
A SURVEY OF WORKING CAPITAL MANAGEMENT PRACTICES AMONG MANUFACTURING COMPANIES IN ETHIOPIA

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Abstract

The purpose of this study was to explore the working capital management practices of manufacturing companies in Ethiopia and make comparison with previous similar studies. The study used survey method on a sample of 144 manufacturing companies in Ethiopia that were selected using two-stage stratified random sampling. Survey analysis was employed and then results were presented using tables followed by explanation in three sections where the first section presented the working capital policy matters, followed by the overall management of working capital and finally the management of specific components of working capital. The result showed that the manufacturing companies of Ethiopia have formal and situational working capital policy that are under the responsibility of financial managers who make working capital review per year. The finding also showed that much time is dedicated towards the management of working capital through use of various managerial methods and techniques.

Keywords: Working Capital Management Practices, Cash and Marketable Securities, Accounts Receivable, Inventories, Short Term Financing

1. Introduction

An efficient working capital management practices particularly in manufacturing firms is vital and contribute a lot for wealth maximization goal of such firms. Horne and Wachowicz (2009) discussed some reasons why working capital management matters are very important. For one thing, the current assets of a typical manufacturing firm account for over half of its total assets and thus it is important to use such resources efficiently. Second, for small firms, current liabilities are the principal source of external financing. These firms do not have access to the longer-term financing, other than to acquire a mortgage on a building. The fast-growing but larger company also makes use of current liability financing which requires proper management. Particularly the absence of capital market in Ethiopia has boosted the problem related to financing investments even for medium and large manufacturing companies. Third, the management of current assets and current liabilities require continuous, day-to-day supervision to ensure that a firm has optimal working capital that is neither excessive so as to avoid the realization of substandard return on investment nor inadequate so as to reduce shortages and difficulties of maintaining smooth operations. As a result much of finance managers' time is devoted in the management of current assets and current liabilities as argued by Brigham and Houston (2006) who also mentioned that about 60 percent of a typical financial manager's time

is devoted in the management of working capital. And more fundamentally due to the effect that working capital management practices have effect on the firm's risk, return, and share price.

Regardless of the nature, form, type and the market coverage of firms, the management of working capital components are so important in improving liquidity status and profitability. However, Horne and Wachowicz (2009) argue the presence of trade-off between profitability and risk. That is, on one hand, lowering the level of investment in current assets, while still being able to support sales, would lead to an increase in the firm's return on total assets, but a firm suffer liquidity risk, On the other hand, maintaining more level of current asset lead to improvements in the liquidity status of the firm, however much investment in working capital increase carrying cost Thus, working capital matters has two most basic principles in finance in relation to the trade-off between risk and profitability. In this regard, Ross et al. (2003) and Brigham and Houston (2006) discussed the importance of various working capital management strategies, methods and techniques in holding optimal level of working capital and proper supervision in the way of creating a balance between liquidity and profitability that in turn contribute towards the achievement of wealth maximization goal of a firm.

Therefore starting from assigning a proper human capital, firms have to give proper attention in setting working capital policy, reviewing the adequacy of working capital and employing methods and techniques which are proper to the management of working capital at general level and particularly with respect to each component of specific components of working capital, viz. cash and marketable securities, accounts receivables, inventories, accounts payable and short term loan. In other word paying inappropriate attention with respect to determination of optimum level of investment for each component of working capital would result the designing of poor working capital policy and inappropriate monitoring tools that consequently expose the firm to risk of liquidity and substandard rate of return. While the overall management of working capital provides general direction as to the management of working capital in general, the management of specific components of working capital involves monitoring each and every component of current assets and current liabilities that make up the overall working capital.

2. Review of Literature

In relation to exploring the working capital management practices, Koury, MacKay and Smith (1998) discussed that the first comprehensive survey was done in 1978 by Smith & Sell in United States (U.S), some of which asked the respondent to choose one answer among several alternatives, while the others asked the respondent to rank alternatives in terms of their relative importance to the respondent's firm. In 1988, a decade later, the survey was replicated in U.S largest industrial firms by Belt & Smith (1992) as discussed in Koury et al. (1998). The same instrument was used by Belt & Smith to survey working capital management practices of largest Australian firms that later led to comparisons of working capital practices in Australia and the U.S (Belt & Smith, 1991) as discussed in Koury et al. (1998). In 1994, Koury et al. made study on working capital management practices of small Canadian firms.

Nazir, Iqbal and Akram (2011) studied the working capital management practices of 250 largest non-financial firms in 12 different sectors listed at Karachi stock exchange in Pakistan using survey method that was previously used in four studies (Smith and Sell, 1980, Belt and Smith, 1991, Belt and Smith, 1991 and Koury et al., 1998). The response rate in this survey was 41.6% and 104 useable responses were received for analysis which is good as compare to similar previous surveys. There are also some other studies on working capital management practices such as Burns and Walker (1991), Deresse and Abiy (n.d), Perera and Wickremasinghe (2010) Nyabwanga et al.(2012) and Padachi and Carole (2014).

