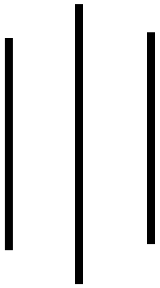
PRACTICES OF WORKING CAPITAL MANAGEMENT In MANUFACTURING INDUSTRIES SITUATED AT NEPALGUNJ INDUSTRIAL ESTATE



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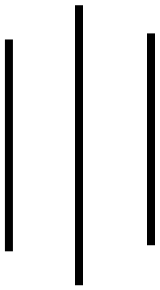

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In Partial Fulfillment of the Requirements of the Degree of

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Central Department of Management

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2013

RECOMMENDATION LETTER

This is to certify that the Thesis

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has been prepared as approved by the this department in the prescribed format of faculty of management. This thesis is forwarded for examination.

…….	…….	…….
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And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for
Masters Degree in Business Studies (M.B.S.)

Viva-voce Committee

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DECLARATION

I hereby declare this thesis entitled **Practices of Working Capital Management in Manufacturing Industries Situated at Nepalgunj Industrial Estate** submitted to the Department of Management; Tribhuvan University is my original work as partial fulfillment of the requirements for the masters of Business studies (M.B.S.), under the Supervision and guidance of Reader **Ajaya Dhakal** Central Department of Management, TU, Kirtipur.

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Binod Raj K.C.

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ABBEREVIATIONS

A/P	= Account Payable
A/R	= Account Receivable
BFI	= Binaya food Industry
CAs	= Curent Assets
CCA	= Cash to Curent Assets
CCC	=Cash Convertion Cycle
CLs	= Current Liabilities
CR	= Vurrent Ratio
EBIT.	= Earning Before Interest and Tax
GPM	= Gross Profit Margin
GWC	= Gross Working Capital
ICP	= Inventory Conversion period
IDM	= Industrial District Management
IDs	= Industrial Districts
IEs	= Industrial Estates
KKT	= Krishna Kamal Textile
LPI	= Laxmi Plastic Industry
MDW	= Modern Doors and Wood Pro.Pvt. Ltd.
Mfg	= Manufacturing
Mgd	= Management
NPAT	= Net Profit After Tax
NWC	= Net Working Capital
PDP	= Payable Deferred Period
RCP	= Receivable Collection Period
ROE	= Return on Equity
ROW	= Return on Working Capital
SEBON	= Securities Board of Nepal
TA	= Total Assets
TL	= Total Liabilities
VMI	= Vinod Metal Industry

CHAPTER-ONE

INTRODUCTION

1.1 Background of Studies

Industrialization is a comparatively new phenomena in Nepal. The history of industrialization is not long in Nepal. The Biratnagar Jute Mill in 1993 B.S. and Nepal Bank in 1994 B.S. taking in the account of industrialization process in Nepal. It is quoted that "there was a good deal more of pre-industrial manufacturing activity during first decade of the last century. During the period other manufacturing enterprises such as Morang cotton mills, Morang Sugar mills, Raghupati Jute Mills and Juddha match factory were set up and come into operation, during the Rana period Nepal has got great sick for industrialization process. After the thrown of Rana Regime efforts are being made to accelerate the peace of economic development. As a result industrial growth was accelerated.

Nepal is one of the least developed country in the world resulting its low per capital income US $ 742 (National Planning Commission) and low economic growth rates 4.3% industrialization has significant part to play in long term development of the country. It is one of the best training grounds for skill development and also an important source of structural changes and diversification and it can raise the flexibility of the economy and reduce dependence an external forces. Industrial plays a crucial role in the progress of economic development and its importance in as a means of achieving economic growth and prosperity within the country. Hence industrialization is universally accepted as a strategy of economic development as well as fundamental goals of most developing countries. Industrialization is an important prerequisite for the economic development, which will transform the traditional economy to modern one.

