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Working capital management practices: A study of select firms in Ethiopia

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Abstract
Studies on corporate finance generally focus on main decisions like capital structure, dividend and capital budgeting. These issues imply the study of long term financial decisions and have been receiving greater attention from researchers. Working capital is also an important component in companies' financial decision making. Firms may have an optimal level of working capital that maximizes their value. The purpose of this study is to investigate working capital management practices: a study of select firms in Ethiopian. To achieve the purpose of the study, 81 large tax payers firms were selected from different economic sectors out of 703 large tax payers firms. For the selection of the sample firms from the target population, purposive sampling technique was adopted. The present study is used primary data sources. The primary data were collected by survey questionnaire and interview and the To analyze the collected data, mean, standard deviation and ANOVA were carried out using SPSS 20.The primary result showed that all managers and managerial accountants responded to most of the cash management practices as highly required for the effective operations of the sampled firms. Some of the cash management practices which they highly require include: maintaining optimum cash balance; managing cash inflows, having sound cash planning policies; investing excessive cash; monitoring cash out flows. The analysis from the primary data of accounts receivable showed that Ethiopian firms did not give due attention on formulating policies for guiding accounts receivable, they did not reviewing accounts receivable policies from time to time and managing accounts receivable turnover ratio and resulting bad debt. It was concluded that all the managers and managerial accountants responded that they were not using the different inventory control techniques, thus all managers should use material requirement planning (MRP), Economic Order Quantity (EOQ), Justin- Time (JIT), Economic production quantity (EPQ) and supply chain management to ascertain inventory level as a practice for effective operations of their firms.

Keywords: working capital management practices, cash, receivables, inventory, accounts payables, working capital financing and short term investment

1. Introduction
Working capital may be regarded as the life blood of business. Working capital is major importance to internal and external analysis because of its close relationship with the current day-to-day operations of a business organization. It is common knowledge that a firm's value cannot be maximized in the long run unless it survives in the short run.

Firms fail most often because they are unable to meet their working capital needs; consequently, sound working capital management is a requisite for firm survival. Management and control of working capital is one of the most effective measures of a company's financial health. It is common to assume that a firm's objective is to maximize shareholder value, and effective working capital management can contribute substantially towards this goal. Efficient working capital management can foresee and sometimes avoid potential financial difficulties. Poor working capital management can lead to financial distress, which increases the probability of bankruptcy (Lakew, 2013) [1].

Effective working capital management is very important. As a result, many financial managers spend long time managing current assets. For instance, according to (Baker and Powel, 2005) [2], in USA manufacturing firms, current assets comprise about 40 per cent of the total assets and skillful management of these short-term assets is critical for ensuring that the firms can meet their short-term maturing obligations and provide attractive return to its shareholders. In addition, about 60 per cent of a financial manager's time is devoted to working capital management and many of the potential employees in finance-related fields will find out that their first assignment on the job will involve working capital (Sebhatleab, 2002) [3]; (Afza and Nazir, 2007) [4]. However, as explained above finance literature gives no or very little focus for the management of working capital management practices (Afza and Nazir, 2007). For these reasons, the managerial perception and the impact of working capital management practices on firm' performance is an essential topic of this study.

The effect of working capital management practices on corporate performance have been studied considerably by different researchers (Shin and Soenen, 1998) [5]; (Deloof, 2003) [6]; (Filbeck and Krueger, 2005) [7]; (Lazaridis and Tryfonidis, 2006) [8]; (Padachi, 2006) [9]; (Samiloglu and Demirgunes, 2008) [10]; (Tewodros, 2010) [11]; (Nuru, 2011) [12].

Most of these and other researchers identify significant relationship between efficiency in working capital management and firms' performance. However, most of, these studies concentrated on large firms operating within well-developed money and capital markets of developed

economies. From such findings it is difficult to generalize for relatively small size Ethiopian firms that operate within an undeveloped financial sector (with absence of organized stock markets and dominance of family owned business), where firms mostly obtain funds for their needed investment in working capital from owner financing, trade credit and short term bank loans. Research studies on the working capital management practices in developing countries, especially in Ethiopia remained an unnoticed area of empirical research. This lack of empirical evidence from developing countries is the major gap in the knowledge of working capital management practices. Therefore, it is difficult to convince business practitioners of the need for changes in practices until evidence of working capital management practices and its potential benefits are provided.

To the best of researcher's knowledge, no research has been done in Ethiopia on working capital management practices in different economic sectors. Thus with this serious shortcomings of the current literature, this study contributes to the existing literature by studying the working capital management practices in Ethiopia. Generally, the researcher has conducted this study with the aim of providing answers to the following basic research questions:

i. What are the practitioners (general managers, finance managers, production managers, marketing managers and management accountants) perceptions on the working capital management practices like management of (Cash, accounts receivables, inventories, accounts payable, financing and investment) required for the effective operation of Ethiopian firms?

2. Objective of the study

The main objective of the study is to investigate working capital management practices: A study of select firms in Ethiopia.

3. Hypothesis of the study

Ho1: There is no significance difference in the mean responses of all managerial staffs on the cash management, accounts receivable management, inventory management, accounts payable management, sources working capital financing, and short term investment management practices for the effective operation of the firms.

4. Research Methodology

The study begins with an extensive review of literature about working capital management practices to understand better the current phenomena and to narrow the research topic. The purpose is to answer the research problem, the research objectives and the hypotheses. In this research explanatory and descriptive research designs are applied. For the purpose of this present study, the data maintained by ministry of trade and Industry of Ethiopia and/or Ethiopian Revenue and Custom Authority served as a sample frame for the population. These databases consist of the names, addresses and contact details of 703 large Ethiopian firms.

