that cash management influence profitability of manufacturing company in CETRAF Ltd.

These results are confirmed by Otieno (2014) who concluded that the company's decision on what amount to hold as cash balance, the choice of the source of short term finances, the approach adopted for the management of its collections and disbursements, its cash forecasting strategy and investment attitude towards idle fund form the major basics for ensuring an efficient and effective cash management system. Pandey (2010) also identified that cash management is imperative in every business organization as cash is said to be the life blood of any business. These findings are also supported by Tuller (2008) who stressed that maintenance of adequate working capital is an essential condition for efficient financial management because it offers huge cash opportunities that could be released with sustainability within a relative short period of time.

Account payable management on profitability of manufacturing company

The respondents were asked whether the statement concerned with account payable management on profitability of manufacturing company. The results were summarized in the table 4.

Table 4: Account payable management and profitability of manufacturing company

Statement	Mean	SD
The firm receives credit facilities from its suppliers	4.77	0.42
The firm receives cash discounts from its suppliers upon payment within a stipulated period of time	4.65	0.63
The firm is sometimes charged an interest by its suppliers for late payment	4.48	0.50
The firm is sometimes unable to pay its suppliers on time	4.59	0.499
The payment period allowed by your suppliers to your firm is reasonable	4.61	0.49

Table 4 revealed the perceptions of the respondents on inventory management and the profitability of manufacturing company. Table revealed the results of 16 respondents that have completed the questionnaire out of 16 distributed and analysis based on mean and standard deviation. The firm receives credit facilities from its suppliers ($\overline{X}$ =4.77 and SD=0.42) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, The firm is sometimes charged an interest by its suppliers for late payment ($\overline{X}$ =4.65and SD= 0.63) this shows that there is very high mean and strong evidence of the existence of the fact and heterogeneity of responses, The firm is sometimes charged an interest by its suppliers for late payment ($\overline{X}$ =4.48 and SD= 0.50) this shows that there is very high mean and strong evidence of the existence of the fact and heterogeneity of responses, The firm is sometimes unable to pay its suppliers on time ($\overline{X}$ =4.59 and SD= 0.49) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses and the payment period allowed by your suppliers to your firm is reasonable ($\overline{X}$ =4.61 and SD= 0.49) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses.

Moderating effect of ownership and shareholder decision

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

The fifth objective of the study was to establish the moderating influence of ownership and shareholders decision on the profitability of manufacturing company s in Rwanda. In satisfying this objective data was gathered through questionnaires and analysis presented in form of frequencies.

Ownership and shareholders decision on profitability of manufacturing company

The researcher sought to assess the perception of respondents on ownership and shareholders decision on The manufacturing company Performance and their views to the statements are presented in the table 5.

Table 5: Ownership and shareholders decision on the manufacturing company performance

Statement	Mean	SD
Ownership and shareholders decision regarding innovation also has a significant role on the performance of the firm, especially for creating competitive advantage of the firm	4.28	0.77
Shareholders are an integral part of the decision-making process, and they surely impact the overall profitability ratio of a business.	4.13	0.78
Innovation can also improve the performance of the company in the form of increased profitability derived from the assets or equity owned	3.74	0.63
Owners and shareholders are the ones that reap the success of a business. The rewards mostly come in the form of increased stock valuations or as financial profits, which are distributed in dividends a business's overall decision, whether its short term or long term, greatly impacts profitability	3.91	0.73
Ownership and shareholders decision have led to more impacts the lucrativeness of a business, and setting the right objectives ultimately leads to success.	4.13	0.67
Ownership and the stakeholders primarily focus on corporate responsibility. They argue that if a business is not able to stabilize its workforce, one day or another, it will lose its integrity. Therefore, it is also often suggested that a balance in power or equilibrium should be maintained for a business's overall growth and profitability.	4.19	0.81
The profitability of the business is somehow dependent on the role of shareholders. Shareholders influence the overall workability and functionality of a business.	4.39	0.75