There are seven types of industries in Nepal and central bureau of statistics (CBS) has classified it. Out of them manufacturing industries are one of the most important of the nations. Industries which produce goods by utilizing or processing raw material, semi-processed materials, by products waste product or, any other goods that is called manufacturing industries. The development of those manufacturing industries, government of Nepal has established 11 industrial, estates in different part

of Nepal. Industrial estates play a significant role in the development process of industrialization of a country.

These industrial estates provide physical infrastructure and other facilities for industrial enterprises at one spot. At present there are 11 industrial estates in the country, which are located at Balaju, Patan, Bhaktapur, Hetauda, Dharan, Pokhara, Nepaljung, Butwal, Gajendranarayan Singh (i.e. Raj Biraj) and Birendranagar are in operation at present and one at Dhankuta under the construction. Feasibility studies to establish industrial estates in more than 16 places including Nuwakot, Janakpur, Ilam, Chitwan, Jhapa, Kailali, Kanchanpur, Dang and Tanahu have been completed. Although this industrial units are different locations, their performance and sustainability have not been very encoring. They have been facing several problems and constraints. As result about 71 industrial units started in these industrial estates have now been closed down.

1.1.1 Industrial Districts Management Limited and its Objective

Initially the management of Balaju and Hetauda industrial districts were undertaken by Nepal industrial development where as Nepaljung, Patan, Dharan and Pokhara industrial estates were GON, Department of industrial districts management ltd. (IDM) was founded as a separate corporate entity in July 1988. It was entrusted with the overall management and supervision of all IDS plus other tasks such as conducting feasibility studies of IDS in potential areas, materializing new IDS and planning and promotion of industries there in. IDM is wholly an undertaking of government of Nepal incorporated under the company act in the form of a public limited company its share holders are Ministry of Industry commerce and supplies (MOICS), Auditor general office and Nepal industrial development corporation. It has an authorized capital of Rs. 150 lakh

Objective of IDM.

1 To provide infrastructure facilities like developed land, industrial sheds and warehouses, roads, drainage, culverts, electricity, water etc to the industries established in the IDS.

2 To study the potentially for the establishment of ID/IE and promote new ID in feasible areas.

3 To stimulate private sectors in setting up IDS/IES in promising area and extend technical services of required.

4 To promote industries in the IDS and undertake the overall management and supervision of the IDS/IES.

5 To identify problems of industrial units setup in the IDS and provide management consulting and extension services for their smooth operation and productivity improvement.

6 To disseminate information of feasible projects, facilities available in the IDS/IES and opportunities there in for investment.

7 To study the implication of government policies and make recommendations to government of Nepal for necessary alternations to develop congenial industrial atmosphere in the IDS/IES.

1.1.2 Present Status of IDS in Nepal

ID/IEs	Balaju	Patan	Hetauda	Dharan	Nepaljung	Pokhara	Butwal	Bhaktapur	Birendranagar	Dhankuta*	G.N. Singh**	
Year of Establishment	1960	1963	1963	1973	1973	1974	1976	1979	1981	1984	1986	
Assistance/Cooperation	USA	India	USA	India	India	Nepal	Nepal	Germany	Netherlands	Nepal	India	**Total**
Total Area (Ropani @)	670	293	2829	202	233	501	434	71	90	63	294	**5680**
Developed	670	293	2367	202	233	501	406	71	90	-	171	**5005**
Leased Out	526	218	1470	93	184	384	347	58	55	-	15	**3350**
Leasable	-	-	336	47	5	-	-	-	-	-	60	**448**
Land Occupied By Utility Services +	144	75	561	62	44	117	59	13	35	-	96	**1206**
Investment (Rs. in Million)												
Government Sector	13.2	25.8	29.21	7.7	9.6	16.7	11.0	13.6	7.4	5.6	35.5	**175.31**
Private Sector	2000	410.6	3163.58	162.9	125	740	1000	280	5	-	35.6	**7922.68**
No. of Industries	94	108	59	24	34	72	61	35	22	-	6	**516**