At the fiscal year end of June 30, 2015 there are 703 Large Tax Payer Organization (LTOs) owned by both the state and private sectors; After the researcher investigated the financial statements of 703 companies from ERCA large taxpayers' branch office in Addis Ababa, only 81 firms that satisfy the criteria that the firms which have 10 years above audited financial statements were included in the sample study. The firms were selected purposively. Moreover, the firms were selected from eight economic sectors (See table 1) that can be regrouped in to Agriculture and allied sector, service sector and industry sector. None of the firms are from the financial sector. The firms are from the eight sectors of the economy, organized as a share companies and private limited companies. Furthermore, the business organizations are from both the private sector and the public sector.

For each of the sampled companies (81 large companies) a questionnaire was distributed to General Managers, Marketing Managers, Production/service Managers, finance Managers and Managerial Accountants. They were chosen as the target respondents as they are believed to represent the major Working Capital Management practices stakeholders within the organization and could be expected to have a better understanding of the information issues within the organization. A total of 405 respondents were taken as a sample size (81 companies multiplied by 5 managers of each respective firm) and questionnaires were distributed to managers and managerial accountants working in the sampled firms. But 49 respondents did not give response to the questionnaire and the total sample size is restricted to 356 respondents.

Survey questionnaire [1] and interview [2] were used as instrument to collect the primary data. The researcher has administered survey questionnaire and interviews to the general managers and accounting personnel of Ethiopian sample firms. The aspects on which the data are sort to be collected from the sample respondents constituted gender, age, work position, educational level, study field, work experience and knowledge of Financial/ managerial accounting of respondents. Whereas the data gathered regarding background information of responding companies constitute annual sales, information on number of employees currently employed in the company, company age, the degree of using technological equipment, importance of using advanced technology, using computers in administration and financial aspects and information about Finance/ Accounting Staff and the use of working capital management policies and practices of sample companies. Finally, survey questionnaire and interview were conducted to the practitioners (General Managers and management accountants) opinions on the working capital management practices (Cash, accounts receivables, inventories, accounts payable, investment and financing) required for the effective operation of Ethiopian sampled firms.

The purpose of all analyses is to summarize data so that it is easily understood and provides the answer to our original questions. Data collected during the survey was initially coded in to numerical representations, so that a series of statistical analyses could be performed with the help of computer software, namely Statistical Packages for Social Science (SPSS) version 20.0 and Micro Soft Excel 2013.

For this study, the researcher made use of the following

descriptive statistics, with range of aims:

- Measurements of central tendency, namely the mean and standard deviation were used.
- In calculating the mean and standard deviation for the various items of the questionnaire, the response category in the questionnaire was rated in scales as follows:

Table 3.2: Mean and standard deviation of respondents' opinion

Response Category	Points	Boundary Limit
Very Highly Required (VHR)	5	4.50-5.00
Highly Required (HR)	4	3.50-4.49
Required (R)	3	2.50-3.49
Somewhat Required (SR)	2	1.50-2.49
Not Required (NR)	1	1.00- 1.49

The questionnaire items were reported and described as: "Very highly required"; "Highly Required"; "Required"; "Somewhat Required"; and "Not Required" based on the boundary limits above. Analysis of Variance (ANOVA) was employed to test the theoretical framework on which the study was based so as to determine whether there was significant relationship, or differences among group mean totals, item mean scores and independent variables.

5. Results and Discussions

5.1 Cash management practices in Ethiopian sample firms

Cash is the most important factor in financial management. It is also most important current asset for the operations of the business. Every activity in an enterprise evolves round the cash. It may be rightly compared to the blood of human body. Just as blood gives life and strength, cash gives profit and solvency to business organization. Cash is limited in every enterprise and it can't be raised as and when one likes it. Managers therefore, spend much time and effort for planning of cash receipts and disbursements to ensure a desirable level of cash and they take great care to prevent cash from being lost, stolen or misappropriation.

The cash is obviously the most important current asset movement, as it is the most liquid and can be used to make immediate payments. Insufficient cash at any moment may prevent a firm from discharging its liabilities or force it to sell its other assets immediately. On the other hand, extreme liquidity may take the firm to make uneconomic investments. This underlines the significance of cash management. For this sake, the present study aims to answer the research question: What are the cash management practices required by firms for effective operations in Ethiopia? To answer research question 1, the data generated in section 4 of the questionnaire were analyzed and presented in Table 1.

Table 1: Mean response of respondents on cash management practices of sample firms

S. No	Items	N	Mean	Std. Dev.	Response Category
1	Maintaining optimum cash balance as a practice by the firm for effective operations	356	3.87	1.055	Highly Required
2	Management of cash inflows as a facilitator for effective operations of the firm	356	4.04	1.082	Highly Required
3	Sound cash planning policies is as a practice by the firm for effective operations	356	4.30	1.180	Highly Required
4	Investment of excessive cash as a practice for effective operations of the firms	356	4.21	1.087	Highly Required
5	Monitoring cash outflows as a practice by the firms for effective operations resource utilization of the firm	356	3.98	1.160	Highly Required
6	the firm should synchronizes the cash inflows with its cash outflows as a practice for effective business operations	356	3.68	.910	Highly Required
7	Cash receipts should be forecasted as a practice for effective operations by the firm	356	3.46	1.041	Required
8	Cash expenditures should be forecasted as a practice for effective operations by the firm	356	3.77	1.050	Highly Required
9	Staff dealing with cash should be trained periodically as a practice for effective operations by the firm	356	3.34	1.085	Required
10	Staff handling cash should be rotated at intervals for effective internal controls by the firm	356	3.42	1.057	Required
Cluster Mean		356	3.807	1.0707	Highly Required