Table 5 shows the influence of ownership and shareholders decision of the manufacturing company performance. Table revealed the results of 16 respondents that have completed the questionnaire out of 16 distributed and analysis based on mean and standard deviation. Ownership and shareholders decision regarding innovation also has a significant role on the performance of the firm, especially for creating competitive advantage of the firm ($\overline{X}$ =4.28 and SD=0.77) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses, Shareholders are an integral part of the decision-making process, and they surely impact the overall profitability ratio of a business ($\overline{X}$ = 3.13 and SD = 0.78) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses, Innovation can also improve the performance of the company in the form of increased profitability derived from the assets or equity owned ($\overline{X}$ =3.74and SD= 0.63) this shows that there is very high mean and strong evidence of the existence of the fact and homogeneity of responses. Owners and shareholders are the ones that reap the success of a business. The rewards mostly come in the form of increased stock valuations or as financial profits, which are distributed in dividends a business's overall decision, whether its short term or long term, greatly impacts profitability ($\overline{X}$ = 3.91 and SD = 0.73) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses. Ownership and shareholders decision have led to more impacts the lucrativeness of a business, and setting the right objectives ultimately leads to success($\overline{X}$ = 4.13 and SD = 0.67) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses. Ownership and the stakeholders primarily focus on corporate

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

responsibility. They argue that if a business is not able to stabilize its workforce, one day or another, it will lose its integrity. Therefore, it is also often suggested that a balance in power or equilibrium should be maintained for a business's overall growth and profitability ($\overline{X}$ = 4.19 and SD = 0.81) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses. The profitability of the business is somehow dependent on the role of shareholders. Shareholders influence the overall workability and functionality of a business. ($\overline{X}$ = 4.39 and SD = 0.75) this shows that there is high mean and strong evidence of the existence of the fact and homogeneity of responses. Emery (2004) confirmed these results that ownership and the stakeholders are also called stockholders that invest in a company and focus on corporate profitability. Their highest intention is to solely pursue the maximization of profit to gain higher dividends. There's a continuous debate in corporate circles about decision-making power. However, if the decision-making power is in the hands of the shareholders, it will prove to be more lucrative for the business.

The relationship between working capital management and profitability of manufacturing company

Profitability is important for manufacturing company to be able to face global competition, profitability advanced increased dynamics in markets. If many manufacturing company practice well profitability, they considered a key determinant of survival and success of manufacturing company means manufacturing company's performance.

Correlation between inventory management and profitability of manufacturing company

To determine the relationship between the inventory management and profitability of manufacturing company the regression analysis model produced R square of determination as presented in table 6.

Table 6: Regression model between inventory management and profitability of manufacturing company

Indicator	Coefficient
R	0.83
R square	0.78
Standard Error Estimate	52927.871

Table 6 showed the impact of inventory management on profitability of CETRAF Ltd. The results as measured by R-square and adjusted R-square, show that 78% of the total variation in profitability is caused by inventory management. Regression results on Table 4.14 for inventory management on profitability of manufacturing company indicate that the combined effect of inventory management can explain 78% variations of profitability of CETRAF Ltd.

Table 7: ANOVA[a] between inventory management and profitability of manufacturing company

Indicator	Sum of Squares	Df	Mean Square	F	Sig.
Regression	69.75	1	.975	35.609	0.000
Residual	25.21	9	.2801		
Total	94.96	10			

a. Dependent Variable: Profitability of manufacturing company
b. Predictor: (Constant), Inventory management

Regression tests on Table 7 show that inventory management are significant at 0.000 in explaining profitability of manufacturing company and hence confirms the alternate hypothesis. From the ANOVA, the *P*-value is less than 0.05 implying that the model is a good fit for the data and mean square (Residual) .2801 < 1 then the profitability of manufacturing company is good. The results indicated that there is positive relationship between inventory management and profitability of manufacturing company of CETRAF Ltd.

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

Table 8: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.105	1.118		12.413	.000
	Inventory management	.84.4	.113	.372	2.122	.0004
	a. Dependent Variable: profitability of manufacturing company					

$Y = \alpha+\beta_1 X_1+ €$

Y=Dependent variable – profitability of manufacturing company

α=Constant

€ =Error

β =Coefficient of the Disbursement

X_1 = Inventory management

$Y = 12.105 + 0.844(\text{inventory management}) + €$

The regression equation shows that profitability of manufacturing company will always depend on a constant factor of 12.105 regardless of the existence of other determinants. The other variables explain that; every unit increase in inventory management will increase profitability of manufacturing company by a factor of 0.84

Correlation between cash management and profitability of manufacturing company

To determine the relationship between the cash management and profitability of manufacturing company, the regression analysis model produced R square of determination as presented in table 9.