Operating	62	85	42	13	20	59	47	36	22	-	4	**390**
Under Construction	14	6	2	4	7	3	4	2	-	-	-	**40**
Closed	18	17	15	6	7	10	10	1	-	-	2	**85**
Employment Nos. ++	3800	1522	3500	504	850	1512	1651	700	89	1	47	**14214**
Power Capacity (KVA)	4000	1500	5000	750	750	700	1350	900	37.5	-	100	**15087.5**
Water Supply (KL/Hr)	20	1.25	92	1	7.75	20	6	20	4.1	-	8	**179.92**
Roads (KM)	5.2	5.0	11	2.30	2.34	2.54	2.14	0.69	0.91	-	2.0	**34.12**

* Construction help up

* * G.N. Singh = Gajendranarayan Singh Industrial Estate

@ 1 hectare = 19.65 Ropani.

\+ Utility services include road, powerhouse, warehouse, drainage, green belt, industrial and administrative building, etc

\+ \+ Including Head Office / IDs.

Manufacturing sector is critical to the pursuit of sustained growth due to its potential to promote technological, capacities, advance the diversification of production and exports, add value to exports and to foster intersectoral inter-industry linkages. In Nepalese economy the manufacturing sector is very small. It has face various problems, which would have acted as constraints in growth of manufacturing industries. Mainly such problems arise due to land locked and under developed situation of the country, shortage of capital, small size market, lack of trained and skilled manpower, instabilities of government etc. The government policy to concentrate more on fixed capital has overlooked the financing of working capital.

Working capital plays vital role in the success or failure of business. The working capital is the life blood and controlling nerve-centre of the business. Every firmer business wants to maximize the value of firm. It is the main goal of the enterprise. The firms concentrate on providing quality product and service in timely manner. Working capital is the part of the capital of a company that is employed in its trading operations. Working capital management concerned with managing both current assets and current liabilities and the interrelationships between them. The excess working capital as well as short working capital is harmful for business. The success and failure of any business organization heavily depends upon the sort of efficiently in its working capital management.

In the context of Nepal, working capital management is not satisfactory. Many studied reports relating the performance of public enterprise have found that managers often lack of basis of knowledge of working capital. It is most necessary to involve the study the working capital management for healthy industrial and business organization it has affected by the various factors. All of these affecting reasons have not succeeded to include in this study. Study of working capital management is important at least four reasons (i) the adequacy of investment in current assets otherwise it would seriously erode their liquidity position (ii) they most select the type of current assets for the razing their operative efficiency (iii) they are required to ascertain the turnover of current assets that greatly determined the profitability of the enterprise (iv) they must find out the appropriate source of funds using to finance current assets.

However in recent year, it has been realized that the area of working capital intricately inter woven with the success on failure of the enterprise. Today one may across with such situation where shortage of funds for working capital as well as the uncontrolled over expansion of working capital has many business to fail and in less serve caused, has situated their growth. This aspect of working management is equally applicable to the small as well as large scale enterprises. The only difference is that in small firm, working capital management may be the factor that decides success or, failure where as in longer firms, efficient working capital management can significantly affect the firm's profitability.

The working capital management practices of manufacturing industries situated in Nepalgunj industrial estate provide totally a different picture. In recent years, it has been realized that the areas of working capital intricately inter-woven with the success or failure of the enterprises. Due to shortage of funds for working capital as well as the uncontrolled over expansion of working capital caused many business to fail and has stunted their growth. This aspect of financial management is equally applicable to the small as well as large scale enterprises of the manufacturing industry. More ever liberalization is giving threat and opportunities to the entire countries of the world, it is assertively said that the management of working capital should not be neglected by manufacturing companies. So this study of working capital management includes the selected manufacturing industries situated in Nepalgunj industrial estate to present their scenario.