***Source*:** SPSS Result, 2015 / 2016

Table 1 depicted the items 1, 2, 3, 4, 5, 6, and 8 had mean scores ranging from 3.68 to 4.30 which were within the boundary limit for highly required. This implies that all managers responded to the aforementioned items on cash management practices required for effective operations of Ethiopian firms as highly required. However, items 7, 9 and 10 revealed that the mean scores ranged from 3.34 to 3.46 which were within the boundary limit for required. This implies that all managers responded to the fact that: Cash receipts should be forecasted as a practice for effective operations by firms; Staff dealing with cash should be trained periodically and Staff handling cash should be rotated at intervals as a practice for effective internal controls by the firms, as required. The standard deviation values which ranged from .910 to 1.180 showed that the opinions of the respondents are not far from each other and they are also close to the mean value. However, since the cluster mean was 3.807, it therefore implies that all managers agreed to majority of the items on cash management practices as highly required for the effective operations of Ethiopia sampled firms.

The result of the findings in the above table revealed that all managers and managerial accountants responded to most of the cash management practices as highly required for the effective operations of the sampled firms. Some of the cash management practices which they highly require include: maintaining optimum cash balance; managing cash inflows, having sound cash planning policies; investing excessive cash; monitoring cash out flows; synchronizing cash outflows with

their cash inflows; and forecasting cash expenditures. The above results, confirms the views of (Gitman, 1997) [13] and (Scherr, 2004) [2], (Oroka, 2013) [14] that the purpose of cash management is to determine and achieve the appropriate level and structure of cash, and marketable securities, consistent with the nature of the business's operations and objectives. Similarly the result agrees with the findings of Marfo-Yiadom & Agyei (2012) [15] who noted that every business uses cash balances. Cash is used to pay creditors, pay for purchases, and pay wage and salaries to employees. It is also used to acquire non-current assets. Furthermore, it is required to pay interest on loans and taxation.

According to Lasher (2000) [16], bad cash management practices can make a strong company weak to the point of failure. He stressed that especially among small firms; it is uncommon for companies to be simultaneously profitable and bankrupt.

However, the present study also revealed that Ethiopian firms require the following cash management practices for the effective operations: cash receipts should be forecasted and staff's handling cash should be rotated at intervals. Hence, Deakins, Logan and Steele (2001) [17] noted that managing cash flow and cash conversion cycle is a critical component of overall financial management for all firms, especially those who are capital constrained and more reliant on short-term sources of finance. The findings of this study is at variance with the study of Tewolde (2002) [18] who found that firms controls cash collections by separating duties for sequential cash operations, handling and recording. Therefore, proper cash management depicts effective operations of firms. This is because losses will be minimized, profitability of the business will increase, and consistency with the nature of the firm's objectives can be easily attained.

From the view of the researcher, cash receipts being forecasted as a practice, training staff dealing with cash periodically and staff handling cash being rotated as a practice by firms were responded as required exception when compared to the other items on cash management practices which were highly required, because cash receipts are not usually planned for effective operation by firms and though majority of the sampled firms have sufficient and competent finance/accounting expertise (which were discussed this issue in chapter 4 of this study), rotation of staff handling cash will almost be impossible.

Hypotheses Testing

In order to test the significance of the difference in the response of cash management practices for the effective operation of the firm among the sample respondents "ANOVA" test has been used and the results are shown in table 1a.

Ho: There is no significant difference in the mean responses of all managerial staff on the cash management practices for the effective operation of the firm

Table 1a: Analysis of variance (ANOVA) result of the mean responses of all managers on the cash management practices for the effective operation of the firm

Sources of variation	SS	DF	MS	F	P-value	F crit
Between Groups	338.814	4	84.703	526.230	0.0000	1.947348
Within Groups	56.498	351	.161			
Total	395.312	355				

***Source*:** SPSS Result, 2015 / 2016

It is evident from table 1a the calculated value of F is 526.230 which is greater than the table value of 1.947 and p-value 0.0000 at a 5 percent level of significance with degree of freedom V_1= 4 and V_2= 351 and hence the variance among all managers are significant. This ANOVA test rejected the null hypothesis of there is no significance difference in the mean responses of all managers on the cash management practices for the effective operation of the firm. This means that all managers' responses on the cash management practices required by firms for effective operations in Ethiopia are dissimilar.

5.2 Accounts receivable management practices of Ethiopian sample firms

Given a choice, every firm would prefer selling its produce on cash basis. However, due to factors like trade policies, prevailing marketing conditions, etc., businesses are compelled to sell their goods on credit. In certain circumstances, a business may deliberately extend credit as a strategy of increasing sales. According to Pfohl, Elbert & Hofmann (2003) [19], extending credit means creating a current asset in the form of 'Debtors' or 'Accounts Receivable'. Investment in this type of current assets needs proper and effective management as it gives rise to costs such as: Cost of carrying receivable (payment of interest etc.) and cost of bad debt losses. For this sake, the present study aims to answer the research question: What are the accounts receivable management practices required by firms for effective operations in Ethiopia? To answer research question 2, the data generated in Section 4 of the questionnaire were analyzed and presented in table 2.