Table 9: Regression model

Indicator	Coefficient
R	0.71.5
R Square	0.76.5
Std. Error of the Estimate	2.21273

The results in the Table 9 showed the impact of cash management on profitability of manufacturing company. The results as measured by R-square and adjusted R-square, show that 76% of the total variation in profitability of manufacturing company is caused by cash management.

Table 10: ANOVA model

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	55.029	1	55.029	11.239	0.000
Residual	44.066	9	.489		
Total	**99.095**	**10**			
c. Dependent Variable: Profitability of manufacturing company d. Predictor: (Constant), cash management					

Table 10 which reveal that cash management are significant at 0.000 in explaining the profitability of manufacturing company in Rwanda and supported the alternate hypothesis. From the ANOVA, the *P*-value is less than 0.05 implying that the model is a good fit for the data. The results indicated that there is positive relationship between cash management and profitability of manufacturing company of CETRAF Ltd.

Table 11: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.709	1.838		12.413	.000
	Cash management	.889	.113	.372	2.122	.0001
	a. Dependent Variable: profitability of manufacturing company					

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$Y = \alpha+\beta_1X_2+ €$

Y=Dependent variable – Profitability of manufacturing company

α=Constant

€ =Error

β =Coefficient of the Disbursement

X_1 = cash management

Y = 11.709 + 0.889(cash management) + €

The regression equation shows that profitability of manufacturing company will always depend on a constant factor of 11.709 regardless of the existence of other determinants. The other variables explain that; every unit increase in cash management will increase profitability of manufacturing company by a factor of 0.889.

Correlation between account receivable management and profitability of manufacturing company

To determine the relationship between the account receivable management and profitability of manufacturing company, the regression analysis model produced R square of determination as presented in table 12.

Table 12: Regression model

Indicator	Coefficient
R	0.91
R Square	0.828
Std. Error of the Estimate	19834.50918

The results in the table 12 showed the impact of account receivable management on profitability of manufacturing company. The manufacturing company. The results as measured by R-square and adjusted R-square, show that 82.8% of the total variation in profitability of manufacturing company is caused by account receivable management.

Table 13: ANOVA model

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.03	1	17.03	43.293	0.000
Residual	35.41	9	39.34		
Total	**52.44**	**10**			
a. Dependent Variable: Profitability of manufacturing company					
b. Predictor: (Constant), account receivable management					

The results in the Table 13 showed statistical significance of the variables is considered were 0.000. From the ANOVA, the *P*-value is less than 0.05 implying that the model is a good fit for the data. The results indicated that there is positive relationship between account receivable management and profitability of manufacturing company of CETRAF Ltd.

Table 14: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.809	1.838		12.413	.000
	account receivable management	.821	.113	.372	2.122	.0001
	a. Dependent Variable: Profitability of manufacturing company					

$Y = \alpha+\beta_1X_3+ €$

Y=Dependent variable – Profitability of manufacturing company

α=Constant

€ =Error

β =Coefficient of the Disbursement

X_1 = account receivable management

Y = 12.809 + 0.812(account receivable management) + €

The regression equation shows that profitability of

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manufacturing company will always depend on a constant factor of 10.809 regardless of the existence of other determinants. The other variables explain that; every unit increase in account receivable management will increase profitability of manufacturing company by a factor of 82.1

Correlation between account payable management and profitability of manufacturing company

To find out the relationship between account payable management and profitability of CETRAF Ltd, the regression analysis model produced R square of determination as presented in table 15.

Table 15: Regression model

Indicator	Coefficient
R	0.841
R Square	0.74
Std. Error of the Estimate	485059

The results in the table 15 showed the impact of account payable management on profitability of manufacturing company. The results as measured by R-square and adjusted R-square, show that 74% of the total variation in profitability of manufacturing company is caused by account payable management.