1.2 Focus of the Study

Manufacturing industries which produce goods by utilizing or processing raw material, semi processed materials, by-product or waste product or any other goods. Every manufacturing firm needs various types of assets to run the production process without any interruption. Some assets are required to meet the needs of regular production and some to need the expenses and short terms obligation of firms. So management has to manage different types of assets especially required to run the operation of the firm smoothly. One of the major components is working capital with out any industry can not be operated smoothly.

So this study focuses on how working capital management in managing in manufacturing industries situated at Nepalgunj industrial estates. Working capital can be regarded as the life-blood of the enterprise it refers to the administration of all aspects of the current assets and current liabilities. It includes that type of capital, which circulates from one to another form in the ordinary conduct of business. As the management of current assets and current liabilities of the business organization is necessary for day-to-day operations. The aspect of determining appropriate proportion of current assets in the structure of total assets comes under the preview of working capital policy. The unnecessary blocking of working capital, administrative negligence in day-to-day operation and serious liquidity problem are the main causes for the failure of manufacturing companies situated in Nepalgunj industrial estates. Most of the manufacturing companies are operating in loss though they are following aggressive approach of working capital management. So the study is focused on how the working capital management in managing in manufacturing industries situated in Nepalgunj industrial estate.

Industries situated in Nepalgunj industrial estate

S.N.	Bimal Metal Industries	Product	Prop righter
1.	Laxmi Plastic Pvt. Ltd	Copper & Brass pots	Ashok Kumar Baidhya
2.	Bijaya Metal Industries	Polithine pipes	Jaya Gopal Shrestha
3.	Vinod Metal Industries	Copper and Brass pots	Kannaiyalal Baidhya

4.	Binaya Food Industries	Copper and brass pots	Kannaiyalal Baidhya
5.	Bheri Technical School	Soyabody and vooja	Rajesh Kumar Maske
6.	Barsha Metal Industries	Manpower production	Yam Bhandari
7.	Ganesh Auto Works	Copper and brassblood	Kannaiyalal Baidhya
8.	Himalaya Electro Mechanical and Trading	Moter repairs	Ram Bahadur Hitany
9.	Himalaya Engineering works	Electric goods	Md. Sofi Ansari
10.	Krishana Kamal Textile Pvt. Ltd.	Transformed panel board repair	Tawahir Khan
11.	Mashakti Metal Industries	Polister cloths	Dinesh Kesharwal
12.	Modern Doors and Wood Pro. Pvt. Ltd.	Tap fitting goods	Tej Kumar Jaiswal
13.	National Automatic Works	Plywood and door	Champalal Sharma
14.	Noor Furniture Industry	Moter engine repairs	Binaya Sharma
15.	Nepa Engineering Works	Wood furniture	Hajarat Ali
16.	Nepali Harbal Processing Plant	Greel, shorter and suspension bridge	Kedarchandra Sharma
17.	Om Shakti Metal Industry	Harbal processing	Sakil Ahamed Jasgadh
18.	Rani Metal Industry	Metal goods	Shushil Kumar Jalan
19.	Roshan Metal Industry	Brass tap and metal pots	Rani Jaiswal
20.	Rijawan Engineering Works	Copper rings	Mithumiya Jasgadh
21.	Shidhhibinayak Food Pro.	Iron mfg. services	Jawahir Khan

22.	Shyam Chemicals Industry	Cron flash	Minesh Maske
23.	Star Metal Industry	Ditergent powder	Naresh Kumar Lakher
24.	Shidhartha Engineering Works	Brats and copper pots	Rajid Ahamad, Jasgadh
25.	Tendon Plastic Pvt. ltd.	Iron mfg. service	Jawahir Khan
26.	Tap and Values Industries	P.V.C. pipes and polithin	Rattan Kumar Tandan
27.	Bimal Metal Industries	Tap goods	Nitin Kumar Jalan

Out of this industry, the study is mainly focused on the working capita management practice of selected five manufacturing industries situated at Nepalgunj industrial estate. A brief, introduction of sample manufacturing companies is given below.