Table 2: Mean response of respondents on accounts receivable management practices of sample firms

S. No	Items	N	Mean	Std. Dev.	Response Category
1	Account receivables controlled as a practice for effective operations by the firm.	356	3.96	1.241	Highly Required
2	The firm should evaluate the average credit extended to customers as a practice for their effective business operations.	356	3.57	1.006	Highly Required
3	The firm should project expected sales and expected investment in receivables as a practice for effective business operations.	356	3.79	.994	Highly Required
4	Account receivables to customers should go with a time lag for repayment as a practice for effective operations of the firm.	356	4.10	1.201	Highly Required
5	Management of the firm should formulate policies guiding accounts receivables as a practice for effective business operations.	356	3.17	1.297	Required

6	Terms of agreement should be made for every credit sales as a practice for effective operations of the firm.	356	4.00	1.234	Highly Required
7	Management should make expectations on account receivable turnover and resulting bad debts as a practice for effective operations of the firm.	356	3.26	1.146	Required
8	Management should review accounts receivable policies from time to time as a practice for effective operations of the firm.	356	3.09	1.304	Required
9	Collection policy should be made for obtaining payments of past due accounts as a practice for effective operations of the firm.	356	3.01	1.340	Required
10	Staff should be trained in credit and collection policies as a practice for the effective operations of the firm.	356	2.98	1.431	Required
Cluster Mean		356	3.49	1.295	Required

***Source*:** SPSS Result, 2015 / 2016

The above table 2 portrayed that items 1, 2, 3, 4 and 6 had mean scores ranging from 3.57 to 4.10 which were the boundary limit for highly required. This implies that all managers opinion to the above items on accounts receivable management practices as highly required by sampled firms for effective operations in Ethiopia. However, items 5, 7, 8, 9 and 10 showed that the mean scores from 2.98 to 3.26 which were within the boundary limit for required. This implies that all managers responded to these items on accounts receivable management practices as required by firms for effective operations in Ethiopia. The standard deviation values which ranged from .94 to 1.43 showed that the opinions of the respondents were not far from the mean value. The table further revealed a cluster mean of 3.5 which was within the boundary limit for highly required, implying that all managers on a general note responded to accounts receivable management practices as highly required by firms for effective operations in Ethiopia.

It was found that respondents opinion for highly require accounts receivable management practices: like accounts receivables are controlled, average credit extended to customers are evaluated accounts receivables to customers goes with a time lag for repayment, expected sales and investment in receivables are projected, and terms of agreement are made for every credit sales. While managers of the firms also agreed that firms require the following accounts receivable management practices: sample managerial staff opinion on require are firms should formulate policies guiding accounts receivable, reviewing accounts receivable policies from time to time, managing accounts receivable turnover and resulting bad debt, collection policy being made for obtaining payments of past due accounts, and staff should be trained in credit and collection policies. This supports the view of Kaur (2010) [20] who opined that, the inefficient management of accounts receivable not only reduces profitability but ultimately may also lead a business concern to financial crises. On accounts receivables Lind (2011) [21] noted that the management of accounts receivables needs to be in balance: if the collection policy of a firm is stringent, it may reduce bad debts and the resources tied up in receivables, but at the same time, it probably affects sales negatively as well. On the other hand, profits from credit sales do not benefit a firm unless the amount is collected.

This result supports the views Pfohl, Elbert & Hofmann (2003), and (Oroka, 2013) advising that the objective of any management policy pertaining to accounts receivables would be to ensure that the benefits arising due to the receivables are more than the cost incurred for receivables and the gap between benefit and cost increases resulting in increased profits. An effective control of receivables helps a great deal in properly managing it. Each business should, therefore, try to find out average credit extended to its client.

Hypothesis testing

To judge whether there was any significant difference in the mean responses of all managers on the accounts receivable management practices for the effective operation of the firm, the following hypothesis is framed and tested.

Ho: There is no significant difference in the mean responses of all managers on the accounts receivable management practices for the effective operation of the firm.

Table 2a: Analysis of variance (ANOVA) result of the mean responses of all managers on the accounts receivable management practices for the effective operation of the firm

Sources of variation	SS	DF	MS	F	P-value	F crit
Between Groups	453.815	4	113.454	430.266	0.0000	1.947348
Within Groups	92.553	351	.264			
Total	546.368	355				

***Source*:** SPSS Result, 2015 / 2016

Table 2a shows that the calculated value of F is 430.266 which is greater than the table value of 1.947 and P- value 0.0000 at a 5 percent level of significance with degree of freedom V_1= 4 and V_2= 351 reveals that the null hypothesis is rejected. This means that all managers' responses on the accounts receivable management practices required by firms for effective operations in Ethiopia are not the same.

5.3 Inventory management practices of Ethiopian sample firms

A good inventory management is important to the successful operations of most organizations, unfortunately the importance of inventory is not always appreciated by top management. This may be due to a failure to recognize the link between inventories and achievement of organizational goals or due to ignorance of the impact that inventories can have effect on costs and profits. Working capital requirements are influenced by inventory holding. Hence, the need for effective and efficient management of inventories is required by firms. For this sake, the present study aims to answer the research question: What are the inventory management practices required by firms for effective operations in Ethiopia? To answer research question 3, the data generated in

Section 4 of the questionnaire were analyzed and presented and shown in table 3.

