THE IMPACT OF WORKING CAPITAL MANAGEMENT ON FINICIAL PERFORMANCE OF ETHIOPIAN BREWERY FACTORIES

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ABSTRACT

*Management of working capital refers to management of current assets and current liabilities. Firms may have an optimal level of working capital that maximizes their value. Prior evidence has determined the relationship between working capital and financial performance. Thus, this study examined the impact of working capital management on financial performance by using audited financial statements of a sample of 6 brewery factories companies in Addis Ababa, Ethiopia for the period of 20010 to 2017. The performance was measured in terms of profitability by return on total assets, capital as dependent financial performance (profitability) variables. The working capital was determined by the Cash conversion period, Accounts receivable period, inventory conversion period and accounts payable period are used as independent working capital variables. The data was analyzed using STATA 12, est*imation equation by both correlation analysis and pooled panel data regression models of cross-sectional and time series data were used for analysis. Results indicate that longer accounts receivable and inventory conversion periods are associated with higher profitability. The results also show that there exists significant positive relationship between cash conversion cycle and profitability measures of the sampled firms. On the other hand, findings show that a highly significant negative relationship between account receivable period, inventory conversion period and account payable period with return on asset. The results conclude that cash conversion cycle has significant positive relationship with return on asset. In general, paying suppliers longer and collecting payments from customers earlier, and keeping product in stock less time, are all associated with an increase in the firm's performance. Managers, therefore, can increase firms‟ profitability by improving the performance of management of working capital components.

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List of acronyms

APP: Accounts Payable Period

ARP: Accounts Receivable Period

CCC: Cash Conversion Cycle

COGS: Cost of Goods Sold

CR: Current Ratio

DAR; financial leverage

FL: Firm leverage

FS: Firm size

GOP: Gross Operating Profit

GWC: Gross Working Capital

IHP: Inventory Holding Period

ICP; Inventory conversion period

LN SALE; Firm of size

NPM: Net Profit Margin

NWC: Net Working Capital

OLS: Ordinary Least Square

OPM: Operating Profit Margin

ROA: Return on Asset

SG: Sales Growth

WC: Working Capital

WCM: -Working Capital Management

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Working capital refers to the capital that companies use in their daily operations and it consists of companies' current assets and current liabilities, and management of Working capital is the ability to control the current assets and current liabilities in a manner that provides the firm with maximum return on its assets and reduces payments for its liabilities. Working capital management efficiency is vital especially for brewery firms, where a major part of assets is composed of current assets that will directly affect the performance and liquidity of firms (Raheman& Nasr, 2007).

Wang (2002), shin, Lazaridis and Tryfonidis (2006), Falope and Ajilore (2009) have shown that working capital management has an effect on of a firm and Proper estimation of working capital is a difficult task for the management because amount of working capital varies across firms over the periods depending upon the nature of business, scale of operation, production cycle, credit policy, availability of raw materials, etc.

For this reason, significant amount of funds is necessary to invest permanently in the form of various current assets. For instance, due to time lag between sale of goods and their actual realization in cash, adequate amount of working capital is always required to be made available for maintaining the desired level of sale (Blinder &L.J.Maccini, 1991) corporate financial management primarily deals with three core areas that have a bearing on a firm's financial goals.

As postulated by Firer et al *(*2008), the three core areas of corporate finance are (1) capital budgeting, which encapsulates the process of planning and managing firm's long-term investments; (2), capital structure, which outlines the specific mixture of long-term debt and equity maintained by a firm and (3) working capital management, which deals with management of firm's short-term assets and liabilities.

One of the most important factors for a firm to consider is the management of working capital, which is related to short term financing and investment decision of a firm. The function of obtaining efficient working capital management is to maintain current assets and current liabilities in respect to each other and to generate maximum returns.

Working Capital Management (WCM) is an important corporate financial decision since it directly affects the profitability of the firm. Working capital management efficiency is vital especially for manufacturing firms, where the major part of assets and liabilities are composed of current assets especially inventory and trade receivables, and current liabilities; trade payable. (Arunkmar and Ramanan,2013)

Working capital refers to part of the firm's capital, which is required for financing short term or current assets such as cash, marketable securities, debtors and inventories. Funds thus, invested in current assets keep revolving fast and are constantly converted into cash and this cash flow out again in exchange for other current assets.

Working capital is also known as revolving or circulating capital or short-term capital. (Deloof, 2003). When a business entity takes the decisions regarding its current assets and current liabilities it can be termed as working capital management. The management of working capital can be defined as an accounting approach that emphasize on maintaining proper levels of both current assets and Current liabilities. Working capital management provides enough cash to meet the short-term obligations of a firm. (Raheman and Nasr, 2007).

Working capital management is a particular importance to the profitability growth of a business entity. This is because without a proper management of working capital, it is difficult for the firm to run its operations smoothly. That is why Brigham and Houston (2003) conclude that about 60 percent of a typical financial manager's time is devoted to working capital management. Hence, the crucial part of managing working capital is maintaining the required liquidity in day-to-day operation to ensure firm's smooth running and to meet its obligations.

In their respective studies of working capital management, Deloof (2003); Rahman and Nasr (2007) found that current assets of a typical manufacturing fir accounts for more than half of the total assets and that the high levels of current assets within a firm directly affects its profitability and liquidity. Efficient management of working capital plays an important role of overall corporate strategy to create shareholder value.

The way of managing working capital can have a significant impact on both the liquidity and profitability of the company (Shin &Soenen, 1998). The main purpose of any firm is to maximize profit. Also maintaining liquidity of the firm is an important objective. The problem is that increasing profits at the cost of liquidity can bring problems to the firm. Thus, there is a trade-off between these two objectives and disregarding liquidity may result in insolvency and bankruptcy. (Raheman and Nasr, 2007).

Every business requires working capital for its survival. Working capital is a vital part of business investment which is essential for continuous business operations. It is required by a firm to maintain its liquidity, solvency and profitability. (Lazaridis and Tryfonidis, 2006). Working capital management explicitly affects both the profitability and level of desired liquidity of a business. Hence, it has both negative and positive impact on firm's profitability, which in turn, affects the shareholders' wealth. (Rahman and Nasr, 2007).

It is therefore a critical issue to know and understand the effects of working capital management and its influence on firm's profitability. Indeed, a lot of research has been conducted in different countries to show the impacts of working capital components on firms Profitability. However, there are few studies with reference to Ethiopia on working capital management and firm profitability especially in the manufacturing sector.

By looking on the importance of working capital management, the researcher needs to assess the impacts of it on firms' performance. Accordingly, the general objective of the study is to examine the impact of working capital management on financial performance of Ethiopian brewery factories.

1.2. Statement of the Problem

The working capital management observes are examining the impact of aggressive/conservative working capital investment and financing policy. Wajahat& Syed (2010), Vishnani S & Shah B (2007) argue that working capital is just an idle resource with a high cost and low benefit associated with it so they advised companies to follow zero working capital policy but such a policy is very risky because it reduces the liquidity and it might leads to a default.

Other researchers support companies to have a working capital policy because they believe that proper management of components of working capital can balance cost and benefits of the company and it will reduce the risk of default by raising the level of liquidity. Companies can choose among three different types of working capital i.e. aggressive, conservative and moderate but their choice depends on their desire level of liquidity and risk.

Working capital management concerned with two decision areas: Determination of appropriate level of investment in current assets and decisions as to what method of financing to use and to obtain funds for this investment. They are part of investment and financing decisions respectively Pass and Pike (1987) emphasized that short term finance area particularly working capital management will be given very less attention in contrast to long term investment even if it plays a very vital and important role in the growth of firm and in enhancement of performance.

Deficiency in the planning and control of working capital management is one of the main causes of business failure and it is a neglected subject which has been too little investigated or written about. The two main objectives need to be satisfied by working capital management is liquidity and profitability but there should be a trade-off / balance between these two objectives.

In Ethiopia many brewery factories do not carrying out working capital management practices due to obsolete business process and structure of the company. As a result, there is a huge deficiency problem in brewery factories Samuel &Tarayekegn (2011.a firm is required to maintain a balance between liquidity and profitability while conducting its day to day operations. Liquidity is a precondition to ensure that firms are able to meet its short-term obligations and its continued flow can be guaranteed from profitable venture.

Firms can maximize their value by having an optimal level of working capital (Deloof, 2003). On the balance sheet, firms have large inventory and generous trade credit policy which leads to higher sales. Larger inventory reduces the risk of stock-outs. Accounts receivables, which is a part of trade credit, stimulates sales because it allows customers to assess product quality before paying (Long, Malitz and Ravid, 1993; and Deloof and Jeger, 1996). The negative side of granting trade credit and keeping inventories is that money is locked up in working capital (Deloof, 2003).

Another component of working capital is accounts payable, which keeps the trade credit not to extend but receiving it from a supplier. Receiving a trade credit from a supplier allows a firm to assess the quality of the products bought, and can be an inexpensive and flexible source of financing for the firm (Deloof, 2003; Raheman and Nasr, 2007). The flipside is that receiving such a trade credit can be expensive when firms offered a discount for the early payment. This is also the case with uncollected and extended trade credit, which can lead to cash inflow problems for the firm. (Gill et al, 2010).

Researchers have studies working capital management in many different ways. While some authors study the impact of an optimal inventory management, others have studied the optimal way of managing accounts receivables that leads to profit maximization (Lazaridis and Tryfonidis, 2006; and Besley and Meyer, 1987). Other studies have focused on how reduction of working capital improves a firm's profitability (Jose et al., 1996; Shin and Soenen, 1998; Deloof, 2003; Padachi, 2006; RahemanandNasr, 2007; Samilogluand Demirgunes, 2008; Sharma and Kumar, 2011).

Much of the currently available empirical literature on working capital management is focusses on its impact on firms in developed countries. The results show that longer accounts receivable and inventory holding period's area associated with owner profitability. There is also negative relationship between accounts payable period and profitability measures; however, except for operating profit margin this relationship is not statistically significant. The results also show that there exists significant negative relationship between cash conversion cycle and profitability measures of the sampled firms.