S.N.	Industries	Establish date	Authorized capital Rs (00,000)	Paid of capital Rs in (00,000)	Produce product
1.	BFI	B.S. 2037	20	20	Harin Vooja
2.	KKT	B.S. 2056	25	25	Shirting and shooting
3.	LPI	B.S. 2039	50	50	High density ploythin pipe
4.	MDW	B.S. 2039	50	40	Plywood
5.	VMI	B.S. 2039	50	45	Aluminum and copper sheet circle

1.3 Statement of the Problem

Working capital plays a significant role in every aspect and more so in manufacturing industry whose structure and function depends upon it. Working capital management refers to the proper management of firm's current assets and

current liabilities, recognizing the interrelations and interactions that exist between them. It is concerned with all decisions and Acts that influence the determination of the appropriate level of current assets and their efficient use as the choice of the methods of financing them, keeping in view of liquidity.

Every Nepalese manufacturing industries are still facing the problem of working capital management due to lack of knowledge about working managing working capital causes harm to the organization and finally pushes it into liquidation. Every investor wants to earn profit in their investment. But profits are not only the indicator of proper management of working capital. There are various indicators of working capital management. So basically this study has tries to find out the issues of working capital management of manufacturing industries situated at Nepalgunj industrial estates and how resolution of these issues. The financial performances of manufacturing industries are not so good. The reasons should be investigated and corrective measures should be taken for the improvement of their performance.

This study tries to solve the following research question

1 What is the relationship between current assets and total assets of manufacturing industries?

2 Is there proper investment in each type of working capital in manufacturing industries?

3 Is there a profitability of industries is satisfactory?

4 Are the manufacturing industries following appropriate working capital policy?

5 What are the major factors affecting the management of working capital in manufacturing industries?

1.4 Objective of the Study

The main objectives of this study are to examine of the management of working capital in manufacturing industries situated in Nepalgunj industrial estate. The excess of working capital as well as inadequate working capital both are harmful for the business (Pradan 1986). The major objective of this study are as follows:

1 To analyze the composition of working capital of selected manufacturing industries i.e. BFI, KKT, LPI, MDW and VMI.

2 To analyze the proper relationship of sales and working in manufacturing industries.

3 To analyze the composition of current assets and current liabilities of selected manufacturing industries.

4 To provide suggestion for improvement of working capital management of manufacturing industries situated at Nepalgunj industrial estate.

1.5 Significance of the Study

Nepalese manufacturing industries are operating in the competitive environment and facing various problems. In this situation, mfg. industries have to adopt suitable strategies for their existence. The success or failure of any organization depends upon its strategy, which is affected by working capital management. Working capital management refers to proper management of firm's current assets and current liabilities, recognizing the interrelations and interactions that exist between working capital is the most crucial area in enterprise management because many instances have shown that regardless of excellent production and wide fixed assets management has lost the control of its firm because a liquidity crisis resulted in takeover by creditors, forced merger or bankruptcy.

Nepalese manufacturing industries have a different pattern of scenario of using working capital, most of the companies do not have any fixed policies. Because of lack of definite working capital policies, the cash flow management of companies is almost poor. They have made their huge level of investment in fixed and long term assets. Though they have such type of investment, they are facing difficulties on operating their day to day business because of poor working capital management.

This study will be helpful to carryout further research study in this field. Hence, these studies will diagnose the relationship of working capital management of the efficiency of the enterprise as a whole. It will also be useful for the new management to improve the efficiency as well as the profitability with proper management of working capital and its components.

Working capital management important for these reasons

1 More than half of the total assets are typically invested in current assets.

2 A large proportion of time of the financial manager is allocated to working capital management.

3 Small firms may minimize their investment in fixed assets by leasing but they cannot avoid their investment in cash, receivables and inventories.

4 The relation between sales growth and the need to invest in current assets is close and direct.

5 Investment in fixed assets may be reduced by renting of leasing, but investment in inventories and receivables is usually unavoidable.