Table 3: Mean response of respondents on inventory management practices of sample firms

S. No	Items	N	Mean	Std. Dev.	Response Category
1	Minimum stock level should be fixed as a practice for the effective operations of the firm.	356	3.82	1.192	Highly Required
2	Inventory management policies should be made as a practice for optimal resource utilization of the firm.	356	3.00	1.509	Required
3	Sales forecast should be developed in inventory management as a practice for the effective operations of the firm.	356	3.00	1.342	Required
4	Excess inventories should be avoided as a practice for effective internal controls of the firm.	356	4.10	1.201	Highly Required
5	Inventory stock-out should be avoided as a practice for the effective operations of the firm.	356	4.16	1.170	Highly Required
6	On-the-job training should be organized as a practice for staff on inventory management needed for the effective operations of the firm.	356	3.00	1.413	Required
7	Inventories should be ordered following laid down guidelines as a practice for effective operations of the firm.	356	3.18	1.217	Required
8	Inventory planning should be made at regular intervals as a practice for effective operations of the firm.	356	2.67	1.250	Required
9	Inventories should be properly checked on arrival as a practice for effective operations of the firm.	356	4.01	1.104	Highly Required
10	Material requirement planning, Economic Order Quantity (EOQ), Justin- Time (JIT), Economic production quantity and supply chain management should be used to ascertain inventory level as a practice for effective operations of the firm.	356	2.49	1.132	Required
Cluster Mean		356	3.34	1.389	Required

***Source*:** SPSS Result, 2015 / 2016

Table 3 elicited that items 1, 4, 5 and 9 showed that the mean scores ranged from 3.82 to 4.16 which were within the boundary limit for highly required. This implies that all managers agreed to these items on inventory management practices as highly required by firms for effective operations in Ethiopia. While item 2, 3, 6, 7, and 8 had mean scores ranging from 2.67 to 3.18 which were within the boundary limit for required. However, item 10 had a mean score of 2.49 which is in-between the boundary limit of somewhat required. This means, all managers are in-different on if material requirement planning (MRP), Economic Order Quantity (EOQ), Justin- Time (JIT), Economic production quantity (EPQ) and supply chain management should be used to ascertain inventory level as a practice for effective operations of firms. The standard deviation values which ranged from 1.104 to 1.509 showed that the opinions of the respondents were far from the each other and far from the mean value. In the table further revealed the cluster mean of 3.34 which is within the boundary limit for required, implying that all managers on a general note responded to the items on inventory management practices as required by firms for effective operations in Ethiopia.

According to sample respondents opinion it was found that firms in Ethiopia highly require for following inventory management practices: minimum stock level is fixed, excess inventories are avoided, inventory stock out are avoided, and inventories are properly checked on arrival. While firms in Ethiopia state require for the following inventory management practices: inventory management policies being made for optimal resource utilization, sales forecast are developed in inventory management for effective operations, on-the-job training are should be organized for staff on inventory management, inventories should be ordered following laid down guidelines, and inventory planning being made at regular intervals. More so, firms somewhat require Material requirement planning (MRP), Economic Order Quantity (EOQ), Justin- Time (JIT), Economic production quantity (EPQ) and supply chain management as a practice to ascertain inventory level.

These findings are in concedes with (Breuer, 2009) [22] who deposed that a good inventory management practice is important to the successful operations of most organizations, unfortunately the importance of inventory is not always appreciated by top management. Similarly this finding agrees with the view of (Scherr, 2004), who noted that inventory planning helps to match inventory requirements to sales and production needs. It also helps to know inventory acquisition and usage during lead-time, quantity on hand and on order as well as the levels of safety stock.

In supporting the view of Breuer on the challenges of inventory management practices, (Maysami, 2009) [23] advised that since holding inventory involves costs such as storage and insurance expenses, excess inventory must also be avoided if minimal cost and maximum profits are desired.

Hypotheses testing

To judge whether there was any significant difference in the mean responses of all managers on the inventory management practices for the effective operation of the firm, the following hypothesis is framed and tested.

Ho: There is no significant difference in the mean responses of all managers and managerial accountants on the accounts receivable management practices for the effective operation of the firm.

Table 3a: Analysis of variance (ANOVA) - result of the mean responses of all managers on the inventory management practices for the effective operation of the firm

Sources of variation	SS	DF	MS	F	P-value	F crit
Between Groups	439.641	4	109.910	594.854	0.0000	1.947348
Within Groups	64.854	351	.185			
Total	504.494	355				

***Source*:** SPSS Result, 2015 / 2016

Table 3a shows that the calculated value of F is 594.854 which is greater than the table value of 1.947 and P-value 0.0000 at a 5 percent level of significance with degree of freedom V_1= 4 and V_2= 351 and hence the variance among all managers are significant. This ANOVA test rejected the null hypothesis of there is no significance difference in the mean responses of all managers on the inventory management practices for the effective operation of the firm. This means that all managers differently responded to the inventory management practices required by firms for effective operations in Ethiopia.

5.4 Accounts payable practices of Ethiopian sample firms

The management of accounts payable is the other side of the management of accounts receivable. Accounts payable of one small and medium scale enterprise are accounts receivable of another small and medium scale enterprise. Management of accounts payable in working capital cycle deals with debts owed to customers from goods and services, and the logic of payment terms. From the perspective of an individual company, the best way to deal with their accounts payable is to take the full credit period if no financial incentives are offered. If a firm makes payments earlier than required, it loses profits, because the need for financed working capital increases. In case discounts are offered, the situation should be analyzed by calculating the effective annual rate of interest earned by the discount. If it is more than the cost of capital used up by the early payment, the discount should be taken (Mott, 2005) [24], (Oroka, 2013).

From another point of view, delaying payments to the supplier, the quality of product bought can be assessed before paying. A firm can also use it as an inexpensive and flexible source of financing. But then again, paying late may become costly if the supplier offers discounts for early payment. The traditional view on accounts payable has been that more profitable firms pay their bills faster. On the other hand, speeding up the payments to the suppliers may lead to increase of profitability because of the substantial discounts offered for prompt payment (Deloof, 2003) [25]. For this sake, the present study aims to answer the research question: What are the accounts payable management practices required by firms for effective operations in Ethiopia? To answer research question 4, the data generated in section 4 of the questionnaire were analyzed and presented in table 4.