According to the knowledge of the researcher, no study would be conducted deeply about all financial performance hence; the study is conducted to fill the gap on impact of working capital management on financial performance of Ethiopian brewery factories.

1.3. Research hypothesis

There are several statements of possibility can be made in view of the impacts of working capital management on firm's profitability. By considering the below research objective the following discussion shows the hypothesis (HO) that this study attempted to test.

Ho_1: Accounts collection period has significant negatively impact on firm's profitability.

Ho_2: Inventory conversion period of a firm is significant negatively impact on firm's profitability.

Ho_3: The account payable period of a firm is significant negatively impact on a firm's profitability.

Ho_4: The cash conversion cycle of affirm is significant positively impact on firm's profitability.

1.4. Objective of the Study

The general and specific objectives of the study are set below.

1.4.1. General Objective

The general objective of this study is to examine the impact of working capital management on financial performance of Ethiopian brewery factories.

1.4.2. Specific Objectives

The specific objectives of this study are: -

- To investigates the effect of accounts collection period on performance of firms.
- To evaluate the effect of inventory conversion period on firm's performance.
- To ascertain the relationship between account payable period and profitability of the firm.
- To examine the relationship between cash conversion cycle and profitability of the firm.

1.5. Significance of the study

The purpose of this study was the research whether working capital management can affect firm's performance in Ethiopian brewery factories share companies. It is expected that the result of this study concerning working capital management in the brewery firms contributes to current knowledge on the performance of the firms.

Efficient financial management requires the existence of some objectives or goals. This is because judgment as to whether or not a financial decision is efficient must be made in light

of an appropriate management of working capital while at the same time sustaining good returns to the shareholders.

This study would be greatly benefit financial managers and chief executive officers of brewery factories share companies' firms in Ethiopia. By understanding the relationship between working capital management policies and performance, finance managers would be able to plan their working capital strategies based on working capital management policies that enhance performance. The study would be an important resource document for academicians and future researchers who may wish to examine the performance of firms in relation to working capital management and profitability.

1.6. Limitations of the Study

The study was limited to the impacts of working capital management financial performance of Ethiopian brewery factories the total sample size of the study is six brewery factories companies and the study took five years data from year 2011to 2015.

1.7. Organization of the Proposal

The proposal would be is organized in to three chapters; Chapter one provides an introduction overview of the full study comprising the statement of the problem, objectives of the study, research hypothesis, significance of the study, limitation of the study, and organization of the proposal also captured. The second chapter, literature review gives an extensive literature study on working capital and the managements of its different parts. Overview of the population, sampling technique, the research design, data source and collection procedures and data analysis procedures. It also provides the description of the relevant variables that was included in the model, model selection criteria and diagnostic test analysis on the model specification used for the study. Then the fourth chapter will discuss empirical result, finally, the fifth chapter conclusion recommendation and further consolidation for the study

CHAPTER TWO

LITERATURE REVIEW

The purpose of this chapter is to introduce key principles around working capital and general theory around it. This chapter introduces drivers behind working capital, the theoretical review of working capital management and reviews of prior research made on working capital management.

2.1 Theoretical Review

2.1.1 An Overview of Working Capital

Working capital management was concerned with making sure firm has exactly the right amount of cash and lines of credit available to the business at all times (Deloof, 2003). Cash is the lifeline of a company. If this lifeline deteriorates, so does the company's ability to fund operations, reinvest and meet capital requirement and payments. Understanding a Company's cash flow health is essential to making investment decision.

An individual company's investment in working capital has been related to the type of industry in which it operates and the essential working capital policy each individual company adopts (Nyakundi, 2003). The investment decisions concern how much of the firm's limited resources should be invested in working capital. It further observes that financing decisions relate to how the investment in working capital is to be funded.

2.1.3 The Concept and Definition of Working Capital

Khan and Jain (2007) also argued that there are two concepts of working capital; gross and net. The term gross capital also referred to as working capital means the total current assets of a business. The term net working capital can be defined in two ways (i) net working capital is the difference between current assets and current liabilities; (ii) that portion of current assets which is financed with long- term funds. The extensive literature on the subject reveals the component of working capital as consisting of current assets fewer current liabilities. The working capital is affected by a number of factors, including the nature of the business, credit policy, conditions of supply, price level changes.

2.1.4 Types of Working Capital

Working capital was the capital/funds required for day to day operations of the business. Working capital is invested usually in all types of inventories such as raw materials, spares, finished goods etc. and credit extension to debtors and cash in hand. According to Paramasivan and Subramanian (2009), working capital is classified into different types and the classification based on the following views:

- Balance sheet view
- Operating cycle view

On the basis of balance sheet view, working capital is described below: the two most important terms when discussing working capital are gross working capital and net working capital. The investment that is needed for receivables, inventories and cash is generally called working capital or gross working capital. It is simply called current assets in the balance sheet of affirm.

Permanent / fixed working capital:

It refers to minimum amount of investment in all Working capital which is required at all times to carry out minimum level of business activities (Brigham and Houston, 2003). In other words, it represents the current assets required on a continuing basis over the entire year. Further, working capital will be a limit life and usually not exceeding a year, in actual practice some part of the investment in that is always permanent.

Since firms have relatively longer life and production does not stop at the end of a particular accounting period some investment is always locked up in the form of raw materials,

Temporary working capital:

It's also known as the circulating or transitory working capital. This is the amount of investment required to take care of the fluctuations in the business Activity. Fabozzi and Peterson (2003 p. 678) they defined as a rise of working capital from Seasonal fluctuations in a firm's business. Because firms do not have to maintain this form of Working capital throughout in the year, or year after year, it may be better to use short-term (Bank credit) rather than long-term sources of capital to satisfy temporary needs. In other Words, it represents additional current assets required at different times during the operating Year.

2.2 Working Capital Management

A significant number of studies have been done on working capital, although from different Perspectives and in different situations and environments. According to Maharaja (1999), working capital management involves administration of Current assets and current liabilities which consists of optimizing the level of current assets in Partial equilibrium context. Working capital management involves the relationship between a Firms' short –term assets and its short-term liabilities. Khan and Jain (2007) also stress that working capital management is concerned with the Problems that arise in attempting to manage the current assets, the current liabilities and the Interrelationship that exists between them.

Working capital cycle*:*

The working capital cycle measures the time between paying for goods being supplied to the buyer and the final receipt of cash from the sale of these goods. Advantageous to keep the cycles short as possible as it increases the effectiveness of Working capital. Working capital cycle also known as operating cycle, with recent modification Conversion cycle.

Khan and Jain (2007) also stated that the operating cycle it is the Modification to cash can be said to be the heart of the need for working capital. The continuing flow of cash to Suppliers, to inventory, to accounts receivable and back into cash is what is called the Operating cycle. They further stress that the operating cycle consists of three phases. In phase one,

working capital.

2.2.1 Working Capital Management Components

The basic focus in managing specific current assets should be to optimize the firm's investment in these assets. The main components of a firm's working capital include the following:

Cash and Marketable Securities;

A firm can be very profitable, but if this is not translated into cash from operations within the same operating cycle, the firm would need to borrow to support its continued working capital Needs. Thus, the twin objectives of profitability and liquidity must be synchronized and one should not impinge on the other for long. Investments in current assets are inevitable to ensure delivery of goods or services to the ultimate customers and a proper management of same should give the desired impact on either profitability or liquidity. If resources are blocked at the different stage of the supply chain, this will prolong the cash operating cycle.

Although this might increase profitability (due to increased sales), it may also adversely Affect the profitability if the costs tied up in working capital exceed the benefits of holding More inventory and/or granting more trade credit to customers. Cash is the most important current asset for the operation of the business. Cash is the basis input needed to keep the business running on a continuous basis; it is also the ultimate output expected to be realized by selling the service or product manufactured by the firm. Cash consists of currency, demand deposit and time deposits. (Copeland et al, 2005).

The principal Marketable security is commercial paper (short-term unsecured notes sold by other firms). the other security is the government treasury bills and bonds. Good management of working capital will generate cash, help improve profits and Reduce risks. The main sources of cash are accounts payable and equity. Pandey (1993) refers accounts payable as a trade credit that a customer Cash management is concerned with the managing of cash flows into and out of the firm, Cash flows within the firm, and cash balances held by the firm at a point of time by financing Deficit or investing surplus cash.

Accounts Receivables;

Trade credit was the most prominent of the modern business. It is considered as an essential Marketing tool, acting as a bridge for the movement of goods through production and Distribution stages to customers finally. Hendrickson (1992) underlines the importance of Accounts receivables. A firm grants trade credit to protect its sales from the competitor ‘sand to attract the potential customers to buy its products at favorable terms.

When the firm sells its products or services and does not receive cash for it immediately, the firm is said to have granted trade credit to customers.

Trade credit thus creates account receivable which the firms expected to collect in the near future. The level of receivables arising out of credit is thus Influenced by either a conservative, moderate or an aggressive policy of the working capital Management a firm adopts Ross et al (2004) Receivables constitute a substantial portion of Current assets of several firms. Copeland et al (2005) note that as substantial amounts are Tied-up in trade debtors, it needs careful analysis and proper working capital management Policy for a firm to achieve its financial objective and goals.

Inventories;

The word ‘inventory’ has been defined in many ways. Ballon (2004) defines inventories as Stockpiles of raw materials, supplies, components, work in process, and finished goods that Appear at numerous points throughout a firm’s production and logistics channels. Inventory is an important and valuable asset. It constitutes substantial portion of the total Current assets of a business.

According to Joshi (2000) the item forming inventory can be classified into three categories :(1) Raw materials (RM), (2) work-in-process (WIP) and (3) Finished goods (FG). Raw Material inventory represents the item of basic inputs which are yet to be processed into final Product. Work-in-process covers all items which are at various stages of production Processes. These items have ceased to be raw material but have not developed into final Products and are at various stages of semi-finished levels. A finished goods inventory consists of the final products which are awaiting sale.Joshi (2000) enumerates the objectives of inventory management as follows;

• To reduce cost of holding stock so that investment in stock outs (running out of stock) production cycle operates smoothly.