3. Statement of Problem

Despite a sizable amount of the time and money invested in the different components of the working capital with a view to maximise firms' profitability, prospects and prosperity with reasonable risk there with, such influence has not attracted the attention of researchers adequately as attested by the limited literature in developing countries in general and in Ethiopia in particular. And those studies that have been undertaken in the area have focussed on small and micro scale through use of secondary data in view of establishing relationship between working capital management and profitability. However, to contribute a lot for profit and wealth maximisation goal, the practice is so crucial. Ross et al (2003) discussed that profitability is the result of different practices and policies. To the extent of the existing body of knowledge, only few studies like Derese and Abiy (n.d) surveyed the working capital management practices in case of business enterprises of Jimma town in Ethiopia.

4. Objectives of the study

Owing to the enormous importance, this study was designed to explore the working capital management practices of manufacturing companies in Ethiopia. Particularly, this study was designed:

- i. to explore the working capital management policies of manufacturing companies in Ethiopia.
- ii. to investigate the overall working capital management methods and techniques employed by manufacturing companies in Ethiopia.
- iii. to investigate the various methods and techniques employed in managing specific components of working capital of manufacturing companies in Ethiopia.

5. Research Methodology

Survey design was appropriate and thus used in order to explore the working capital management practices of manufacturing companies in Ethiopia. Creswell (2012) discussed that survey is appropriate to describe the current trends of practice, determine individual opinions about policy issues, and evaluate the existing practice with some other benchmark. The existing survey instruments of Smith and Sell (1980), and Belt and Smith (1991 and 1992), Koury et al. (1998) and Nazir et al. (2011) were primarily considered and few of them were modified and additional questions were included. Primary data was collected through distribution of survey questionnaire that contain various scales of mutually exclusive categorical questions, multiple response categorical questions and ranking scale questions to finance managers or their equivalents of manufacturing companies in Ethiopia to ensure that responses are reliable and valid.

Regarding the sampling design, two stage sampling was used. In the first stage, 225 lists of medium and large manufacturing companies were stratified in to ten industrial manufacturing sectors on the basis of the nature of their operation provided by industry classification criteria of International Standard Industrial Classification, ISIC (2008). In the second stage, a sample of 144 manufacturing companies was withdrawn using random sampling which is proportional to the stratum. The sample size was determined using Yamane's 1967 sample size determination formula. Thus, 144 manufacturing companies from ten (10) industrial sectors were withdrawn using stratified random sampling and since the samples characteristics incorporate the various industrial sectors, it is representative and can estimate the population characteristics.

Before distributing the questionnaire, the validity of the instrument was checked by three (3) assistant professors and pilot test was done for preliminary assessment of working capital management practice and for the betterment of the instrument as well. Then, the questionnaires

were distributed to a sample of 144 finance managers or their equivalent of manufacturing companies and 105 usable questionnaires were obtained representing 72.29 percent response rate. After the collected data have been coded and entered in to Statistical Package for Social Science (SPSS) Version 21, survey analysis was made. Finally, results were presented using frequencies, percentages and tables.

6. Result and Discussion

The result and discussion part is divided in to three sections where the first section presents the finding on working capital policy, followed by the overall management of working capital and finally the management of specific components of working capital.

I. Working Capital Policy

This section discusses the working capital policy matters like nature, responsibility of setting, type and frequency of reviewing working capital.

Table 1: Overall Working Capital Policy

Overall Working Capital Matters	Response	Frequency	Precent
Nature of working capital policy	Formal (Written)	91	86.7
	Informal (Non-written)	14	13.3
	Total	105	100.0
Responsibility of working capital policy	Board of Directors	29	27.6
	President	18	17.1
	Vice President of Finance	24	22.9
	Financial Manager (Treasurer)	34	32.4
	Total	105	100.0
Type of working capital policy	Cautious (Risk Avoiding)	18	17.1
	Aggressive (Risk Accepting)	17	16.2
	Situational	55	52.4
	Change overtime	15	14.3
	Total	105	100.0
Frequency of review on working capital policy	Monthly	4	3.8
	Quarterly	14	13.3
	Semi Annually	15	14.3
	Annually	44	41.9
	Whenever Necessary	28	26.7
	Total	105	100.0

As presented in Table 1, the manufacturing companies had the policy out of which 91 (86.7%) of them have a formal working capital policy whereas the rest 14 (13.3) have informal working capital policy. This indicates that majority of manufacturing companies in Ethiopia follows formal or written policy of working capital followed by informal policy. The finding also revealed that there were no companies that operate without having working capital policy. The finding on responsibility for setting the working capital policy in the manufacturing companies shows that 34 (32.4%) is set by financial manager (treasurer) followed by boar of director 29 (27.6%), then vice president of finance 24 (22.9), and finally the President 18 (17.1%). Chief accountants are not setting the working capital policy at all. Regarding the type of working capital policy adopted by manufacturing companies, 55 (52.4%) are “situational”, 18 (17.1) are “Cautious (Risk Avoiding)”, 17 (16.2%) are “Aggressive (Risk Accepting)” and the rest 15 (14.3%) responded on “Change overtime”. This implies that manufacturing companies change the investment and financing activities of working capital as per to the prevailed condition. The cautious policy of working