Table 16: ANOVA model

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.121	1	5.121	21.766	0.001
Residual	2.118	9	2.353		
Total	72.39	10			
a. Dependent Variable: Profitability of manufacturing company					
b. Predictor: (Constant), Account payable management					

The results in the Table 16 showed statistical significance of the variables is considered were 0.001. From the ANOVA, the *P*-value is less than 0.05 implying that the model is a good fit for the data. The results indicated that there is positive relationship between account payable management and profitability of CETRAF Ltd.

Table 17: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.804	1.838		12.413	.000
	Account payable management	.79	.113	.372	2.122	.001
	a. Dependent Variable: profitability of manufacturing company					

$Y = \alpha+\beta_1X_4+ €$

Y=Dependent variable – Profitability of manufacturing company

α=Constant

€ =Error

β =Coefficient of the Disbursement

X_1 = account payable management

Y = 12.809 + 0.739(account payable management) + €

The regression equation shows that profitability of manufacturing company will always depend on a constant factor of 11.804 regardless of the existence of other determinants. The other variables explain that; every unit increase in account payable management will increase profitability of manufacturing company by a factor of 0.79.

Correlation between the moderation influence of shareholders decision and ownership on profitability of manufacturing company

To find out the relationship between the moderating influence of shareholders decision and ownership and profitability of manufacturing company.

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Table 18: Moderation Effect of Dependent Variables

	Ownership			Shareholders decision s		
Dependent Variable	**R-Square**	**Percent Moderation Effect**	**p-value**	**R-Square**	**Percent Moderation Effect**	**p-value**
Profitability	0.452	9.6%	0.000	0.429	6.9%	0.000

Table 18 shows the moderation effect of ownership and shareholders decision on profitability indicators of manufacturing company. The results show that ownership have a high mean percentage of moderation of 9.6% compared to 6.3% of shareholders decision. This weighted mean moderation effect is in line with the aggressive of ownership within the working capital management in CETRAF Ltd and hence the higher moderation effect.

The relationship between profitability of manufacturing company

Profitability is important for manufacturing company to be able to face global competition, profitability advanced increased dynamics in markets actually considered the most attractive element of the manufacturing company, in terms of income generation, growth rates, and relatively low capital needs as considered a key determinant of survival and success of manufacturing company means manufacturing company profitable.

Correlations analysis

Correlation Analysis is statistical method that is used to discover if there is a relationship between two variables/datasets, and how strong that relationship may be (Akamavi, 2017).

Table 19: Correlations analysis

		IM	CM	ARM	APM	P
IM	Pearson Correlation	1	.794	.659*	.810	.894**
	Sig. (2-tailed)		0.000	0.00	0.000	0.000
	N		50	50	50	50
CM	Pearson Correlation		1	.866**	.718**	. 889**
	Sig. (2-tailed)			0.000	0.000	0.000
	N			50	50	50
ARM	Pearson Correlation			1	.490**	. 812**
	Sig. (2-tailed)				0.000	0.000
	N				50	50
APM	Pearson Correlation				1	. 739**
	Sig. (2-tailed)					0.000
	N					50
P	Pearson Correlation					1
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

From the correlation Table 19, the results show that there is a moderatecorrelation between inventory management and profitability as Pearson correlation is 0.894. The p-value is 0.000, which is less than both standard significance levels of 0.05 and 0.01. This indicates that, out of the considered determinants of profitability as measured by inventory management has significant effect on its profitability of manufacturing company. From the correlation table, the results show that there is very strong correlation between cash management and profitability as Pearson correlation is 0.889. The p-value is 0.000, which is less than both standard significance levels of 0.05 and 0.01. This indicates that, out of the considered determinants of profitability as measured by cash management has significant relationship with profitability of manufacturing company.

Table 18 reveals that questionnaire were answered by 16respondents, p-value is 0.000, which is less than standard significance levels of 0.05. In this

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research, researcher confirmed a relationship between account receivable management and profitability of manufacturing company. Since the Pearson Correlation value was 0.812 and it is significant, the researcher proved that there is moderate and positive relationship between account receivable management and profitability of manufacturing company. From the correlation table, the results show that there is very strong correlation between Account payable management and profitability of manufacturing company as Pearson correlation is 0.739. The p-value is 0.000, which is less than both standard significance levels of 0.05 and 0.01. This indicates that, out of the considered determinants of profitability as measured by account payable management has significant relationship with profitability.