• To persuade the business to reduce the levels of inventory whereas one prompts it to increase the same.

Managing and optimizing inventory levels are tedious tasks which require balancing between Sales and tied-up capital. In case the inventory levels are too low, the company might miss Out on sales when demand arises or might not be able to deliver goods on time. On the other Hand, too much inventory ties up capital that can be used elsewhere more effectively.

The trend has been to lower inventory levels over the past decades (Brealey and Myers, 1996).A concept that is often used for inventory management is just-in-time approach. The just-intima approach is a strategy for effective inventory management and help keeping inventory Levels on a lower level. The strategy aims to make the orders of material, produce and deliver just in time when it is required and not before (Brealey and Myers, 1996)

Accounts payable;

Another component of working capital was accounts payable, but it is different in the sense that it does not consume resources; instead it is often used as a short-term source of finance. Thus, it helps firms to reduce its cash operating cycle, but it has an implicit cost where discount is offered for early settlement of invoices. (Padachi, 2006).

2.2.2 The Cash conversion cycle

Biger*et al* (2010) proclaim that a popular measure of working capital management is the 'Cash conversion cycle' which is calculated as 'days of sales in receivables', plus 'day's sales in inventory' minus 'day's payable outstanding'. This cycle essentially denotes the number of Days a company's cash is tied up by its current operating cycle (Fried *et al*, 2003).

2.3 Working Capital Theories

There are various theories that support the significance of working capital. Some of the most Important theories pertinent to working capital management include the following:

Quantity Theory of Money;

According to the 'quantity theory' money is held only for purpose of making payments for Current transactions (Keynes, 1973). This theory was proposed by Irving Fisher in 1911.Fisher's version of the quantity theory can be explained in terms of the equation of exchange Model.

MV = PT …… (i)

Where M is the nominal stock of money in circulation, V is the transaction velocity of Circulation of money, that is, the average number of times the given quantity of money Changes hand in transactions, P is the average price of all transactions and T is the number of Transactions that take place during the time period. Both MV and PT measure the total value of transactions during the time period and so must be identical. Thus, 'the equation' is really An identity which must always be true; it tells us only that the total amount of money handed Over in transactions equal to the value of what is sold.

Keynesian Theory of Money;

Keynes (1973) in his great work: "The General Theory of Employment, Interest and Money" Identified three reasons why liquidity is important; the ***speculative motive***, the ***precautionary Motive*** and the ***transaction motive.*** The speculative motive is the need to hold cash to be able to take advantage of, for example, Bargain purchase, and favorable exchange rate fluctuations in the case of international firms.

Baumol Inventory Model;

Baumol (1952) developed the inventory development model. The Baumol model is based on The Economic Order Quality (EOQ). The objective is to determine the optimal target cash Balance. Baumol made the following assumptions in his model. The firm is able to forecast Its cash requirements with certainty and receive a specific amount at regular intervals, the Firm's cash payments occur uniformly over a period of time, that is, a steady rate of cash Outflows; the opportunity cost of holding cash is known and does not change over time.

Cash Holdings incur an opportunity cost in the form of opportunity forgone and the firm will incur the same transactions cost whenever it converts securities to cash. Each transaction incurs affixed and variable cost. Below is the equation representation in Baumol model of cash Management: Holding cost = K(C/2) Total cost =K(C/2 +c (T/C) and Transaction Cost = c (T/C) Limitations of the Baumol model are: it assumes no cash receipts during the projected period, Obviously cash is coming in and out on a frequent basis and, no safety stock is allowed for Reason being it only takes a short amount of time to sell marketable securities.

The Modern Quantity Theory;

Milton Friedman restated the quantity theory of money in 1956 as a theory of demand for money and this modern quantity theory has become the basis of news put forward by Monetarists (Copeland et al, 2005). In this theory, money is seen as just one of a number of Ways in which wealth can be held, along with all kinds of financial asset consumer durables, Property and human wealth. According to Friedman, money has a convenience yield in the its holding saves time and effort in carrying transactions.

2.4 Types of Working Capital Management Policies

An individual company's investment in working capital is related to the type of industry in which it operates and the essential working capital policy the company adopts. Working Capital investment decisions concern how much of the firm's limited resources should be Invested in working capital. Financing decisions relate to how the investment in working Capital is to be funded.

What may be considered an acceptable level of working capital for? One industry or line of business may be unacceptable (i.e. too low or too high) in another due to different operating or business characteristics across industries. Working capital Requirements are also likely to change

over time in response to the nature of a company's Operations, for example, as firm progresses from growth to a maturity stage in its life cycle (Collins et al, 1996).

Pandey (1993) underlines three distinct types of working capital policies which a company can pursue; ***aggressive policy, moderate policy*** and ***conservative policy.*** The type of policy Adopted relates to the firm's general approach to the investing and financing of its working Capital needs. Aggressive and conservative policies tend to represent the opposite ends of a Spectrum of working capital policy options. The policies differ in other attitudes to both the Investment in and the financing of current assets. The more conservative in attitude the policy Is, the greater the level of investment in current assets and the greater the firm's reliance on Long term capital (in the form of debt or equity) to finance the investment in current assets

2.4.1 Conservative Working Capital Policy

A conservative policy implies relatively high investment in current assets in relation to sales, the current assets to sales ratio is comparatively high and asset turns over ratios were low. Inca conservative approach, stock and cash levels generally be kept high to avoid stock- out and Illiquidity costs. There is also likely to be a sizeable investment in short-term bank deposits another short-term liquid investment. (Copeland, et al, 2005).

The investment in current asset is divided into permanent current assets and temporary Current assets. The investment in permanent current assets represents the core, or minimum Level of investment in current assets required on a continual basis. In addition to permanent Current assets, the business needs to invest in temporary assets, to accommodate fluctuations in its business (Brealey& Myers, 1996).

Weston and Brigham (1977) further observe that as the conservative policy relies on long term financing, this also makes it a more expensive policy to follow than one which follows Short-term financing. However, they say it is also the low risk working capital policy as the Company is not dependent upon access to short term funds and is not therefore exposed to the Volatility of short-term interest rates or to unexpected changes in general economic Conditions.

2.4.2 Aggressive Working Capital Policy

An aggressive capital policy relies on minimum investment in current assets and is highly dependent on access to short-term financing. With an aggressive policy total investment in current assets is kept to a minimum. The current asset to sales ratio is much higher and the

Current turnover rates much higher in comparison to a conservative policy. In terms of financing, McMenamin (1999) says that a company following an aggressive Working capital policy uses long-term finance to fund its investment in permanent fixed Assets and also a substantial part of its permanent current assets.

2.4.3 Moderate Working Capital Policy

A moderate or balanced working capital policy falls midway between the aggressive and Conservative working capital policies. With a moderate policy, the level of investment in current assets is neither lean nor excessive. Following a moderate policy, long-term funds are used to finance the investment in fixed asset and permanent components of current assets Investments. Temporary or seasonal current assets are financed by short term sources of Finance.

2.5 Working Capital Management, Profitability and Liquidity

Jose et al (1996) showed that day-to-day management of a firm's short-term assets and Liabilities plays an important role in the success of the firm. Firms with growing long-term Prospects and healthy bottom lines do not remain solvent without good liquidity Management. Profitability is more important because profit can usually be turned into a liquid Asset, and that liquidity is also important but does not mean that the company is profitable. Gilman (1999),

For Gilman (1999) in addition to profitability, liquidity management is vital for ongoing Concern. Jose et al (1996) suggests optimum liquidity position, which is minimum level of Liquidity necessary to support a given level of business activity

2.5.1 Measurement of Liquidity and Profitability

In every area of financial management, the finance manager was always faced with the dilemma of liquidity and profitability. He/she has to strike a balance between the two (Eljelly, 2004). Liquidity means the firm has to have adequate cash to pay bills as and when they fall due, and it also have sufficient cash reserves to meet emergencies and unforeseen demands, in all-time. On the other hand, Profitability goal requires that funds of a firm should be utilized as to yield the highest return. Hence, liquidity and profitability are conflicting decisions,

Profitability i.e. high return and low liquidity. On the other hand, to choose short term Investment with low profitability i.e. low return and high liquidity. However, creditors of the company want managers to invest in short term assets because they are easy to liquidate but it reduces the profitability because of low interest rate. On the other Hand, if the managers prefer

the long-term investment to enhance the profitability then in case of default lenders or creditors have to wait longer and bear some expense to sell these assets because the liquidity of long-term investment is low. In reality, none of the managers choose any of these two extremes instead they want to have a balance between profitability and Liquidity which fulfils their need of liquidity and gives required level of profitability (Arnold, 2008).

Profitability ratio was a measure of profit generated from the business and is measured in Percentage terms e.g. percentage of sales, percentage of investments, percentage of assets. High percentage of profitability plays a vital role to bring external finance in the business because creditors, investors and suppliers do not hesitate to invest their money in such accompany (Fabozzi and Peterson, 2003, p. 733). There are several measures of profitability which a company can use. Few measures of profitability are discussed here:

Gross operating profit (GOP):

This ratio explains that how efficient a company was to utilize its Operating assets. This ratio calculates the percentage of profit earned against the operating Assets of the company (Weston and Brigham, 1977, p. 101). Gross Operating Profit = (Sales – COGS) / (Total asset –financial asset)

Net profit margin (NPM):

It calculates the percentage of each sale dollar remains after Deducting interest, dividend, taxes, expenses and costs. In other words, it calculates the Percentage of profit a company is earning against its per dollars sale. Higher value of returning sale shows the better performance (Gitman, 1999). NPM = (Earnings available for common stakeholder / Net sales) *100

Return on asset (ROA):

This ratio explains that how efficient a company was to utilize its Available assets to generate profit. It calculates the percentage of profit a company is earning against per dollar of assets (Weston and Brigham, 1977, P. 101). The higher value of Roadshows the better performance and it is computed as follows: ROA = (Earnings available for common stockholders / total/ Asset) *100On the other hand, liquidity ratio measures the short-term solvency of financial position of affirm. This ratio is calculated to comment upon the short-term paying capacity of a concern or the firm's ability to meet its current obligations Fabozzi and Peterson (2003, p.729) and it is Discussed as follows:

***Current ratio**:*

Is defined as the relationship between current assets and current liabilities. It is a measure of general liquidity and it is the most widely used to make the analysis for short-term financial position or liquidity of a firm (Fabozzi and Peterson, 2003 p. 733). Current Ratio is calculated by dividing the total current assets by total current liability.