capital policy, which is ranked second in the current survey indicate that companies have risk avoiding behaviour through investing more investment in current assets with lesser short term financing. Table 1 also shows the result on the frequency of reviewing working capital policy where 44(41.9%) review “annually”, 28 (26.7%) review “whenever necessary”, 15 (14.3%) review “semi-annually”, 14 (13.3%) review “quarterly” whereas the rest of 4 (3.8%) manufacturing companies review on monthly basis. This indicates that it takes a year for most manufacturing companies in Ethiopia to review their working capital policy on a regular basis.

II. Overall Management of Working Capital

This section discusses the overall management of working capital issues like time devotion, monitoring technique, important activity, capital budgeting implications and hurdle rate used in the working capital as a whole.

Table 2: Time Allotted to Financial Management Decisions

Ranking Financial Management (FM) Decisions on the basis of Time Devoted							
FM Decisions	N	Percentage Ranking					Average Ranking
		1	2	3	4	5	
Capital Structure	46	9.5	21.0	43.8	16.2	9.5	2.95
Capital Budgeting	43	21.0	41.0	14.3	16.2	7.6	2.49
Working Capital	47	44.8	16.2	27.6	6.7	4.8	2.10
Dividend Decision	48	11.4	9.5	9.5	45.7	23.8	3.61
Valuation Decision	54	13.3	13.3	6.7	15.2	51.4	3.78

Regarding the responses to rank the time devoted in financial management decisions, Table 2 shows that the highest rank is given to “working capital management” followed by “capital budgeting” and then “capital structure with average rank of 2.10, 2.49 and 2.95 respectively. “Dividend policy” is ranked fourth and “valuation decision” is ranked as least with an average rank of 3.61 and 3.78, respectively. The result showed that much time is devoted in the management of working capital which in fact requires day to day supervision so as to undertake the financial activities smoothly.

Table 3: Methods in Monitoring Working Capital

Ranking of Preferred Methods in Monitoring Working Capital						
Measures	N	Percentage Ranking				Average Ranking
		1	2	3	4	
Current Ratio	45	31.4	23.8	42.9	1.9	2.15
Working Capital as a percentage of Total Assets	38	36.2	31.4	31.4	1.0	1.97
Working Capital Turnover	45	27.6	42.9	23.8	5.7	2.08
Other Measures	95	4.8	3.8	1.0	90.5	3.77

As far as the method of monitoring working capital, Table 3 shows that the highest rank is given to “working capital as a percentage of total assets” with average rank of 1.97 followed by “working capital turnover” and the “current ratio” with average rank of 2.08 and 2.15, respectively. “Other” option was ranked least with average rank of 3.77. This indicates the first most important tool for monitoring working capital was working capital as a percentage of total assets.

Table 4: Working Capital Activities

Ranking the Importance of Working Capital Activities									
Activities	N	Percentage Ranking							Average Ranking
		1	2	3	4	5	6	7	
Speeding up collections	30	28.6	37.1	19.0	9.5	1.9	2.9	1.0	2.31
Slowing down payments	21	30.5	20.0	27.6	11.4	6.7	2.9	1.0	2.56
Minimizing inventory level	25	20.0	25.7	23.8	13.3	12.4	4.8	-	2.87
Increasing inventory level	36	5.7	9.5	10.5	34.3	22.9	17.1	-	4.10
Minimizing bank account	39	10.5	4.8	7.6	21.9	37.1	17.1	1.0	4.26
Increasing bank account	55	4.8	4.8	9.5	8.6	18.1	52.4	1.9	4.95
Other activities	96	1.9	-	1.0	1.0	-	2.9	93.3	6.79

As presented in Table 4 about the importance of working capital activities of Ethiopian manufacturing companies, “speeding up collections”, “slowing down payment”, “minimizing inventory level”, “increasing inventory level”, minimizing back account”, “increasing bank account” and “other activities” are ranked from highest to lowest rank with average ranking of 2.31, 2.56, 2.87, 4.10, 4.26, 4.95 and 6.79, respectively. This result shows that the most important working capital of manufacturing companies in Ethiopia is accelerating the collection of cash from debtors.

Table 5: Evaluation of Working Capital Implication on Capital Budgeting

Evaluation	Response	Frequency	Percent
Working capital implications in the evaluation of each capital budgeting	Never	12	11.4
	Sometimes	65	61.9
	Always	28	26.7
	Total	105	

As presented in Table 5, 65 (61.9%) of responding companies sometimes consider the implication of working capital while evaluating capital budgeting whereas 28 (26.7%) of responding companies always consider working capital implication. 12 (11.4%) never consider the implication of working capital on capital budgeting. The result showed that the majority of responding companies sometimes consider the implication of working capital while evaluating capital budgeting.