Analysis of Variance (ANOVA)

As presented in table 20, ANOVA statistics was conducted to determine the differences in the means of the dependent and independent variables to show whether a relationship exists between the two.

Table 20: ANOVA model

	DF	Sum Square	Means Square	F	Significance F
Regression	4	4.019	2.310	4.387	.002a
Residual	191	15.423	.445		
Total	**195**	**19.442**			
a. Dependent Variable: Profitability of manufacturing company					
b. Predictor: (Constant), Profitability					

The P-value of 0.002 implies that manufacturing company ' profitability has a significant joint relationship with inventory management, account receivable management, cash management and account payable management , which is have main square residual of 0.445 < 1. This implies that the regression model is significant and can thus be used to assess the association between the dependent and independent variables. According to Gelman (2016), ANOVA statistics analyzes the differences between group means and their associated procedures (such as variation" among and between groups).

Regression coefficients of determination

To determine the relationship between the independent variables and the dependent variable and the respective strengths, the regression analysis produced coefficients of determination as presented in table 21.

Table 21: Regression coefficient results

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	SD. Error	Beta		
(Constant)	6.751	4.732		1.427	.043
Inventory management	1.244	0.589	.296	1.733	.017
Cash management	1.021	.697	.338	1.785	.033
Automated teller machine Account receivable management)	.761	.720	.362	1.057	.023
Account payable management	.663	.680	.342	989	.019

a. Dependent Variable: Profitability of manufacturing company

Findings in table 21, Reveal a positive relationship between manufacturing company and all the independent variables. Taking the regression model: $Y = \alpha + \beta1X1 + \beta2X2 + \beta3\ X3 + \beta4\ X4 + \epsilon$; where, Y= manufacturing company ; α = Constant; $\beta1 - \beta4$ = Beta coefficients; X1 = Inventory management ; X2 = account receivable management ; X3 = Cash management X4 = Account payable management and ϵ = Error term, the established regression equation was:

Manufacturing company' profitable = 6.751 +1.244 (inventory management) + 1.244 (cash management) + .761 (account receivable management) + .663 (Account payable management).

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

A unit change in agent the manufacturing company would thus lead to a 1.244 change in Profitability of manufacturing company ceteris paribus; a unit change in cash management would least to 1.021 change in manufacturing company' profitability ceteris paribus a unit change in automated teller machine (account receivable management) would lead to a .761 change in manufacturing company performance ceteris paribus and a unit change in account payable management would lead to a .663 change in manufacturing company performance ceteris paribus while a unit change in. This implies that among other factors, inventory management, automated teller machine (account receivable management), cash management, and account payable management were strong significant determinants of Profitability of manufacturing company of CETRAF. Those concluded by Rajesh (2011) the chief purpose of each financial manager is to increase the sales volume and firms' profitability. In order to get this goal, efficient working capital is indispensable because working capital have an impact on the profitability and liquidity of firms.

Secondary data analysis

Within this part, the researcher makes a comprehensive explanation of CETRAF Ltd profitability analysis by calculating Ratio in years of the study and show the profitability changes of CETRAF Ltd in general and profitability included.

Table 22: Profitability ratio

Profitability ratios	**Ratios**	**2019**	**2018**	**2017**
	Gross profit ratio = (Net revenue/Gross profit) ×100	0.39%	10.17%	6.7%
	Net profit Margin = $\frac{\text{Profit after tax}}{\text{Sales}}$	1 %	0.1%	0.3%
	Return on assets (ROA) = $\frac{\text{Net income}}{\text{Total assets}}$	0.6%	0.09%	0.2%
	Return on equity (ROE) = $\frac{\text{Net income}}{\text{Shareholders' Equity}}$	0.9%	0.09%	0.7%

From the data tabled 4.230 shows that 0.39 % (2019), 10.17 % (2018) and 6.7 % (2017) showed that CETRAF Ltd was gross profit ratio means that the higher the margin, the more profitable of the manufacturing company. The table indicated that 1 % (2019), 0.1% (2018), 0.3% (2017) was the net profit margin ratio showed that the higher the margin, the more profitable of the manufacturing company. The table indicated that 0.6%(2019), 0.09%(2018) and 0.2% (2019) of return on asset showed that CETRAF Ltd was profitable because it show how efficient the firm has been in using the net assets to generate returns in the business. The table indicated that 0.9% (2019), 0.09% (2018), and 0.7% (2017) of return on equity, showed that CETRAF Ltd was profitable showed by the efficiency of the firm in using the owner's capital to generate returns. Those variations are the impacts of different products introducing in CETRAF Ltd where the contribution of inventory management, account receivable management, cash management and account payable management transaction were included.