Current ratio = current asset / current liability on the other hand, ***debt ratio***s one part of financial ratio which is used for debt management Used by different company. Hence, it is ratio that indicates what proportion of debt accompanies has relative to its assets. The measure gives an idea to the leverage of the company Along with the potential risks the company faces in terms of its debt-load (Fabozziand Peterson, 2003 p. 586). It is calculated as dividing total debt by total asset.

2.6 Review of Empirical Studies

The subject of working capital management has been extensively explored in the discipline of Finance. Many researchers have studied working capital from different views and in different Environments. This section reviewed the previous studies on the impact of working capital Management on firm's profitability. Deloof (2003) investigated the relationship between working capital management and firm Profitability of Belgian firms, where he studied 1009 large Belgian non-financial firms for the Period of 1992 to 1996.

Using correlation and regression tests he found a significant negative relationship between gross operating income and the number of days accounts receivables, Inventories and accounts payable of Belgian firms. On the basis of these results he suggested that managers could create value for their shareholders by reducing the number of day's Accounts receivable and inventories to a reasonable minimum. The negative relationship between accounts payable and profitability is consistent with the view that less profitable Firms wait longer to pay their bills.Lazaridis and Tryfonidis (2006) investigated the relationship that is statistically significant between corporate profitability, the cash conversion cycle and its components.

They used a Sample of 131 companies listed in the Athens Stock Exchange for the period of 2001-2004.The independent variables used were fixed financial assets, the natural logarithm of sales, financial debt ratio, cash conversion cycle and its components – day 's inventory, days receivable and day 's payable. The dependent variable is profitability measured by gross

Operating profit. The research findings showed negative relationship between cash conversion Cycle, financial debt and profitability, while fixed financial assets have a positive coefficient. The authors conclude that companies can create more profit by handling correctly the cash Conversion cycle and keeping each different component to an optimum level.Padachi (2006) examined the trends in working capital management and its impact on firm's Performance.

The results proved that a high investment in inventories and receivables is Associated with lower profitability. Further, he showed that inventory days and cash Conversion cycle had positive relation with profitability. On the other hand, account Receivables days and accounts payable days correlated negatively with profitability. A study on value added, productivity and performance of few selected companies in SriLankawith

The sample of 15 financial companies listed under the Colombo Stock Exchange (CSE) reveals that, profit before tax per employee and value added per rupee of fixed asset is positively correlated and labor cost to sales and gross profit is also positively correlated.Afza and Nazir (2007) studied 208 public limited companies listed at Karachi Stock Exchange (KSE) for a period of 1998 to 2005.Through cross-sectional regression models on Working capital policies, profitability and risk of the firms; they found a negative relationship between the profitability measures of firms and degree of aggressiveness on working capital Investment and financing policies.

Their result indicates that, the firms yield negative returns Followed on an aggressive working capital policy by investigating the relative relationship between the aggressive or conservative working capital policies for .Firms Rahman and Nasr (2007) studied the effect of different variables of working capital management including average collection period, inventory turnover in days, average Payment period, cash conversion cycle, and current ratio on the net operating profitability.

They selected a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period Of six years from 1999 - 2004 and found a strong negative relationship between variables of Working capital management and profitability of the firm. They found that as the cash Conversion cycle increases, it leads to decreasing profitability of the firm and managers can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level. Samiloglu and Demirqunes (2008) found that working capital policies are the

main determinants of a firm's profitability as far the working capital is concerned. Though they never say which working capital policy guarantees a higher profitability,

Their studies only mention conservative policy with no reference to the remaining two - aggressive and Moderate Policies. They carried out a study on a sample of fifty listed manufacturing firms at The Istanbul stock exchange, Turkey, for a period of ten years, which was from 1998 to 2007.Their dependent variable of the regression model was return on assets. Their empirical results Show that for the mentioned sample and period, capital management policy significantly affects profitability of Turkish manufacturing firms.

However, they hasten to add that cash Conversion cycle, size of a firm and fixed financial assets has no statistically significant Effects on the firm's profitability. Falope and Ajilore (2009) used a sample of 50 Nigerian quoted non-financial firms for the Period 1996 -2005. Their study utilized panel data econometrics in a pooled regression, where time-series and cross-sectional observations were combined and estimated. They found significant negative relationship between net operating profitability and the average Collection period, inventory turnover in days, average payment period and cash conversion Cycle for a sample of fifty Nigerian firms listed on the Nigerian Stock Exchange. Furthermore, they found no significant variations in the effects of working capital Management between large and small firms.

Mathuva (2009) examined the influence of working capital management components on corporate profitability by using a sample of 30 firms listed on the Nairobi Stock Exchange (NSE) for the periods 1993 to 2008. He used Pearson and Spearman's correlations, the Pooled ordinary least square (OLS), and the fixed effects regression models to conduct data Analysis Firm to pay its creditors (average payment period) and Profitability. A.K. Sharma and Satish Kumar (2011) examined the effect of working capital on profitability Of Indian firms. They collected data of a sample of 263 non-financial BSE 500 firms listed at The Bombay Stock (BSE) from 2000 to 2008 and evaluated the data using OLS multiple Regression.

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Waweru (2011) carried out a study on the relationship between working capital management and the value of companies quoted at the NSE (Nairobi stock exchange). 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 average stock price was used to measure the value of the Firm. The regression

models indicated that there was some relationship between working capital management and the firm ‘s value while the result of the Pearson correlation indicated negative relationship between average cash collection period, inventory turnover in days,

Cash conversion cycle and the value of the firm.Makori and Jagongo (2013) in their paper they analyzed the effect of working capital. Management on firm’s profitability in Kenya for the period 2003 to 2012.For this purpose, balanced panel data of five manufacturing and construction firms each which are listed on the Nairobi Securities Exchange (NSE) was used. The dependent variable, firm’s profitability, was measured by return on asset. With regard to independent variables, average collection Period, inventory conversion period, average payment period and cash conversion cycle were Used to measure working capital management. Pearson’s correlation and ordinary least Squares regression models were used to establish the relationship between working capital Management and firm’s profitability.

The study found a negative relationship between Profitability and number of day’s accounts receivable and cash conversion cycle, but a Positive relationship between profitability and number of days of inventory and number of Day’spayable.Yadav and Kumar (2014) studied the relationship between working capital management. Determinants on profitability.

Profitability is a dependent variable whereas determinants of Working capital are independent variables such as average collection period, inventory Turnover in days,

average payment period, cash conversion cycle, and net trading cycle were Used to assess working capital management, and return on total assets.

Lawal, Abiola, and Oyewole (2015) Studied by taking six selected companies in Nigeria Covering the period between 2006 and 2013 was used for the study. Purposive sampling Technique was adopted and data collected was analyzed using panel data least square method of regression. The study found a significant negative relationship between the components of Working capital (ARP, APP and IHP) and profitability (ROI) it concluded that working Capital management has significant impact on profitability of manufacturing companies.

There are studies with reference to Ethiopia on working capital management and firm Profitability, especially in the manufacturing sector. Tewodros (2010), studied the effect of management of working capital policies on firm’s Profitability a sample of 11 manufacturing private limited companies in Tigray region, Ethiopia for the period of 2005-2009.

The finding of descriptive statistics shows that, on Average cash conversion cycle takes 313days and with minimum and maximum days of -315And 2264 respectively. It also took an average 314days to sell inventory. Firms wait an Average 120days to pay their purchases and receive payment against sales on an average of118days.The results show that longer accounts receivable and inventory holding periods are Associated with lower profitability.

There is also negative relationship between accounts Payable period and profitability measures; however, except for operating profit margin this Relationship is not statistically significant. The results also show that there exists significant Negative relationship between cash conversion cycle and profitability measures of the sampled firms. No significant relationship between current assets to total assets ratio and Profitability measures has been observed. On the other hand, findings show that a highly Significant positive relationship between current liabilities to total assets ratio and Profitability.

Finally, negative relationships between liquidity and profitability measures have also been observed. Ephrem (2011) examined the impact of working capital management on profitability of the selected small and medium enterprises which are found in Addis Ababa. He took sample of30 small micro enterprises were selected from the two sub cities of Addis Ababa namelyNifas-Silk-Lafto and Kirkos and analysis was done for five years from 2005-2009. Hisalso Used Pearson correlation, regression analysis and pooled ordinary least squares for data Analysis. The results indicated that cash conversion cycle and average collection period has Negative impact on net operating profitability of a firm. Finally, he concluded that a good Working capital management practices can boost the profitability of small businesses.

Tiringo (2013) examined impact of working capital management on profitability of micro and small enterprises in Ethiopia for the case of Bahir Dar City Administration. The study had taken a sample of 67 micro and small enterprises. Data for this study was collected from the Financial statements of the enterprises listed on Bahir Dar city micro and small enterprises Agency for the year 2011.The study applied Pearson's correlation and OLS regression with across sectional analysis. The result showed that there is a strong positive relationship between Number of day's accounts payable and enterprises profitability.

2.7 Summary of the Chapter and Knowledge Gap

This chapter start with an overview of working capital in which its nature and importance of working capital, concept and definition of working capital and types of working capital. Working capital management (WCM) and different components of WCM which are cash and Marketable securities, accounts receivable, inventory, accounts payable and cash conversion Cycle are mentioned. Also, working capital theories are discussed. Afterwards the different WCM policies in which a firm can pursue are discussed. Then the WCM, profitability and Liquidity with its measurement was described. Finally, Prior research in the field was described

. Generally; the literature review indicates that working capital management has impacts on Profitability, liquidity and performance of a firm. Even if, the literature review indicated that Working capital management has impact on the profitability, liquidity and performance of Firms but there still is vagueness regarding the appropriate variables, hypotheses and effect Size measures that might serve as proxies for working capital management as a whole.