Table 6: Discount Rate Used in Evaluating Change in Working Capital

Measure	Response	Frequency	Percent
Discount rate used in evaluating changes in working capital	Interest rate	28	26.7
	Cost of equity capital	13	12.4
	Average Cost of Capital	37	35.2
	Hurdle rate not required	27	25.7
Total	Total	105	100.0

As presented in table 6, 37(35.2%) of respondents reply that “average cost of capital” is used as discounting rate so as to evaluate the change in working capital. 28 (26.7%) use “interest rate” and 13(12.4%) use “cost of equity capital”, however 27 (25.7%) of responding companies reply

that they do not require hurdle rate in evaluating the change in working capital. The analysis shows that the average cost of capital is used in evaluating changes in working capital followed by interest rate.

III. Management of Specific Components of working capital

This section discusses the practices in the management of specific components of working capital, viz cash and marketable securities, accounts receivables, inventory, accounts payable and short term loan management.

Cash and Marketable Securities Management Practices

This sub section discusses the management of cash and marketable securities that include matters like method of determining target cash balance, strategy of managing marketable securities, average maturity period of managing marketable securities, techniques used to decrease negative float and increase positive float.

Table 7: Cash Management Practices

Method of Determining Target Cash Balance		
Methods	Frequency	Percent
Scientific Models	23	21.9
Past Experience	65	61.9
Ad-hoc Decision	17	16.2
Total	105	100.0

Table 7 showed that 65 (61.9%) of respondents use past experience as a method of determining their target cash balance. While 23(21.9%) use scientific models, the rest 17 (16.2%) make ad-hoc decision when determining the target cash balance. As it can be understood from this analysis, majority of respondents use past experience as a method of determining target cash balance.

Table 8: Strategy of Managing Marketable Securitis

Ranking of Strategy Preferred to Manage the Portfolio of Marketable Securities							
Strategies	N	Percentage Ranking					Average Ranking
		1	2	3	4	5	
Buy and hold to maturity	12	12.4	25.7	11.4	50.58	-	3.00
Portfolio perspective	37	35.2	28.6	27.6	.6	-	2.10
Play the yield curve	25	28.6	23.8	22.9	23.8	1.0	2.45
Ad-hoc decision	36	24.8	21.9	34.3	19.0	-	2.48
Other strategies	103	1.0	-	1.0	-	98.1	4.94

Regarding the strategy of managing portfolio of marketable securities, the highest rank is given to portfolio perspective with average rank of 2.10, play the yield curve is the second highest with average rank of 2.45, followed by ad-hoc decision, and then buy and hold to maturity with average rank of 2.48 and 3.00, respectively. The least ranked option is “other strategies” with average rank of 4.94. The analysis shows that responding companies consider risk diversification strategy to manage portfolio of marketable securities.

Table 9: Average Maturity of Portfolio of Marketable Securities

Measure	Response	Frequency	Percent
Average Maturity of Portfolio Marketable Securities	One week to one month	7	6.7
	One month to three months	26	24.8
	Three month to six months	49	46.7
	Over six months	23	21.9
	Total	105	100.0

When respondents are asked about the average maturity of the portfolio of marketable security (see Table 9), the highest response 49 (46.7%) is given to “three months to six months”, followed by “one month to three months 26 (24.8%)” and then “over six months” 23(21.9%). Finally, 7 (6.7%) of respondents replied that the average maturity of portfolio of marketable securities is from one week to one month. The analysis shows that the portfolio of marketable securities have an average maturity of three to six months and most of manufacturing companies in Ethiopia invest more in short term securities than long term.

Table 10: Techniques Used to Reduce Negative Float

Techniques Used To Reduce Negative Float			
Techniques	Responses		Percent of Cases
	Counts*	Percent	
Requesting debtors/customers	56	19.6%	53.3%
Providing cash discount	20	7.0%	19.0%
Over the counter collection	32	11.2%	30.5%
Payment by Wire or Automatic Debit	22	7.7%	21.0%
Using near branch bank	57	20.0%	54.3%
Using Lock boxes	43	15.1%	41.0%
Arranging Pre authorized check collection	27	9.5%	25.7%
Using Cash Concentration	27	9.5%	25.7%
No Answer	1	0.4%	1.0%
Total	285	100.0%	271.4%

* Dichotomy group tabulated at value 1.

As it can be seen from Table 10, respondents have been given to select on the techniques used to reduce negative cash flow that in turn accelerate the collection of cash and increase available cash balance in the bank account. The result showed that 57 (20.0%) of respondents employing such techniques use near branch bank followed by requesting debtors 56 (19.6%) and then using lock boxes 43 (15.1%). The percentage of respondents that employ over the counter collection, arranging pre authorized check collection, using cash concentration, payment by wire/automatic debt and providing cash discount are 32 (11.2%), 27 (9.5%), 27 (9.5%), 22 (7.7%) and 20 (7.0%), respectively. 1 (0.4%) of the respondents never use any techniques of reducing negative float. The analysis shows that using near branch is mostly used technique of reducing cash which in turn accelerate the collection of cash, followed by requesting debtors to pay cash and then using lock boxes whereby customers send payments to a post office box and a local bank collects and processes checks.