Table 4: Mean response of respondents on accounts payable management practices of sample firms

S. No	Items	N	Mean	Std. Dev.	Response Category
1	Management should set up disbursement system in managing accounts payable as a practice for effective operations of the firm.	356	2.33	1.060	Some what Required
2	Accounts payable policies and procedures should be formulated as a practice for effective operations of the firm.	356	3.00	1.359	Required
3	The duties of staff handling accounts payable should be segregated as a practice for effective operations of the firm.	356	2.75	1.302	Required
4	Accounts payable systems should be monitored and reevaluated at intervals as a practice for effective operations of the firm.	356	2.99	1.513	Required
5	Accounts payables should be controlled as a practice for effective operations of the firm.	356	2.97	1.362	Required
6	Accounts payables received from customers should go with a time frame for payment required for effective operations of the firm.	356	3.57	1.115	Highly Required
7	Terms of agreement should be made for every credit receipt as a practice for effective business operations of the firm.	356	3.34	1.085	Required
8	Staff should be trained on credit payment policies as a practice for effective operations of the firm.	356	3.09	1.304	Required
9	Management should review accounts payable policies from time to time as a practice for effective operations of the firm.	356	2.95	1.400	Required
10	Management should project a limit on accounts payable as a practice for effective operations of the firm.	356	3.03	1.373	Required
Cluster Mean		356	3.00	1.330	Required

***Source*:** SPSS Result, 2015 / 2016

The above table 4 furnishes that items 2, 3, 4, 5, 7, 8, 9 and 10 had mean scores ranging from 2.75 to 3.34 which were within the boundary limit for required. This implies that all managers responded to these items on accounts payable management practices as required by firms for effective operations in Ethiopia. Exception to all other items, were items 1 and 6 which showed that the mean scores of managers and accountants were 2.33 and 3.57 respectively. This revealed that in item 1, managers were in-different to the fact that management should set up disbursement system in managing accounts payable as a practice for effective operations of firms opined somewhat require. While for item 6, managers and

accountants responded that accounts payables received from customers should go with a time frame for payment as a practice, as highly required for effective operations of small and medium scale enterprises. The standard deviation values which ranged from 1.06 to 1.513 showed that the opinions of the respondents were far from the individual respondents opinion and are far from the mean value. Since the cluster mean of 3.00 is within the boundary limit for required, therefore, managers and accountants responded to majority of the items on accounts payable management practices as required by their firms.

It was found that respondents opinion require for the following accounts payable management practices: accounts payable policies and procedures should be formulated, duties of staff handling accounts payable should be segregated, accounts payable systems should be monitored and reevaluated at intervals, accounts payables should be controlled, terms of agreement should be made for every credit receipt, staff should be trained on credit payment polices, management should review accounts payable policies from time to time and management should project limit on accounts payable. The findings of this research corroborate the views of and Scherr (2004); Mullins (2009) [26]; (Oroka, 2013) who opined that accounts payable are obligations (debt, liabilities) that will be settled at a future time. They are considered "current liabilities," which means that the debt will be settled with current assets during the current operating cycle.

Hypothesis testing

To judge whether there was any significant difference in the mean responses of all managers on the accounts payables management practices for the effective operation of the firm, the following hypothesis is framed and tested.

Ho: There is no significant difference in the mean responses of all managers on the accounts payables practices for the effective operation of the firm.

Table 4a: Analysis of variance (ANOVA) result of the mean responses of all managers on the accounts payable management practices for the effective operation of the firm

Sources of variation	SS	DF	MS	F	P-value	F crit
Between Groups	362.944	4	90.736	877.900	0.0000	1.947348
Within Groups	36.278	351	.103			
Total	399.222	355				

***Source*:** SPSS Result, 2015 / 2016

Table 4a reveals that the calculated value of F is 877.900 which is greater than the table value of 1.947 and P-value0.0000 at a 5 percent level of significance with degree of freedom V_1= 4 and V_2= 351 and hence the variance among all managers are significant. Hence null hypothesis is rejected. This means that all managers' opinion on the cash management practices required by firms for effective operations in Ethiopia are not the same.

5.5 Sources of working capital financing management practices of Ethiopian sample firms

Now, it is worthwhile to understand the sources to financing working capital. Working capital or current assets are those assets, which unlike fixed assets change their forms rapidly. Due to this nature, they need to be financed through short-term funds. For this sake, the present study aims to answer the research question: What are the sources of working capital financing practices required by firms for effective operations in Ethiopia? To answer research question 5, the data generated in section 4 of the questionnaire were analyzed and presented in table 5.

Table 5: Mean response of respondents on working capital financing practices of sample firms

S. No	Items	N	Mean	Std. Dev.	Response Category
1	Equity finance as a source of financing working capital by the firm for effective operations	356	3.43	1.288	Required
2	Long-term debt as a source of financing working capital for the retained earnings of the firm.	356	3.97	1.305	Highly Required
3	Asset-based financing as a source of funding working capital for effective operations of the firm	356	4.36	1.131	Highly Required
4	Accounts payable as a valuable source of financing in working capital to meet short term obligations of the firm	356	4.13	1.132	Highly Required
5	Accruals as a discretionary source of financing in working capital for optimal resource utilization of the firm	356	3.87	1.187	Highly Required
6	Bank loans as a source of financing working capital for the liquidity of the firm	356	4.24	1.024	Highly Required
7	Promoters fund as a source of financing working capital required by the firm for effective operations	356	3.47	1.286	Required
8	Borrowing from family for private and/or subsidy by the government for public as a source of financing in working capital for the profitability of the firms.	356	3.47	1.171	Required
9	Thrift as a source of financing working capital for effective operations of the firm	356	4.25	1.096	Highly Required
10	Unsecured financing as a source of financing working capital for the solvency of the firm	356	2.43	1.063	Somewhat Required
Cluster Mean		356	3.76	1.295	Highly Required