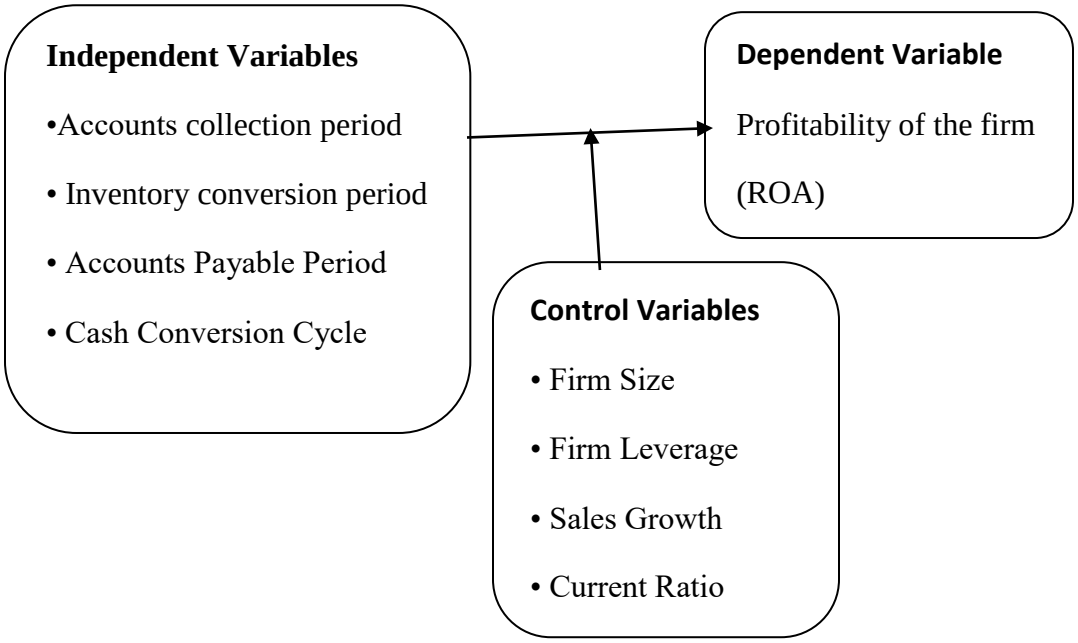
From the empirical study listed above it could be depicted that working capital have impact on profitability. Mathuva (2009) found out that shortening days in collection period would Result in increase on profitability and further noted that companies with shorter accounts Payable period are less profitable and quick turn of inventory would increase profitability.

In Another way, Sharma and Kumar (2011) found that WCM and profitability was positively Correlated. Their study reveals that ARP and CCC exhibit a positive relationship with Profitability as well days account payable and inventory of number of days are negatively Correlated with firm's profitability. Tewodros (2010) also suggested that reduction of CCC and quick turnover of inventory would increase profitability. Tiringo (2013) also suggested that firms with shorter account payable period are less profitable. It is clear from the empirical evidence,

There are no common results on the impact of WC on Profitability. This may be due to lack of not incorporating all relevant and most important Variables used to measure both WC and profitability. Therefore, this study included the major important variables and provides useful support for better understanding of the impact of Management of working capital on profitability of brewery factories companies 'in Ethiopia. Finally, the study adopted a purposive Method to incorporate the homogeneous sampling and brought the generalizability on all brewery factories companies to be robust.

2.8 Conceptual Framework

The following figure presents schematic conceptual framework of the relationship between Working capital management measures and profitability of firm Figure 2.1 Schematic conceptual frame work



Source; - developed by

CHAPTER THREE
RESARCH METHODLOGY

3.1 INTODUCTION

The previous chapter opens a way to identify the theoretical and literary works of people in relation to working capital management. This chapter however moves a step further by showing the ways in which the relevant data and its collection methods have helped prove that indeed working capital management is necessary for brewery factories. Mode of data collection and data analysis. These are essential to the research because it gives a breakdown of the various research methods and strategies that will be implements in conducting the research.

3.2 Research Design

The explanatory type of study with a quantitative approach is employed to analyses the collected data. The research design, used in this study is a panel data analysis of cross-sectional and time series data. Panel data analysis, also called the constant coefficients model is one where both intercepts and slopes are constant, where the cross-section firm data and time series data are pooled together in a single column assuming that there is no significant cross section or temporal effects (Gujarati, 2003). (Stata) is applying to get results.

3.3 Data Source and Collection Procedure

The research study would be the use of secondary source of data. The secondary data would be derived from financial statements of brewery factories. These data include audited balance sheet and profit and loss accounts showing annual financial statements of the sampled companies. The data would be collected for a period of five years. The period of the data collected from the years 2011 to 2015

3.4. Population and Sample Size

3.4.1 Target Population

A population was the total collection of elements about which the researcher makes some Inferences. The collection of all possible observations of a specified characteristic of interest is called a population while a collection of observations representing only a portion of the population is called a sample total observation is 30

3.5. Research Sample Selection

The data would be collected from all brewery factories (population) found in Addis Ababa Ethiopia. To select sample firms, the researcher employs Non probabilistic sampling specifically purposive sampling (Homogeneous sampling) rather than taking the whole thing so as to meet the requirements. The reason behind selecting purposive sampling techniques than others is, it will consider more appropriate when the universe happens to be small and a known characteristic of it is to be studied highly concentrate

3.6. Data Analysis

The collected panel data would be analyzed by using descriptive statistics, correlations, and multiple linear regression analysis. The secondary data would analyze by using Stata 12. Basically, descriptive statistical tools would use to analyze the mean, standard deviation, minimum and maximum values of the study. Before undertaking any manipulations of the data, the study would compute the descriptive statistics and correlation matrices for brewery in the sample, since correlation analysis would use to select the variables which enter in the econometrics model.

3.6.1. Inferential Analysis

Quantitative analysis, correlation models are used to measure the degree of association between Indifferent variables. **Correlation analysis** Correlation is uses to measure the direction of the linear relationship between two variables as well as to measure the strength of association between variables (Tabachnick and Fidell, 2007, p. 56-57). In this study, the Pearson's Correlation Coefficient is calculated to see the relationship between all variables. As for the direction of the relationship, the positive correlation indicates that when one variable increases another also increases while the negative correlation shows inverse relationship (Pallant, 2007, p. 101). And also, Regression analysis will be used to estimate the causal relationships between profitability variable, liquidity and other chosen variables under consideration. A pooled regression will be conducted since the data has both time series and cross-sectional dimensions. As a result, Ordinary Least Squares and Generalized Least Squares (cross section weights) methods used for analysis.

Pooled regression, time series and cross-section data Pooled regression, involve estimating a single equation on all the data together, so that the data set for *y* is stacked up into a single column containing all the cross-sectional and time-series observations, and similarly all of the

observations on each explanatory variable would be stacked up into single columns in the *x* matrix and then the equation is estimated using OLS (Brooks, 2008 p.488)

Time series data, as the name suggests, are data that have been collected over a period of time on one or more variables. Time series data have associated with them a particular frequency of observation or collection of data points. The frequency is simply a measure of the interval over, or the regularity with which, the data are collected or recorded (Brooks, 2008 pp.3 - 4). Gujarati (2004, p 27) mentioned that **cross-section data** are data on one or more variables collected at the same point in time.

3.7. DESCRIPTION OF VARIABLES AND RESEARCH HYPOTHESES

This study undertakes the issue of identifying key variables that influence working capital management of Addis Ababa brewery factories and to explore and examines the impact of working capital management on firms' performance. As a result, the study employed a number of variables stated below have been used to test the hypotheses of the study. They include dependent, independent and some control variables.

3.7.1. DEPENDENT VARIABLES

Dependent Variables are variables that are used to measure the performance of firms. Financial ratios are uses to compare different companies in the same industry, to compare different industries and over a period of years, a firm or an industry develops certain norms that may indicate future success or failure. If relationships change in a firm's data over different time periods, the ratios may provide clues on trends and future problem. That means the financial ratio also use to compare performance in different time periods.

Profitability ratios measure a firm's overall efficiency and effectiveness in generating profit. They are calculated by establishing relationships between profit figures on the one hand, and sales or assets on the other hand. The term profitability is measured in different ways by the researcher. It was measured as Return on Asset (ROA) while Working Capital Management was measured. To set up a factual association between the operating "success" or "failure" of firms

and working capital performance and to avoid the effect of tax incentives (if available), Earning Before Interest and Tax (EBIT) is used as a base to calculate ROA as dependent variable.

$$\text{Return on Assets (ROA)} = \frac{\text{Erning before Interest and tax(EBIT)}}{\text{Total Asset(TA)}}$$

3.7.2. INDEPENDENT VARIABLES AND RESPECTIVE RESEARCH HYPOTHESES

The working capital methods include Average Collection Period, Inventory Conversion Period (ICP), Average Payment Period, and Cash Conversion Cycle (CCC). As a result, Cash Conversion Cycle is measured the source of three parts Number of Days Receivable, Inventory Conversion Period and Number of Days Payable. All these parts of CCC help to examine the gathering, inventory conversion and policy of the payment on sectored basis.

3.7.2.1 CASH CONVERSION CYCLE (CCC):

Firms purchase inventories from suppliers on credit and then sell inventory on credit as well. In both cases cash flows are delayed. CCC refers to time in days between a firm pays its payables and receives receivables. CCC is the difference between sum of inventory period and receivable period (operating cycle) and payment period. To calculate CCC the researcher uses the following formula: Cash conversion cycle (CCC)=ARP+ICP-APP

3.7.2.2 INVENTORY CONVERSION PERIOD (ICP):

It is average number of days to convert raw materials into finished products and then selling them to customers. Inventory period is calculated by dividing average inventory by average sales per day. To calculate ICP

$$\text{Inventory Conversion Period (ICP)} = \frac{\text{Average Inventory}}{\text{Net Sales}} * 365$$

3.7.2.3 AVERAGE COLLECTION PERIOD

This variable is defined as the number of the days which is needed to collect the receivables. In other words, it is the average period for which receivables are outstanding. The information about the net annual sales of the firm and the average beginning and ending receivables are used (Mohammadi, 2007):

To calculate ACP $$\text{Average Collection Period} = \frac{\text{Average Accounts Receivable} \times 365}{\text{Net Sales}}$$

3.7.2.4. AVERAGE PAYMENT PERIOD

This is the number of days a company takes to pay off the accounts payable. The average beginning and ending accounts payable are used to measure the average payment period (Deloof, 2003): To calculate APP

$$\text{Average Payment Period (APP)} = \frac{\text{Average Accounts Payable} \times 365}{\text{Net Sales}}$$

As indicated in chapter two on Theoretical and literature review part the Respective research hypotheses are proposed detail as: H1: cash conversion cycle is significant related to financial performance of the firm. H2: Inventory management (holding periods) have significant impact on firms' financial performance. The way how receivables are managed has significant effect on the financial performance of firms H4: Accounts payable periods has significant impact on the financial performance of firms.