Table 11: Techniques Used to Increase Positive Float

Techniques Used To Increase Positive Float			
Techniques	Responses		Percent of Cases
	Counts*	Percent	
Centralize disbursement	57	34.1%	54.3%
Stretching credit term	43	25.7%	41.0%
Disbursing from remote area	33	19.8%	31.4%
Maintaining zero balance account	31	18.6%	29.5%
No Answer	3	1.8%	2.9%
Total	167	100.0%	159.0%

* Dichotomy group tabulated at value 1.

As it can be seen from Table 11, respondents have been given to select on the techniques used to increase positive cash flow that in turn defer the payment of cash and increase available cash balance in bank account. The result showed that 57 (34.1%) of respondents employing such techniques use centralize disbursement technique followed by stretching credit term 33 (19.8%) and then maintaining zero balance account 31 (18.6%). 3 (1.8%) of the respondents never use any techniques of increasing positive float. The analysis shows that the mostly used technique of increasing positive float is centralize disbursement and this entails that manufacturing companies in Ethiopia deposit minimum amount of money which is necessary to pay bills.

Accounts Receivable Management Practices

This section presents the result and discussion of data analysis related to accounts receivable management practices that include basis of selling product, reasons of selling products on credit; sources used in obtaining customers' information; techniques employed in assessing the creditworthiness of customers; technique in monitoring the payment behaviour of customer, and criterion in evaluating credit term change.

Table 12: Basis of Selling Products to Customers

Basis of Selling Product to Customers		
Basis	Frequency	Percent
Only Cash	5	4.8
Both	100	95.2
Total	105	100.0

Table 12 shows that 5 (4.8%) of respondents sell products for cash while 100 (95.2%) replied on "both". None of respondents replied on "only credit". The analysis indicates that almost all responding companies make both cash and credit sales.

Table 13: Reasons of Credit Sales

Ranking Reason of Selling on Account					
Reasons	N	Percentage Ranking			Average Ranking
		1	2	3	
Increasing/Stimulating Sales	72	29.5	68.6	1.9	1.72
Enhancing Competition Capability	70	66.7	30.5	2.9	1.36
Others	100	2.9	1.9	95.2	2.92

As far as reasons of selling goods on credit, Table 13 presents that enhancing competition capability is ranked highest with average rank of 1.36, followed by increasing/stimulating sales

1.72 and finally other reason 2.92. This result indicates that responding companies are selling on account to primarily enhance competitive advantage and then to stimuli their sales.

Table 14: Source of Customers Information

Source of Information about Customer			
Sources	Responses		Percent of Cases
	Counts*	Percent	
Financial Statements obtained from customers themselves	59	38.8%	59.0%
Reviewing the customers' payment history with the firm	66	43.4%	66.0%
Using bank assessors	19	12.5%	19.0%
Buying credit reference	6	3.9%	6.0%
Others Sources	2	1.3%	2.0%
Total	152	100.0%	152.0%

* Dichotomy group tabulated at value 1.

As it can be seen from Table 14, respondents were asked to tick on the sources of obtaining customers information that in turn assist in assessing the credit worthiness. From those respondents who are obtaining information about customers' information to assess credit worthiness, 66 (43.4.0%) of respondent from obtain the information by reviewing the customers' payment history with the firm, followed by financial Statements obtained from customers themselves 59 (38.8%), then using bank assessors 19 (12.5%) and finally buying credit references 6 (3.9%). 2 (1.3%) of respondents selected in the "other sources". The analysis shows that most of responding companies are obtaining information by reviewing the customers' payment history with them, followed by financial Statements obtained from customers themselves.

Table 15: Techniques of Assessing Customers' Credit Worthiness

Ranking Techniques of Assessing Customers' Creditworthiness						
Techniques	N	Percentage Ranking				Average Ranking
		1	2	3	4	
"Four C's" of Credit	31	31.0	42.0	24.0	3.0	1.99
Sequential Credit Analysis	22	37.0	22.0	40.0	1.0	2.05
Credit Scoring	34	30.0	34.0	34.0	2.0	2.08
Others	93	2.0	3.0	2.0	93.0	3.86

As shown in Table 15, respondents who assess the credit worthiness of their customers replied that "Four C's" of credit is ranked highest with average rank of 1.99, followed by sequential credit analysis with average rank of 2.05 and then credit scoring with average rank of 2.08. The least ranked option is "other methods" with average rank of 3.86. The result entails that responding companies assess the credit worthiness of their customers primarily using the traditional four C's of credit where they will consider the character, condition, capacity and capital of their customers.