CONCLUSION AND RECOMMENDATIONS

This study was conducted with the main objective to effect of working capital management on the performance of manufacturing company in Rwanda, 2016-2018. The study established that inventory management, account receivable management, cash management and account payable management are the profitability effected profitability of CETRAF Ltd. Furthermore, in view of the findings and problems associated with the use working capital management in CETRAF Ltd which significantly influence return on assert return on equity and net profit margin. The study established that there are positive relationships between working capital management on the profitability of manufacturing company in Rwanda. Based on these findings the study concluded that working capital management affects the profitability of manufacturing company in Rwanda.

Based on the above findings and conclusion, the following recommendations were given to not only to the CETRAF LTD but also to the future researchers.

The Strategic Journal of Business & Change Management. **ISSN** 2312-9492 (Online) 2414-8970 (Print). www.strategicjournals.com

The suggestions that could be made for of CETRAF Ltd based on findings of the study is maintaining its current assets regularly and measuring its current liabilities in manner that will favor its profitability.

CETRAF Ltd should keep optimum current assets in order to enhance the short-term debt-paying ability of the firm.

Keeping a positive net working capital is very crucial to improve performance of company. Therefore, CETRAF Ltd have to struggle with maintenance of current assets exceeding the current liabilities.

Studies should be done about working capital management in firm from specific sectors so as to be able to generalize the findings. Other categories of listed institutions also have a section of working capital management and a study should be done on the effect of working capital management on their profitability based on the findings of this study. Further study on effect of working capital management on profitability should be done with more firms including those not listed and include all the sectors and extend the period of study. Lastly, future researchers are advised to adopt other sets of working capital management indicators to test how respective practices influence the companies' financial performance. This will significantly make contributions towards establishing a comprehensive scholarly opinion relating to corporate finances and working capital management modifications.

REFERENCES

Abuzayed, B. (2012). "Working capital management and firms' performance in emerging markets: the case of Jordan. International Journal of Managerial Finance,.

Ademola,O.J.(2014),Working capital management and profitability of selected quoted food and beverages manufacturing firms in Nigeria. European Journal of Accounting Auditing and Finance Research, 2(3), 10-21.

AdmadArefAlmazari (2013), "The Relationship between working capital Management and Profitability: Evidence from Saudi Cement companies", *British journal of economics, Management & Trade,*4(1), 146-15

Akinlo,O.O.(2011),The effect of working capital on profitability of firms in Nigeria: Evidence from General Method of Moments (GMM). Asian Journal of Business and Management Sciences,1(2),130-135.

Amedahe, F. (2002). *Introduction to educational research.* Accra: Mercury Press. pp 31.

AngeSendashonga (2013) *Effect of working capital management on performance of manufacturing companies in Rwanda*, Independent Institute of Lay Adventists of Kigali , Kigali

Baley, R. (2011). *Methods of social research* (2nd ed.). New York: McMillan Publishing House. pp 67.

Baltagi, B. (2008). *Econometric analysis of panel data.* Wiley: John Wiley & Sons. pp 123-142.

Barnett, M. L., & Salomon, R. (2018). Beyond dichotomy: The curvilinear relationship between social responsibility and financial performance. *Strategic Management Journal, 27* (21), 11-56.

Berg, L. (2009). *Quantitative research methods for behavioral sciences* (5th ed.). New York: Pearson Education Ltd. pp 1-18.

Bhattacherjee, A. (2012). Social Science Research: Principles, Methods, and Practices. Textbooks Collection.Book 3.

Bhunia A, Das A. (2012) Affiliation Between Working Capital Management and Profitability. Interdisciplinary Journal of Contemporary Research in Business.3(9):957-968.