3.7.3. CONTROL VARIABLES

In order to have a reliable analysis of the impact of working capital management performance on profitability, it is common in working capital literature to use some control variables to account for various factors that may influence profitability of firms (Deelof, 2003; Eljelly, 2004; Lazaridis and Tryfonidis, 2006; Padachi, 2006; Afza and Nazir, 2007; Tewodros 2010;). Accordingly, together with the above working capital variables, some control variables that are specific to firms and general to the economy as a whole were taken into account in this study.

Short Term Liquidity: Liquidity affects profitability of firms so to keep its effect neutral the researcher has used current ratio as control variable. It is calculated by dividing current assets by current liabilities. Current Ratio = Current Assets/Current Liabilities Size of firm: It is obvious that firms' size affects profitability; to keep size as constant factor the researcher have used natural logarithm of sales as control variable. Size of firm = Natural Logarithm of Net Sales Short Term financial assets: Financial assets are used to obtain short term profits, these assets vary company to company, so to keep its effect neutral researcher have taken it financial assets to company's total asset ratio as control variable and is calculated by dividing short term financial assets by total assets. Short Term Financial Assets Ratio = Short term Loans and Advances / Total Assets

Leverage: To keep the debt utilization effect constant debt to asset ratio is taken as control variable, it is calculated by dividing total debt by total assets.

Leverage = Total Debt/Total Assets **Table: 3.1.**

Variables

Dependent	Return on Asset (ROA)
Independent/Explanatory	Accounts Receivable Period (ARP)
	Inventory Conversion Period (ICP)
	Accounts Payable Period (APP)
	Cash Conversion Cycle (CCC)
Control	Liquidity = Current Ratio (CR)

	Size of the Company = Natural Log of Sales (LnSales)
	Financial Assets to Total Assets (FTA)
	Leverage = Total Debt to Total Asset Ratio (DAR)

3.8. MODEL SPECIFICATIONS

As mentioned above, the impact of working capital management on firms' performance was estimated by using similar quantitative models of Raheman and Nasr, (2007), Panigrahi, Anita Sharma (2013). The general formula used for the model is:

$$\mathbf{ROA\ it} = \beta\mathbf{0} + \sum_{\mathbf{t=1}}^{\mathbf{n}} \boldsymbol{\beta}\mathbf{i}\ \mathbf{Xit} + \epsilon$$

Source: Panigrahi, Anita Sharma (2013) ROA it and ROI it = Return on Asset, t; I = 1, 2, 3…, 11 firms respectively. β0 = the intercept of equation βi = Coefficient of X its variables Xit = the different independent variables for working capital management of firm I at time t. t = Time from 1, 2…, 5 years ϵ = error term This model is used to test the first hypothesis; dependence of Return on Asset ,ROA it = β0 + β1 (CCCit) + β2 (ACPit) + β3 (ICPit) + β4(APPit) + β5 (CCCit) + ϵ

Where,

ROA $_{it}$ = return on assets of firm I for time period t

CCC $_{it}$ = cash conversion cycle of firm I for time period t

ACP $_{it}$= account receivable firm I for time period t

ICP $_{it}$ =inventory conversion firm I for time period t

CCC$_{it}$ = cash conversion cycle firm I for time period t β**0** = intercept

Table: 3.2.

Proxy Variables, Definition and Predicted Relationship

Proxy	**Definition Predicted**	**Sign**
ROA	Return on Asset	
ARP	Accounts Receivable Period	-/+
ICP	Inventory Conversion Period	-/+
APP	Accounts Payable Period	-/+
CCC	Cash Conversion Cycle	-/+
CR	Current Ratio	
FTA	Financial to Total Asset Ratio	
Ln_{Sales}	Natural Log of Sales	
DAR	Debt to Asset Ratio	

3.9. Assumption one; Testing for the Average Value of the Error-Term is Zero

The first CLRM assumption requires, the average value of the errors term should be zero. As per (Brooks, 2008), if a constant term is included in the regression equation, this assumption will not be violated. Therefore, since the constant term will be including in the regression equation, this assumption will not be violated.

3.9.1 Test of Multicollinearity

Multicollinearity means that there is linear relationship between explanatory variables which may cause the regression model biased Gujarati (2003). Multicollinearity can be identified by the variance inflation factor (VIF) technique, which is statistic calculated for each variable in the model. Theoretically, a VIF greater than 10 may suggest that the concerned variable is multi-collinear with other in the model and may need to be excluded from the model. Hence, the VIF result in Table, as none of the VIFs is excessively high, suggest that there is no perfect or strong collinearity between the explanatory variables

3.9.2 Test for Assumption of Autocorrelation

As noted in Brooks (2008) this is an assumption that the covariance between the error terms over time (or cross-section ally, for that type of data) is zero. In other words, it is assuming that the errors are uncorrelated with one another. If the errors are not uncorrelated with one another, it will be stated that they are ‘auto correlated’ or that they are serially correlated.

3.9.3. Test of Heteroskedasticity

According to (*Brooks*, *2008*), Heteroskedasticity means that error terms do not have a Constant variance. If Heteroskedasticity occur, the estimators of the ordinary least square Method are inefficient and hypothesis testing is no longer reliable or valid as it will underestimate the variances and standard errors. There are several tests to detect the Heteroskedasticity problem, which are Park Test, Glaser Test, Breach-Pagan-Gold Frey Test, White's Test and Autoregressive Conditional Heteroskedasticity (ARCH) test. This study used Breach-Pagan-Goldfrey Test to detect the presence of Heteroskedasticity

CHAPTER FOUR

EMPIRICAL RESULT

4.1. INTRODUCTION

This chapter presents the results of the various indicators of performance of brewery factories firms and their respective working capital variables. The study selected Return on assets (ROA) as the measure of the firm's financial performance. On the other hand, cash conversion cycle (CCC), inventory conversion period (ICP), account collection period (ACP) and account payable (APP) was used as the measure of working capital (or working capital variables) for the study. Empirical results from quantitative data analysis using stata12 as well as presenting results from descriptive statistics, correlation matrix and regression results was used as the study main statistical tool.

4.2. DESCRIPTIVE ANALYSIS

The descriptive statistics was compute, so that it gives detail understanding to the trend of working capital management, financial performance among the sample firms and it is used as stand to give recommendations after identifying the association between the variables from correlation and regression analyses. Descriptive analysis shows the average, and standard deviation of the different variables of interest in the study. It also presents the minimum and maximum values of the variables which help in getting a picture about the maximum and minimum values a variable can achieve.

Table: 4.1. Presents descriptive statistics for 6 brewery factories firms in Addis Ababa for a period of eight years from 2011 to 2015.The research has employed 5 variables for the analysis purpose. Further, these 5 variables are broadly classified in to five independent variables and one dependent variables. Out of the five independent variables, four are proxies for financial performance of the sample firms, which are as it is displayed in table 4.1., the mean value of

firms return on asset is 3.30901 percent of total assets, and it std deviates 2.125326 percent. It means that value of profitability can deviate from mean to both sides by 3.30901 percent. Its minimum value is 0.02 percent while the maximum is 16.65 percent

Table;4,1, Descriptive statics Descriptive statics

```
. sum roa icp acp app ccc
```

Variable	Obs	Mean	Std. Dev.	Min	Max
roa	30	3.554263	2.617087	.02	16.65
icp	30	57.77591	7.457464	45.06	73.80083
acp	30	10.47674	2.245054	8.655551	18.89172
app	30	.025643	.0066536	.0132	.034751
ccc	30	1.026833	.1066616	1	1.575

Source stata 12

Likewise, the descriptive statistics for the four measures of efficiency of working capital management, namely, Cash conversion cycle, average accounts collection period, average inventory conversion period and average accounts payable period are also presented in the same table. Accounts receivable period, a measurement for collection policy, is averaged to 3.554263 days for the sampled firms. The interpretation for the average of the account receivable period is that, firms in the sample wait 10.47674 days on average to collect cash from credit sales. The Account receivable period can vary by 10.47674 days to both sides of the mean value. The minimum and the maximum Account receivable period for the sampled firms are 8.6555 and 18.89172 days respectively. The average value of Inventory conversion period as a proxy for inventory policy is 57.77591 days.

This means, firms in the sample needs on average 57.77591 days to sell inventory. As it is shown in the above table, the standard deviation of inventory conversion period is 7.457464 days. To the sample firms the inventory conversion period ranges between 45.06 and 73.80083 days as

minimum and maximum values respectively. The average value of Accounts payable period as a proxy for payment policy is 0.025641 days. The standard deviation of account payable period for the sample firms is 0.0066536 days. The period ranges between 0.0132 day and 0.034751 days. Moreover, Cash conversion cycle, is 1.026833.days on average and the standard deviation is 0.1066616 days. The minimum value of 1 days shows that a firm records a large inventory turnover and/or cash collections from credit sales before making a single payment for credit purchases. It means that the accounts receivable period and/or the inventory holding period are very short and/or the accounts payable period of the firm is very long. On the other hand, the maximum time for cash conversion period is 1.575 days which is a very long period,

4.3. CORRELATION

Prior to regression result, it is important to check the correlation between different variables on which the analysis is built. Pearson's Correlation matrix is used for data to see the relationship between variables such as those between working capital management and firm financial performance (profitability measure).