Table 16: Techniques of Payment Behaviour of Customers

Ranking Technique Used in Monitoring the Payment Behaviour of Customers						
Techniques	N	Percentage Ranking				Average Ranking
		1	2	3	4	
Accounts Receivable Turnover	41	17.0	40.0	41.0	2.0	2.28
Average Collection Period	36	36.0	36.0	28.02	-	1.92
Aging of Receivable Schedule	44	44.0	25.0	7.0	4.0	1.91
Others Technique	93	3.0	-	4.0	93.0	3.87

As shown in Table 16, “aging of receivable schedule is the highest ranked technique of monitoring the payment behaviour of customers with average rank of 1.91, followed by “average collection period” with average rank of 1.92 and then “accounts receivable turnover” with average rank of 2.28. The least ranked option is “other techniques” with average rank of 3.87. The analysis indicates that the most preferred technique of monitoring the payment behaviour of customers is aging of receivables schedule.

Table 17: Criteria in Evaluating Credit Term Change

Ranks of Criterion in Evaluating Credit Term Change						
Criterion	N	Percentage Ranking				Average Ranking
		1	2	3	4	
Effect on sales	29	23.0	29.0	36.0	12.0	2.37
Effect on the receivable level	31	20.0	26.0	31.0	23.0	2.57
Effect on profit	39	39.0	31.0	13.0	17.0	2.08
Effect on return on investment	48	18.0	14.0	20.0	48.0	2.98

When the respondent were asked to rank the criteria they used while changing the credit terms(see Table17), the highest ranking is given to the “effect on profit” with average rank of 2.08, followed by “Effect on Sales”(2.37), and then “effect on the receivable level”. The least rank is given to “effect on return on investment” with average rank of 3.98. The analysis shows that manufacturing companies in Ethiopia primarily preferred how the change in credit term affects their profit.

Inventory Management Practices

This section presents the result and discussion related to analysis of accounts receivable management practices that include techniques used in monitoring the level of inventory and in replenishing inventory; factors in purchasing raw materials; factors considered while inventory is produced and criterion in evaluating the proposed change in inventory policy.

Table 18: Monitoring Technique of Inventory

Ranking of Monitoring Technique of Inventory					
Factors	N	Average Ranking			Average Ranking
		1	2	3	
Inventory turnover	73	29.5	69.5	1.0	1.71
Average Inventory Period	71	67.6	29.5	2.9	1.35
Others	102	1.9	1.0	97.1	2.95

As shown in Table 18, inventory turnover is the highest preferred monitoring technique of inventory with average rank of 1.71, followed by average inventory period ranked second (1.35) and other techniques with average rank of 2.95. This analysis entails that manufacturing companies prefer to monitor their inventory using average inventory period.

Table 19: Techniques of Inventory Replenishment

Techniques Employed in Replenishing Inventory			
Techniques	Responses		Percent of Cases
	Counts*	Percent	
Economic Order Quantity	44	17.3%	41.9%
Computerized inventory control	41	16.1%	39.0%
Material Requirement Planning	22	8.7%	21.0%
Just in Time	44	17.3%	41.9%
Industry guidelines	23	9.1%	21.9%
ABC Approach	35	13.8%	33.3%
Bin Method	26	10.2%	24.8%
Red Line	15	5.9%	14.3%
Ad-hoc Decision	2	0.8%	1.9%
No Answer	2	0.8%	1.9%
Total	254	100.0%	241.9%

* Dichotomy group tabulated at value 1.

As it can be seen from Table 19, respondents were asked to tick on the techniques of replenishing inventory. From those respondents who are using relishing technique, respondents replied that “economic order quantity” and “just in time” are 44 (17.3%) each, followed by Computerized inventory control 41 (16.1%) and then ABC Approach 35(13.8%) . 26 (10.2%), 23 (9.1), 22 (8.7) and 15 (5.9%) of respondents employing the techniques use bin method, industry guidelines, material requirement planning and red line. While 2 (0.8%) respondents use ad-hock decision, the rest 2 (0.8%) never select in any of replenishing techniques. The analysis shows that responding companies are mostly using scientific method such as economic order quantity, just in time and computerized inventory control as a technique of replenishing inventory as compare to other alternatives. The use of ad-hoc decision is rare for responding companies as inventory replenishing techniques.

Table 20: Factors of Inventory Purchase

Ranking Factor Considered in Inventory Purchased								
Factors	N	Percentage Ranking						Average Ranking
		1	2	3	4	5	6	
Availability of material	29	26.7	27.6	20.0	14.3	10.5	1.0	2.57
Possible discount	27	23.8	19.0	25.7	16.2	14.3	1.0	2.81
Credit term of suppliers	32	30.5	30.5	21.9	11.4	4.8	1.0	2.32
Shortage cost	43	12.4	14.3	14.3	41.0	17.1	1.0	3.39
Inflation Effect	56	5.7	7.6	17.1	16.2	53.3	-	4.04
Others	101	1.0	1.0	1.0	1.0	-	96.2	5.87

As presented in Table 20 about factors considered in the purchase of inventory in Ethiopian manufacturing companies, “Credit term of suppliers”, “Availability of material”, and “Possible discount” are ranked first (2.32), second (2.57) and third (2.81), respectively. While “Shortage cost” (3.39) and “inflation effect” (4.04) are ranked fourth and fifth, respectively, “other” option is ranked least (5.87). The analysis shows that the most preferred factor to purchase inventory is the credit term of suppliers followed by availability of material.