***Source*:** SPSS Result, 2015 / 2016

The data in table 5 revealed that items 2, 3, 4, 5, 6 and 9 had mean scores ranging from 3.97 to 4.36 which were the boundary limit for highly required. This implies that all managers responded to the fact that: long term debt; asset based financing, accounts payable; bank loans; accruals, and thrift are highly required sources of financing working capital by firms for effective operations in Ethiopia. However, items 1, 7, and 8 showed that the mean scores of the respondents

ranged from 3.43-3.47 which was the boundary limit for required. This revealed that managers and accountants responded to the fact that: equity finance, accruals; promoters fund and borrowing from family for private and/or subsidy by the government for public firms are required opinion of respondents for sources of financing working capital by firms for effective operations in Ethiopia. While item 10 shows that managers were in-different to the fact that unsecured financing as a source of financing working capital for the solvency of the firm and revealed somewhat require. The standard deviation values which ranged from 1.024 to 1.305 showed that the opinions of the respondents were not too far from the mean value. Since the cluster mean was 3.76. Therefore, managers agreed to majority of the items as highly required for sources of financing working capital by firms for effective operations in Ethiopia.

The findings of the study revealed sources of financing working capital as highly required by firms for effective operations in Ethiopia. The results revealed that the major sources of financing the working capital of Ethiopian firms for their effective operations are: long term debt; asset based financing, accounts payable; bank loans; accruals, and thrift which are in consonance with the views of (Pfohl, Elbert & Hofmann, 2003); (Oroka, 2013). They deposed that the major sources of financing the working capital of businesses vis-à-vis small and medium scale enterprises are: supplier's credit, bank loans, promoter's fund, equity finance, long-term debt, off-balance sheet financing, asset-based financing, accounts payable, accruals and unsecured financing.

Empirically, Fisman (2001) [27] showed short-term credit; particularly supplier credit is positively correlated with capacity utilization because firms lacking credit face inventory shortages leading to lower capacity utilization. Petersen and Rajan (1997) [28] argue that even in the United States, with extremely well developed financial markets, trade credit is the largest single source of short-term financing. Fisman, particularly claims in developing countries where formal lenders are limited, trade credit plays an even more significant role in funding firm's activities.

Hypothesis testing

In order to test the significance of the difference in the response of sources of working capital financing practices for the effective operation of the firm among the sample respondents "ANOVA" has been used and the results are shown in Table 5a.

Ho: There is no significant difference in the mean responses of all managers on the sources of working capital financing practices for the effective operation of the firms.

Table 5a: Analysis of variance (ANOVA) - result of the mean responses of all managers on the source working capital financing practices for the effective operation of the firm

Sources of variation	SS	DF	MS	F	P-value	F crit
Between Groups	532.076	4	133.019	818.757	0.0000	1.947348
Within Groups	57.25	351	.162			
Total	589.101	355				

***Source*:** SPSS Result, 2015 / 2016

It is evident from table 5a the calculated value of F (818.757) is greater than the table value of F (1.947) and P-value 0.0000 at a 5 percent level of significance with degree of freedom V_1= 4 and V_2= 351 and hence the null hypothesis is rejected. There has been significant difference in the mean responses of all managers on the working capital financing practices for the effective operation of the firm. This means that all managers' responses on the working capital financing practices required by firms for effective operations in Ethiopia are not the same.

5.6 Investment management practices of Ethiopian sample firms

Unlike investments in fixed assets which generate cash inflows over long periods of time, current assets have a cash-to-cash conversion cycle of less than twelve months (Scheer, 2004). Nonetheless, an investment has to be made in current assets, and as with all investments the returns should exceed the required rate of return, otherwise the business's success will be jeopardized. Moreover, in the interests of efficiency and productivity, this investment needs to be carefully managed. The investment in current assets should comprise the best possible combinations of cash, debtors, inventory, and prepayments, which enable the effective and efficient utilization of the investment in fixed assets. Thus the composition and structure of current assets is an important issue and is worthy of consideration (Gitman, 1997). For this sake, the present study aims to answer the research question: What are the investment management practices required by firms for effective operations in Ethiopia? To answer research question 6, the data generated in Section 4 of the questionnaire were analyzed and presented and shown in table 6.

Table 6: Mean response of respondents on investment management practices of sample firms

S. No	Items	N	Mean	Std. Dev.	Response Category
1	The rate of return on investments should be considered before actually investing in working capital as a practice for effective operations of the firm.	356	4.10	1.286	Highly Required
2	Investment policies should be formulated as a practice for effective operations of the firm.	356	2.92	1.409	Required
3	Risk on investments should be evaluated as a practice for effective operations of the firm.	356	3.86	1.166	Highly Required
4	Management should engage in training on best investment practices as a practice for effective operations of the firm.	356	2.83	1.332	Required
5	All idle cash should be invested into the business as a practice for effective operations of the firm.	356	3.84	1.101	Highly Required
6	Investment decisions should be left only in the hands of management as a practice for effective operations of the firm.	356	4.11	1.234	Highly Required