Bouchard, R. (1990). *Hand book of research methodology.* (Unpublished). UNR, Huye. pp 25.

Bryman, A. (2008). *Social research methods* (3rd ed.). Oxford: Oxford University Press. pp 1-34.

Caffasso, A. (2011). *Relationship between accounts receivables management financing policy and profitability: A survey of manufacturing firms in Kenya.* (Unpublished MBA Management project). University of Nairobi, Kenya.

Chisti Khalid Ashraf (2012)"The relationship between working capital efficiency and Profitability". *Journal of Business Finance & Accounting*, *Volume 30, Issue 3-4,* pages 573- 588.

Creswell, John W. (2014). *Research design : qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks: SAGE Publications. ISBN 978-1-4522-2609-5.

Daniya A. Abdulazeez a N. AlhajiBabab K. Ruth Fatimac Y. Abdulrahaman (2015) Working Capital Management and Financial Performance of Listed Conglomerate Companies in Nigeria

Davidson (2011)."The effectiveness of cash management policies".A case study of Hunyani flexible products.

Dettoratius, N., Raman, A., & Craig, N. (2013). *The impact of supplier reliability on retailer demand*. Chicago: Harvard Business school.

Earnest and young (2014)."Efficient working capital management an integral to operating efficiency".*Indus Journal of Management & Social Sciences. 4*(1), 30-42.

European Financial Reporting Advisory Group, (2016). Annual report,

Forghani, M., Shirazipour, M., Hosseini, A. (2013), Impact of working capital management on firms performance. *Journal of Basic and Applied Scientific Research*, 3(7), 943-947.

Gerring, John. (2012). *Case study research: Principles and practices*. New York: Cambridge University Press.

Grawitz, M. (1986). *methodology in social sciences* (7th ed.). Paris: Dalloz. pp 34.

Gulia, R. (2014), Effects of working capital management on firms profits-evidence from the pharmaceutical sector. *International Journal of Management and Social Sciences Research*, (IJMSSR), 3(1), 103-107.

Hollensen, S., Boyd, B., &Dyhr Ulrich, A. M. (2011).The choice of foreign entry mode in a control perspective.*The IUP Journal of Business Strategy*, 8(4), 7-31.

Humblet, J. L. (1980). *How to get documentation.* Paris: PUF. pp 1-22.

Jakpar S, Tinggi M, Siang TK, Johari A, Myint KT and Sadique MS (2017) ***Working*** *Capital Management and Profitability*: Evidence from Manufacturing Sector in Malaysia

Juan, G. T. P., Martinez-Solano, P. (2014). Effects of working capital management on SME profitability. *International Journal of managerial finance, 3*(2), 164-177.

Kalunda, E., Nduku, B. &Kabiru, J. (2012). Pharmaceutical Manufacturing Companies in Kenya and Their Credit Risk Management Practices, Research Journal of Finance and Accounting, Vol. 3, No. 5, pp. 159-167.

Kara H (2012) *Research and Evaluation for Busy Practitioners*: A Time-Saving Guide, p.102. Bristol: The Policy Press

Kennedy, M. (2014). *Accounts Receivables Management and Financial Performance of Manufacturing Firms in Nakuru County.* (Unpublished Doctoral dissertation).University of Nairobi, Kenya .

Khan, J.A., Deng, S., Khan, M.H.A. (2016). An empirical analysis of inventory turnover performance within a local Chinese supermarket. *European Scientific Journal, 12*(34), 214-225.

Kweri, S. (2011). *The Relationship between Accounts receivables Management and Profitability of Manufacturing Firms Listed in the Nairobi stock exchange.* (Unpublished MBA management project). University of Nairobi, Kenya.

Liu, Alex (2015). *Structural Equation Modeling and Latent Variable Approaches*. John Wiley & Sons, Inc.

Makori, D. M. &Jagongo, A. (2013). Working Capital Management and Firm Profitability: Empirical Evidence from Manufacturing and Construction Firms listed on Nairobi Securities Exchange, Kenya. *International Journal of Accounting and Taxation*, 1(1), 1-14

Mathuva, D. (2013). Determinants of corporate inventory holdings: Evidence from a developing country. *The international journal of applied economics and finance*, 7, 1-22.