Table 21: Factors of Production

Ranking Factor Considered in production							
Factors	N	Percentage Ranking					Average Ranking
		1	2	3	4	5	
Seasonality of demand	23	18.1	33.3	21.9	25.7	1.0	2.58
Production schedule	43	41.0	17.1	21.9	18.1	1.9	2.23
Inflation Effect	29	25.7	27.6	20.0	24.8	1.9	2.50
Shortage cost	30	14.3	21.0	33.3	28.6	2.9	2.85
Others	97	1.0	1.0	2.9	2.9	92.4	4.85

Table 21 shows the ranking of factors considered in production of inventory in Ethiopian manufacturing companies where “Production schedule”, “Inflation Effect”, and “Seasonality of demand” are ranked first (2.23), second (2.50) and third (2.58), respectively. While “Shortage cost” (2.85) and “other” options are ranked fourth and fifth (4.85).The analysis indicate shows that most preferred with highest ranked factor of production in manufacturing companies of Ethiopia is the production schedule.

Table 22: Criteria of Evaluating Change in Inventory Policy

Ranking of Criterion in Evaluating the Proposed Change in Inventory Policy						
Criterion	N	Percentage Ranking				Average Ranking
		1	2	3	4	
Inventory level	31	19.0	29.5	29.5	21.9	2.54
Inventory Cost	34	22.9	32.4	28.6	16.2	2.38
Profit	42	40.0	21.0	27.6	11.4	2.10
Return on Investment	53	19.0	16.2	14.3	50.5	2.96

As shown in Table 22, “profit” is ranked highest with average rank of 2.10, followed by “inventory cost” with average rank of 2.38 and then “inventory level” with average rank of 2.54. The least ranked option is “return on investment” with average rank of 2.96. The result of this study shows that the most preferred and the highest ranked criteria to be considered up on a proposed change in inventory policy is profit while return on investment as a criteria is ranked the least. Like in the case of accost receivable, working capital is not seen somehow as an on-going investment by all of the surveyed firms.

Management of Short Term Financing

This section presents the result and discussion of data analysis related to management of short term financing practices that include the management of accounts payable and short term borrowings. Specifically, the section presents the results of practices with respect to cash discount offered by suppliers; reason of taking discount; annualized cost of trade credit; primary use of the short term financing; possible sources of short term loan; type of loan used; collateral requirement of short term loan and degree of agreement how working capital management practice improve liquidity.

Table 23: Short Term Financing Management Practices

Management Practices Short Term Financing	Response	Frequency	Percent
Practice with respect to cash discount offered	Always take discount	19	18.1
	Sometimes take discount	50	47.6
	Pay latter but take discount	23	21.9
	Never take discount	13	12.4
	Total	105	100.0
Why of Taking Discount	Stabilize good relation	11	12.0
	Obtain monetary benefit	22	23.9
	Both	59	64.1
	Total	92	100.0
Estimated Annualized cost of trade credit	1.0 - 5.9%	30	28.6
	6.0 -10.9%	49	46.7
	11.0 - 14.9%	20	19.0
	Greater than 15%	6	5.7
	Total	105	100.0
Primary use of the short term financing	Regular and constant part of finance	18	17.1
	Cyclic part of firm financing	18	17.1
	Seasonal part of firm financing	40	38.1
	Non spontaneous need	29	27.6
	Total	105	100.0

Regarding the practice with respect to cash discount offered, 50(47.6%) of respondents replied that companies sometimes take discount, 23(21.9%) pay later but still take discount, 19 (18.1%) always take discount and 13 (12.4%) never take discount. The analysis shows that about half of manufacturing companies sometimes take discount offered by suppliers.

Respondents were also asked the why of taking discount and 59 (64.1%) of them replied in “both” category, 22 (23.9%) to obtain monetary benefit and 11 (12.0%) to stabilize good relation with supplier. The result revealed that more than half of manufacturing companies are taking discount in order to obtain monetary benefit and stabilize good relation with their suppliers.

Respondents were also asked to estimate the annualized cost of trade credit and 49 (46.9%) reply “6.0 -10.9%”, 30 (28.6) selected “1.0 – 5.9%” option, 20 (19.0%) tick on “11.0 – 14.9%” option and the rest 6 (5.7%) respondents reply that it cost greater than 15%. There were no firms whose annualized cost of trade discount is zero. The analysis shows that majority of manufacturing companies have an 6.0% to10.9% annual cost of trade credit that are incurred due to lost discount or financing cost related to payment of trade credits.

As presented in Table 23, respondents were asked about the primary use of the short term financing. 40 (38.1%) of them responded that for the fulfilment of seasonal part of firm financing, 29 (27.6%) for non-spontaneous need and 18 (17.1%) for each of regular and constant part of finance, and cyclic part of the firm financing.