7	Contractual agreements should be reached for every investment made as a practice to facilitate effective operations of the firm.	356	3.60	.903	Highly Required
8	Investment policies and procedures should be reviewed periodically for effective operations of the firm.	356	2.87	1.408	Required
9	Liquidity and profitability should be major determinants of investment in working capital as a practice for effective operations of the firm.	356	4.03	1.090	Highly Required
10	Investment conversion period (i.e. cash-to-cash conversion cycle) should be considered before investing into business transactions as a practice for effective operations of the firm.	356	3.31	1.116	Required
Cluster Mean		356	3.55	1.310	Highly Required

***Source*:** SPSS Result, 2015 / 2016

The data in table 6 revealed that items 1, 3, 5, 6, 7 and 9 had mean scores ranging from 3.60 to 4.11 which were within the boundary limit for highly required. This implies that all managers responded to the aforementioned items on investment management practices as highly required by firms for effective operations in Ethiopia. While, items 2, 4, 8 and 10 showed that the mean scores ranged from 2.83 to 3.31 which were the boundary limit for required. The standard deviation values which ranged from 0.903 to 1.409 showed that the opinions of the respondents were not far from the mean value and their opinions are not far from each other. The table further revealed the cluster mean of 3.55 which was within the boundary limit for highly required, implying that all managers on a general note responded to the investment management practices as required by firms for effective operations in Ethiopia.

According to sample managerial staff opinion it was found that Ethiopian firms state for highly require the following investment management practices: the rate of return on investment should be considered before actually investing in working capital, risk on investment are evaluated, all idle cash should be invested into the business, investment decisions should be left only in the hands of management, contractual agreements should be reached for every investment made, and liquidity and profitability should be major determinants of investment in working capital. While managers of firms in Ethiopia State agreed that firms require the following investment management practices: investment policies should be formulated, management should engage in training on best investment practices, investment policies and procedure should be reviewed periodically, and investment conversion period should be considered before investing into business transactions.

These findings are supported by the study of (Scheer, 2004), (Oroka, 2013) who noted that investment has to be made in current assets, and as with all investments the returns should exceed the required rate of return, otherwise the business's success will be jeopardized. Moreover, in the interests of efficiency and productivity, this investment needs to be carefully managed. The investment in current assets should comprise the best possible combinations of cash, debtors, inventory, and prepayments, which enable the effective and efficient utilization of the investment in current and fixed assets.

Hypothesis testing

To judge whether there was any significant difference in the mean responses of all managers on the short term investment management practices for the effective operation of the firm, the following hypothesis is framed and tested.

Ho: There is no significant difference in the mean responses of all managers on the investment management practices for the effective operation of the firm.

Table 6a: Analysis of variance (ANOVA) result of the mean responses of all managers on the investment management practices for the effective operation of the firm

Sources of variation	SS	DF	MS	F	P-value	F crit
Between Groups	548.775	4	137.194	1258.660	0.0000	1.947348
Within Groups	38.3799	351	.109			
Total	587.154	355				

***Source*:** SPSS Result, 2015 / 2016

It is evident from table 6a the calculated value of F is 1258.660 which is greater than the table value of 1.947 and P-value 0.0000 at a 5 per cent level of significance with degree of freedom V_1= 4 and V_2= 351 and hence the variance among all managers are significant. This ANOVA test rejects the null hypothesis this means that all managers' responses on the investment management practices required by firms for effective operations in Ethiopia are different.

6. Summary and hypotheses testing

This chapter presented that analysis of data collected through questionnaire, interview and documents reviewed as related to the sspecific objective of the present study, i.e., working capital management practices required by Ethiopian firms for the effective operation of their businesses. The chapter begins with analysis of the major six working capital management practices (i.e., cash management practices, accounts receivable management practices, inventory management practices, accounts payable management practices, short–term investment management practices and working capital financing practices) of the sample firms. The mean and standard deviation were employed to know the opinion of respondents on working capital management practices, while Analysis of Variance (ANOVA) was employed in analyzing/ testing the hypothesis about the difference among five populations mean values. In this study, the five mean populations were General Managers, Marketing Managers, Production/service Managers, finance Managers and Managerial Accountants of large firms in Ethiopia. To judge whether there was any significant difference in the mean responses of all managers on the *cash management, accounts receivable management, inventory management accounts*

payable management, *working capital financing*, and *short term investment management practices* for the effective operation of the firm, "ANOVA" Test has been used and the results are shown in table.5.9. The hypothesis is framed and tested as Ho.

Table 5.9: Analysis of variance (ANOVA) result of the mean responses of all managers

S. No.	Response items	F statistics	P-value	Fcrit	Decision rule*
1	Cash Management Practices	526.230	0.0000	1.947348	Reject
2	Accounts Receivable Management Practices	430.266	0.0000	1.947348	Reject
3	Inventory Management Practices	594.854	0.0000	1.947348	Reject
4	Accounts Payable Practices	877.900	0.0000	1.947348	Reject
5	Working capital financing practices	818.757	0.0000	1.947348	Reject
6	Short term investment practices	1258.660	0.0000	1.947348	Reject

*****Denotes: if the calculated value of F statistics is greater than the table value of at a 5 per cent level of significance, null hypothesis is rejected: Implies that no significance relationship in the mean responses of all managers on the components of working capital management practices for the effective operation of the firm.

7. Conclusions

1. It was concluded that all the managers and managerial accountants responded that they were not using the different inventory control techniques, thus all managers should use material requirement planning (MRP), Economic Order Quantity (EOQ), Justin- Time (JIT), Economic production quantity (EPQ) and supply chain management to ascertain inventory level as a practice for effective operations of their firms.
2. It is suggested that sample firms should periodically evaluate receivables and liquidity management process to determine their effectiveness and efficiency.

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