Ministry of Finance and Economic Planning (MINECOFIN) 2014

Mukeshimana, E. (2019). *Account receiivable management and growth of manufacturing companies in Rwanda. .* (Unpublished Master's Thesis). UNLAK, Rwanda.

Munene, F. (2018). *Accounts receivable management and financial performance of EMBU water and sanitation company limited.* (Unpublished Master's Thesis). Kenyatta University, Kenya.

Naser, K., Nuseibeh, R., & Al-Hadeya, A. (2013). Factors Influencing Corporate Working Capital Management: Evidence from an Emerging Economy. *Journal of Contemporary Issues in Business Research,* 2(1), 11–30

Newing, H. (2011). *Conducting Research in Conservation: A Social Science Methods and Practice.*London: Taylor and Francis publishers.

Nobanee, H., Abdul, L.M., Aslhajjar, M. (2011), Cash conversion cycle and firm's performance of Japanese firms. Asian Review of Accounting, 19(2), 147-156.

Nyabwanga, R. N., &Ojera, P. (2012).Inventory management practices and business performance for small-scale enterprices in Kenya.*Journal of business management*, 4.

Ojeka, S. A. (2012). Credit Policy and its effects on Liquidity: A study of selected manufacturingcompanies in Nigeria, *the Journal of Commerce*, Vol. 3, No. 3, pp. 10-19.

Olaleye Samuel Olasode (2015) working capital management as a tool for manufacturing industry survival in Nigeria: an empirical analysis, *International Journal of Economics, Commerce and Management United Kingdom* Vol. III

Oniwon, A. (2011). *Material management:* key to NNPC reforms. Abuja, Nigeria

Panda, A. (2012). The status of working capital and its relationship with sales: An empirical investigation of Andhra Pradesh Paper Mills Ltd. *International Journal of commerce and Management*, Vol. 22 Iss , 1, pp.36 –52.

Qureshi, M. A. (2014), Relationship of operating cycle and firm's returns: Cases from manufacturing firms listed in KSE Pakistan. *International Journal of Advance Research*, IJOAR, 2(2), 1-10.

Rahman, M. M. (2011). Working Capital Management and Profitability: A Case Study on Textile Industry. *ASA University Review*, 5 (1), 115-132.

Rajesh, M., Reddy, V. (2011), Impact of working capital management on firms' profitability. Global Journal of Finance and Management, 3(1), 151-158.

Rugorirwera, A. (2018). *Effect of account receivable management on performance of business enterprises operating in Ruhango District.* (Unpublished Master's Thesis). University of Kigali, Rwanda.

Salawati, S., Tinggi, M., &Kadri, N. (2012).inventory management in malasyianconstrucion firms: impact on performance. *SIU Journal management*, 2, 59-60

Schwab, Michael, Arts. andBorgdorff, Henk, eds. (2014), *The Exposition of Artistic Research: Publishing Art in Academia,* Leiden: Leiden University Press

Sekaran, U. (2005). *Research methods for business: A skill building approach* (4th ed.). New Delhi: McGrawn hills Publishers. pp 1-56.

Shardeo, V. (2015). Impact of inventory management on the financial performance of the firm. *IOSR Journal of Business and Management, 2*(1), 238–245.

Sharma,A.K.,Kumar,S.(2011), Effect of working capital management on firm profitability: Empirical evidence from India. *Global Business Review,* 12(1),159-173.

Singh, K., Asress, F.C. (2011), Determining working capital solvency level and its effect on profitability in selected Indian manufacturing firms.*International Journal of Research in Commerce, Economics and Management*, 1(2),52-57.

Taani, M. H. (2011),The effect of financial ratios, firm size and cashflows from operating activities on earnings per share:(An Applied Study: On Jordanian Industrial Sector). *International Journal of Social Sciences and Humanity Studies*, 3,197-205.

Uremadu, J.A., Egbide, B., Enyi, P.E. (2012), Working capital management, liquidity and corporate profitability among quoted firms in Nigeria: Evidence From the productive sector. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 2(1), 80-97.

Yazdanfar, D. (2014). "The impact of cash conversion cycle on firm profitability: An empirical study based on Swedish data. *International Journal of Managerial Finance* , Vol. 10 Iss: 4, pp.442 – 452