Table 24: Type of Short Term Loan and Collateral Requirement

Measures	Response	Frequency	Percent
Type of Loan from Commercial Bank	Simple Interest Loan	65	61.9
	Discounted loan	11	10.5
	Loans with compensated balance	14	13.3
	Line of credit with compensated balance	7	6.7
	Revolving credit	8	7.6
	Total	105	100.0
Frequency of collateral requirement	Never	19	18.1
	Sometimes	50	47.6
	Always	36	34.3
	Total	105	100.0

As it can be seen from Table 24, 65 (61.9%) of companies use simple interest loan, 14 (13.3%) use loans with compensated balance and 11 (10.5%), use discounted loan. 8(7.6%) and 7 (6.7%) of the respondents replied that revolving credit and line of of credit with compensated balance are used, respectively. The analysis revealed that the majority of manufacturing companies are the users of simple interest loan.

Regarding the collateral requirement of obtaining short term loan, 50 (47.6%) said sometimes, 36 (34.3%) always and 19 (18.1%) never. More than half of responding companies are sometimes required collateral while borrowing from commercial banks. In comparison, the majority of US and Australian firms are not required collateral up on bank borrowing while the majority of Canadian firms are always required collateral. The majority of Pakistani firms are sometimes required to put collateral just like the result of the current study.

7. Conclusions

An efficient and effective working capital management practices is essential part of financial management decision in order to contribute for the wealth maximisation goal of a firm through creating a balance between liquidity and profitability. This can be done through placing proper personnel who give adequate attention in setting working capital policy, reviewing the adequacy of working capital and employing methods and techniques which are proper to the management of specific components of working capital.

Regarding the overall working capital policy, the majority of manufacturing companies of Ethiopia have formal and situational working capital policy that are under the responsibility of financial managers who make working capital review per year. The finding also showed that much time is dedicated towards the management of working capital as compare to other financial management decisions. Working capital as a percentage of total assets is the most preferred monitoring method of working capital while speeding up cash collection is the most important working capital activities. The companies sometimes evaluate the implication of working capital on capital budgeting and average cost of capital was used as hurdle rate, followed by interest rate to evaluate change in working capital.

Concerning the management of cash and marketable securities of portfolio, the majority of responding companies determine the target cash balance using their past experience. Most of the portfolios of marketable securities are matured between three to six months. While debtors were requested to effect what they owed as a means of accelerating cash collection, the centralize payment was used as a technique of differing cash payments.

Regarding the basis of selling product, the sample manufacturing companies make both of cash and credit sales primarily to stimuli sales followed by enhancing competitive capability. Though the sampled companies are using various sources of obtaining information about their customers,

reviewing the customers' payment history with themselves was found to be the most applied source and the tradition four C's of credit was found to be the first preferred technique of assessing the credit worthiness of their customers while the aging of receivable schedule is the most preferred method of monitoring the payment behaviour of customers. The finding also showed that the effect on profit is considered as criteria in changing the credit terms.

Regarding the replenishment of inventory level in the inventory management practices, economic order quantity and just in time were equally found to be the highest use followed by computerized inventory control. While the credit term of suppliers were used as the most primary factor of raw material purchases, the production schedule was found to be the most important factor of inventory production as compare to other factors. Like receivables, the effect on profit is considered primarily so as to change inventory policy of manufacturing companies.

Related to the result and discussion on the short term financing management practices, the finding showed that majority of manufacturing companies take discounts from their suppliers and from the reason of taking such discount is justified as to obtain monetary benefit and stabilize good relation through effecting early payment. The finding also showed that most manufacturing companies are incurring an estimated annual cost of trade credit running between 6 to 10.9 percent since they are sometimes taking discount offered. The primary use of short term financing is found to be fulfilling the seasonal part of firms' financing. The majority of manufacturers are simple interest loan type users of commercial banks that are sometimes required to collateral covenants. The majority of manufacturing companies also agreed than an efficient management of working capital enhance the liquidity position of their firm.

8. Recommendation

Finance managers are recommended to review their working capital on time lesser than yearly basis by making the review on monthly basis, otherwise on quarterly basis for better management of working capital matters. Manufacturing companies are recommended to see always the implication of change in working capital during capital budgeting which are rare long term decision of a firm. Companies are also recommended to use scientific method in determining optimum level of investment in current assets like in determining target cash balance. They are also recommended to see the impact of changes in working capital policy on return on equity criteria as the firm's ultimate goal is wealth maximization. The companies sometimes take discount offered and this might be the cause that makes the companies to incur an annual cost of trade credit up to 10.9%. Therefore, it is recommended to compare the benefits and costs of taking discounts offered by suppliers.

9. Limitation and Future Research Direction

This study has limitation just like any other studies. Inferences are made only to the manufacturing companies of ten industrial sectors. Thus, interested researchers can study further in the area by incorporating merchandise and service firms to see if any difference exists in the working capital management practices. and may investigate how some company specific issues like size, profitability and other factors affect the working capital management practices.

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