Table: 4.2.,

Shows that Pearson's Correlation Coefficient Matrix

```
. correlate roa icp app acp ccc
(obs=30)
```

	roa	icp	app	acp	ccc
roa	1.0000				
icp	0.0295	1.0000			
app	-0.1813	0.6257	1.0000		
acp	0.5792	-0.1888	-0.3648	1.0000	
ccc	0.9149	0.0325	-0.1300	0.7568	1.0000

Source Stata 12

Table: 4.2., presents the result of the correlation analysis of Profitability Measures with cash conversion period, inventory conversion period, account collection period, conversion period and accounts payable period. The analysis of correlation matrix started between the cash conversion cycle which is a comprehensive measure of working capital and return on asset. In the methodology part of this study, it was hypostasized that, cash conversion cycle (CCC) has significant impact on firms' financial performance. In agreement with the research hypothesis, Table: 4.2. shows positive correlation coefficient between cash conversion cycle and return on assets. From the table, one can notices that correlation coefficients of cash conversion cycle with return on assets are 0.9149 and It means that if the firm is able to increase this time period known as cash conversion cycle, it can increase its profitability. As a result, cash conversion cycle and Return on asset have significant association. As stated above Correlation results between inventory conversion period, account collection period cash conversion cycle and with return on asset have positive result. It shows that any increase in any of these factors will reduce the profitability measure (ROA) of firms. As it has been stated in the methodology part of this study, it was hypothesized that Inventory conversion periods have significant impact between Return on asset. In agreement with this hypothesis, the correlation table indicates that inventory conversion period have positive significant impact with return on assets. The correlation coefficients are 0.0295 Likewise, in the methodology part of this study, it was hypothesized that Accounts payable periods has significant impact on profitability as measured by return on assets. Similar to the research hypothesis, the correlation matrix in the above table prevail negative significant impact between accounts payable period and profitability measures.

Which means if firms delay their payments, they will earn less profits; the reason behind this is that firms can take the advantage of discounts by paying soon. As it is shown in the above, Account payable period has a negative relationship correlation coefficient of- 0.1813 with return on assets. The other hypothesis was that, the way how receivables are managed has effect on profitability of firms measured by return on asset. In view of that, the result of the correlation matrix in Table: 4.2. indicates that the account collection period positive correlated with return

on assets. This relationship is also proofed from the correlation coefficients of 0.5792 with return on asset,

4.4. Testing Assumptions of Classical Linear Regression Model (CLRM)

Before running the regressions, the data sets have been tested. Models had normality problem (Observations that are very extreme compared to other observations) that may cause problems in estimating the regression coefficients and some correction actions have been taken. Test for weather average value of the error term is zero

The first assumption required is that the average value of the errors is zero. In fact, if a constant term is included in the regression equation, this assumption will never be violated. Therefore, since the constant term (i.e. β) was included in the regression equation, the average value of the error term in this study is expected to be zero.

Test for Heteroscedasticity

It has been assumed that the variance of the errors is constant. This is known as the assumption of homoscedasticity. If the errors do not have a constant variance, they are said to be heteroscedastic. To test this assumption the white's test was used having the null hypothesis of heteroskedasticity. To test this assumption the white's test was used having the null hypothesis of heteroskedasticity. the *p*-values are considerably in excess of 0.05 we could reject the null hypothesis of homoscedastic.

```
. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of roa

         chi2(1)      =     0.01
         Prob > chi2  =   0.9046
```

Source Stata 12

Test for Normality assumption

A normal distribution is acp skewed0 .0000 and is defined to have a coefficient of kurtosis 0.0005. the normal distribution is app skewed 0.0.2814 and kurtosis 0.1291 icp ccc roa coefficient 0.3180, 0.0000, 0.0000and 0.6936,0.0000, 0.0000 whether the coefficient of skewness and kurtosis are three respectively.

```
. sktest roa icp acp app ccc
```

Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	joint adj chi2(2)	joint Prob>chi2
roa	30	0.0000	0.0000	41.22	0.0000
icp	30	0.3180	0.6936	1.23	0.5400
acp	30	0.0000	0.0005	21.69	0.0000
app	30	0.2814	0.1291	3.76	0.1525
ccc	30	0.0000	0.0000	44.30	0.0000

The for absence of series multicollinearity assumption

This assumption is concerned with the relationship exist between explanatory variables. If an independent variable is an exact linear combination of the other independent variables, then we say the model suffers from perfect collinearity, and it cannot be estimated by OLS (Brooks 2008). When there is multicollinearity, the amount of information about the effect of explanatory variables on dependent variables decreases.

How much correlation causes multicollinearity however, is not clearly defined. However, Hair et al (2006) argue that correlation coefficient below 0.9 may not cause serious multicollinearity problem. Malhotra (2007) stated that multi collinearity problem exists when the correlation coefficient among variables is greater than 0.75 and it leading to inefficient estimation and less reliable results. This indicates that there is no consistent argument on the level of correlation that causes multicollinearity. In this study correlation matrix for 4 variables shown below in the table had been estimated. The results in the following correlation matrix at table 4.2 show the highest correlation of 0.9149which is between account receivable period and cash conservation cycle average inventory days. The result correlation matrix shows there are no correlation which above 0.75 and 0.9 according to, Malhotra (2007) and Hair et al (2006) respectively, we can conclude in this study that there is no problem of multicollinearity.

```
. estat vif
```

Variable	VIF	1/VIF
acp	2.84	0.352082
ccc	2.55	0.391771
app	1.85	0.540313
icp	1.69	0.590188
Mean VIF	2.23	

Source Stata 12

4.5. Choosing Random Effect (RE) Versus Fixed Effect (FE) Models

According to Dougherty 2011, Brooks (2008) stated that if the observations are based on a random sample then both random effect model and fixed effect model are applicable to it. To check that which of these models should be used, Housman's specification test is applied. But the sample is not selected randomly fixed effect model is more appropriate. Hence, the sample

	Coefficients			
	(b) random	(B) fixed	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
icp	-.0243531	-.0243531	0	0
acp	-.5906887	-.5906887	0	0
app	114.3204	114.3204	0	0
ccc	33.9695	33.9695	0	0

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(0) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 0.00
Prob>chi2 = .
(V_b-V_B is not positive definite)

Source Stata 12

4.5. Results of the Regression Analysis

term This model is used to test the first hypothesis; dependence of Return on Asset, ROA it = β0 + β1 (CCCit) + β2 (ACPit) + β3 (ICPit) + β4(APPit) + β5 (CCCit) + ϵ

Where,

ROA $_{it}$ = return on assets of firm I for time period t

CCC $_{it}$ = cash conversion cycle of firm I for time period t

ARP $_{it}$= account receivable firm I for time period t

ICP $_{it}$ =inventory conversion firm I for time period t

CCC$_{it}$ = cash conversion cycle firm I for time period t β**0** = intercept

```
. xtreg roa icp acp app ccc, fe

Fixed-effects (within) regression               Number of obs      =        30
Group variable: id                              Number of groups   =         6

R-sq:  within  = 0.9348                         Obs per group: min =         5
       between = 0.2092                                        avg =       5.0
       overall = 0.7276                                        max =         5

                                                F(4,20)            =     71.66
corr(u_i, Xb)  = -0.4349                        Prob > F           =    0.0000
```

roa	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
icp	-.0243531	.0408611	-0.60	0.558	-.1095878	.0608816
acp	-.5906887	.1477925	-4.00	0.001	-.8989785	-.282399
app	114.3204	60.08119	1.90	0.072	-11.00674	239.6476
ccc	33.9695	2.604165	13.04	0.000	28.53731	39.4017
_cons	-26.66276	2.5287	-10.54	0.000	-31.93753	-21.38798
sigma_u	1.4494537					
sigma_e	.7588968					
rho	.7848492	(fraction of variance due to u_i)				

Source Stata 12

The result of the regression output presented in shows the impact of working capital management variables on the financial performance of brewery factories companies. The output shows highest explanatory power of the model. It is measured by R2. The R2 measures the success of the regression in predicting the values of the dependent variable in the sample. In standard settings, may be interpreted as the fraction of the variance of the dependent variable explained by the independent variables. The statistic will equal one if the regression fits perfectly, and zero if it fits no better than the simple mean of the dependent variable. As it said before, R2 values indicate the explanatory power of the model and in this study overall R2 value which takes into account the loss of degrees of freedom associated with adding extra variables were inferred to see the explanatory powers of the models.

The p-value shows at what percentage the level of each variable is significant or insignificant. the value of overall R2 is 0.72. There is a rule of thumb which can be used to determine the overall Here in the study adjusted R2 of 0.84 indicates that the formula is strong fit for predicting the ROA. The value of t-test explains the overall significance of a model. It explains the significance of the relationship between dependent variables and all the other independent variables jointly. In the regression outputs the beta coefficient may be negative or positive; beta indicates that each variable's level of influence on the dependent variable. P-Value indicates at what percentage or precession level of each variable is significant. The positive beta coefficient means that variable has a positive impact on your dependent variable, and a negative one has a negative impact. It tells us on average when independent variable increase by 1 percent the dependent increase by beta amount but the independent variables should a statistically significant impact on the dependent variable. Operational model: the operational panel least square regression model used was:

Specifically, when the above panel least squares model is converted into specified variables with their coefficient it becomes: From the regression output in above in table, in line with the initial hypothesis, the results of this regression indicate that the coefficient of account receivable period is negative and significant at p-value of 0.590887. In conformity with the initial hypothesis which states that there is significant negative relationship between inventories conversion period and profitability of firms. Coefficient of Inventory conversion Period is negative and p-value of 0.558 attached to the test statistic. Opposed from the initial hypothesis the result of the regressions analysis shows that, Account payable period is 114.3204 and p-value of 0.072

In the regression model, the beta coefficient of Cash Conversion Cycle is 33.9695 and the p-value of 0.000 attached to the test statistic shows that this hypothesis significance at 5% level.

4.6. Discussion of the Regression Result

4.6.1. INVENTORY CONVERSION PERIOD

The study finds a significant relation between the ROA and ICP which is consistent with the study conducted by (Capkun, Hameri and Weiss 2009). Similarly, the result supports the evidence from the study of Jeng-Ren, et al., (2006) which points out that the companies with low ICP have more efficient working capital management. The regression results point out a significant negative relation between number of day's inventory and profitability which is similar to the previous studies (Deloof, 2003; Raheman and Nasr, 2007; Alipour 2011 Samiloglu and Demirgunes, 2008; Lazaridis and Tryfonidis, 2006.

Inventories are the core of brewery factories and the companies might have to maintain the sufficient inventory level to avoid either the stock-outs or the excess balance. They require raw material and work-in-process for their production and finished goods for sale to customers which affect them to have higher inventory balance and longer inventory period. On the other hand, the excess balance would also cost the company such as loss of benefit from short-term investment, having long outstanding stocks and obsolete inventories. In addition, metal manufacturing companies require the efficient inventory management, supply chain management, procurement and production. Without these systems, the companies may unable to manage their inventory effectively which result in high inventory balance and long inventory period.

4 6.2. ACCOUNT COLLECTION PERIOD

In the literature of working capital, research findings it is indicated that, accounts collection period is related with profitability of firms both positively and negatively, (Falope and Ajilore, 2009; Lazaridis and Tryfonidis, 2006; Nobanee, 2009; Marc Deloof 2003; Raheman and Nasr, 2007).The empirical result shows

a significant negatively relation between the ROA and ACP. The results are consistent with the findings from previous studies conducted by (Lazaridis and Tryfonidis, Deloof 2003, Raheman and Nasr, 2007) that provides the evidence of the negative relation between ROA and ARP.

The implication of the result is that, the increase or decrease in accounts collection will significantly and negatively affect profitability of the firms. It means that the shorter the firm's accounts collection period, the higher will be the profitability and vice versa.

4.6.3. ACCOUNT PAYABLE PERIOD

Result from regression model suggests a significant positive relation between the ROA and APP. The result is consistent with the prior study of (Usama 2012 Raheman and Nasr, 2007) on the contrary, the finding is opposed to the prior research of (Lazaridis and Tryfonidis (2006)

positive significant relationship between accounts payable period and profitability can be explained by the increased availability of funds caused by the delayed payment of accounts payable. Such funds can thus be used for productive purposes that can increase profitability

4. 6.4. CASH CONVERSION CYCLE

The empirical result suggests there is a significant positive relation between the Return on asset and cash conversion cycle which is similar to results found in the prior studies (Deloof 2003, Lazaridis/Tryfonidis 2006, Padachi 2006 Mohamad and Saad (2010). But it is opposing with the study of (Jeng-Ren, et al. 2006, Raheman et al. (2007) and Uyar (2009) found strong positive relationship between cash conversion cycle as a measure of working capital management profitability. It means that the longer firms cash conversion cycles the lower will be the profitability or the shorter the firm's cash conversion cycle, the higher will be the profitability. Considering the components of the cash conversion cycle (i.e., inventory period, accounts collection period) the negative result with cash

conversion cycle points out that an increase in profitability is associated with a lower in the cash conversion cycle. It shows that the profitable companies tend to have the longer cash conversion cycle which indicates to inefficient working capital management. This might be affected by either inventory period, accounts receivable period.

For instance, the companies offer long credit period to customers to raise their sales which lead to high profitability; on the contrary it has a negative effect to the companies' working capital as account collection period is longer which result in the longer cash conversion period. With regard to inventory period, the researcher might assume that profitable companies with high sale volume tend to maintain high inventory balance to supply their customers promptly. Then, they need raw material and work in process for their production as well as finished goods for sales to customer. However, the high inventory leads to the long inventory period. As for accounts payable period, in their purchasing process, the companies may receive a deal such as higher unit cost from the suppliers who offer the longer payment term.

The companies may take the deal if it is considered as providing the higher benefit with the higher unit costs which incase cost of sales and lead to lower profit; while the shorter payable period will also make the cash conversion cycle longer. On the contrary, low profit companies tend to have more effective working capital management with the shorter cash conversion cycle. This might explain as their situations force them to be very careful with their liquidity. Then, inventories and accounts receivable are well-managed. As for long accounts payable period, it might be because they delay their payments to suppliers as Deloof (2003) points

CHAPTER FIVE

CONCLUSION, RECOMMENDATIONS AND FURTHER CONSIDERATION

This chapter presents conclusion drawn from the overall overviews of the research by adding the main findings of the analysis part and give recommendation and future research directions.

5.1. Summery and Conclusion

As stated by Siddiquee and Khan (2009) it has been observed that, firms which are better at managing working capital are found to be able to build a better competitive advantage. They are also better at generating fund internally and also face lesser trouble while seeking external sources of financing. Efficient level of working capital should be present for smooth running of business regardless of the nature of business. From this study, it is concluded that maintaining efficient level of working capital is very important for manufacturing sector as well like all other sectors of business.

A sample of 6 financial performance of brewery factories companies found in Addis Ababa which covered the period from 2011 to 2015 has been used to conduct the study. The data was analyzed and interpreted descriptively and quantitatively. The study used return on assets as, dependent profitability variable. Accounts collection period, inventory conversion period and accounts payable period were used as independent working capital investment policy variables. Moreover, cash conversion cycle and current assets to total assets ratio has been used as comprehensive measures of working capital investment policy.

There is significant negative relation between profitability and the number of accounts collection period. Showing that the shorter it takes firms to receive their collection the more profitable they will be. This negative relationship can be elaborated as the number of periods to collect cash from credit customers becomes too long, it will adversely affect profitability of the firms. This

negative relationship may because of, if a firm collects its accounts collection quickly the fund will be available for other productive usage.

The researcher also found that the negative relationship between inventory conversion period and profitability. It shows that the longer it takes firms to replenish the inventory, the less profitable they will be. This suggests the obsolescence of inventory due to longer inventory period leads to lower profitability. Opposite to the research hypothesis the study has found that the positive but significant relation between account payable day and profitability of manufacturing firms.

The study has found that positive significant relation between cash conversion cycle and financial performance of brewery factories companies. As stated earlier, cash conversion cycle is an additive function of accounts collection period, inventory conversion period and accounts payable period; i.e. cash conversion cycle is equal to accounts receivable period plus inventory conversion period minus accounts payable period. Managing cash conversion cycle efficiently, means efficient management of these three items,

.

5.2. Recommendation

The findings of this study are helpful for the financial managers of the financial performance brewery and it provide the information regarding the management of short-term capital and also inform them about the management policies used by their peers. The information is useful for maintaining a healthy competition and improving own organization. The researcher based on the above findings and the conclusions drawn, recommends to the managers and employees of these brewery share companies. Management of CCC is an important factor in working capital management, and mangers of the firms should apply suitable CCC procedures and control mechanism.

Result shows there is a positive relationship between CCC and return on assets (ROA). Managing cash conversion cycle efficiently, means efficient management of these three items (ACP, ICP, and APP); therefore, the researcher recommended that to be profitable, brewery factories must try to keep these numbers of period to minimum level by developing a clear procedure for collecting the receivables and managing their inventories. If a firm collects its accounts collection quickly (which is part of CCC) the fund will be available for other productive usage In the sense, that the lesser the time it takes customers to pay their bills, results more cash available to replenish the inventory, this intern leads to more sales which ultimately results in an increase in profitability.

In addition to that the collection of collection in a short period of time may help firms to reduce the uncollectable from default. But In following its collection procedures the circumstance of customer's should be kept in mind. Good customers in temporary complexity should be treated differently from habitual defaulters; otherwise firms may lose their loyal customers. In addition, if managers reducing stock it produces major financial advantages by improving cash flows, reducing operational level costs of inventory (decreasing CCC). In the case of a sudden drop in sales accompanied with a mismanagement of inventory will lead to tying up excess capital at the expense of profitable operations. Moreover, the researcher recommends that marketing, purchasing and manufacturing departments should have to create strong linkage and communications so as to feed each other.

5.3. Further Consideration

This research has opened many avenues for future research specially in context of Ethiopia. There are several potential avenues for future research and improvements in working capital management. First, since there is in general shortage of working capital studies in case of financial performance brewery factories in Ethiopia, this may improve current understanding of the working capital management and associated performance in developing countries.

Second, the future research can be long in the area of working capital management is, the working capital practices followed in different sectors using the primary data collected directly from the financial managers of different firms. Such type of study will provide a fresh

understanding of respective managers that how they perceive and manage the working capital of the firm.

Third, another significant area is the working capital management for the financial sectors. This is again an area where studies needed to be undertaken because the working capital requirements for the financial sectors are different from those of the non-financial or manufacturing sectors.

Fourth, another consideration for further study for the proposed study is that the data used here is only 4 years due to the limitation of lack of availability of data; therefore, this study can be extended in terms of number years as well.

fifth, the results valued from this study should be evaluated keeping in mind that there could be many other dependent and independent variables as well besides the variables mentioned above, that can explain working capital management and profitability correlation and this study is limited only to the effect of selected variables in measuring the efficiency of working capital management, Therefore, this study can be extended by including some other variables in the model.

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Appendix

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. xtreg roa icp acp app ccc, fe

Fixed-effects (within) regression               Number of obs      =        30
Group variable: id                              Number of groups   =         6

R-sq:  within  = 0.9348                         Obs per group: min =         5
       between = 0.2092                                        avg =       5.0
       overall = 0.7276                                        max =         5

                                                F(4,20)            =     71.66
corr(u_i, Xb)  = -0.4349                        Prob > F           =    0.0000
```

roa	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
icp	-.0243531	.0408611	-0.60	0.558	-.1095878	.0608816
acp	-.5906887	.1477925	-4.00	0.001	-.8989785	-.282399
app	114.3204	60.08119	1.90	0.072	-11.00674	239.6476
ccc	33.9695	2.604165	13.04	0.000	28.53731	39.4017
_cons	-26.66276	2.5287	-10.54	0.000	-31.93753	-21.38798
sigma_u	1.4494537					
sigma_e	.7588968					
rho	.7848492	(fraction of variance due to u_i)				