1.6 Limitation of the Study

The scope of present study has been limited in terms of period of stud as well as sources and nature of data. This study does not cover all mfg. companies situated at Nepalgunj industrial estates at the time of conducting this study. Out of 27 manufacturing industries situated at Nepalgunj industrial estate, only five manufacturing industries have been taken for research study. So it covers only 18% of the population. The conclusion is based on the available financial statement which might not be perfectly correct in reality. However, following are the limitations of the study.

1 Time and resource constraints may limit the area covered by the study.

2 Out of 27 manufacturing industries situated in Nepalgunj industrial estate, only five of them are included in this study.

3 This research design and analysis followed for this study are basically focused on secondary data which covers the period of last five fiscal years.

4 The major sources of the data will be dependent on the data provided by concerned industries. Central Bureau of statistics and other published and unpublished articles.

1.7 Organization of the Study

This study has been divided into five chapters. These are as follows:

i) Introduction

This chapter includes introduction, focus of the study, statement of problem, objective of the study, significance of the study and organization of the study.

ii) Review of Literature

This chapter focuses on review of literature. It contains past research literature on working capital management of various books, journals, articles and research works.

iii) Research Methodology

This chapter contains research methodology employed in the study. It is consisting research design, sources of data, data and tools and techniques of analysis and period covered.

iv) Presentation and Analysis of Data

This chapter contains presentation and analysis of data to attain the research objectives. Further more, this chapter is subdivided into various headings as follows:

a) Working capital policy:- Various component of working capital will be analyzed on the basis of variables and ratios.

b) Composition of working capital:- It part deals with the investment in current assets.

c) Correlation and regression analysis:- Relationship between various working capital variables and analysis and interpretation by using statistical method.

d) Major findings:- This part presents all the major findings based upon analysis.

v) Summary, Conclusions and Recommendations

The fifth chapter contains summary and conclusion of the study. After that all necessary recommendations are presented. The recommendations are forwarded for the related manufacturing industries to improve their working capital policies.

At last part of the study, a bibliography has been included. All necessary appendices are also included after bibliography.

CHAPTER-TWO

REVIEW OF LITERATURE

Working capital management deals with the management of current assets and current liabilities of Business, which is necessary for day-to-day operation. Working capital can be regarded as the lifeblood of the enterprises. It refers to the administration of all aspect of current assets and current liabilities. The working capital management practices in Nepalese manufacturing enterprises provided different picture. The past trends of many manufacturing companies had given emphasis in fixed assets. So that many manufacturing companies are facing financed difficulties and lower efficiency.

"Review of literature" is an essential part of all studies because it is way to find out the concept about it. It is also a way to avoid investigating problems that have already been definitely answered. The purpose of literatures reviews is, to find out what research studies have been conducted in one's chosen field of study, and what remains to be done. The main objectives of this chapter are to clarity the need of studies rationally and systematically it reviews all the related studies on working capital management. Including different view of exports and researchers, who had accomplished their research on different companies in Nepal.

2.1 Conceptual Review

Conceptual Review helps to make easier to studying on working capital management.

Working capital management is usually described as involving the administration of these namely cash, marketable securities, receivable and inventories and the administration of current liabilities. It means the working capital management is concerned with the problem that arise in attempting to manage the current assets, the current liabilities and the inter relationship that exist between them. (Van Horne 1994.373)

Working capital is a controlling nerve of business it is an important and integrate part of financial management as short-term survival is a pre-requisite to long term success. As pointed out by Ralph, Kennedy and steward mcmullar, the inadequacy or mismanagement of working capital is the heading cause of business

failure. Unless that payment is made at the maturity of the particular debt, the firm is a worst and the creditors may force the firm to terminate its business. (Flink and Donald: 1964:15)

Working capital management is concerned with the problems that arise in attempting to manage the current assets and current liabilities and the interrelationship that exists between them. The goal of working capital management is to mange the firms current assets and current liabilities in such a way that a satisfactory level of working capital is maintained. This is so because if the firm cannot maintain a satisfactory level of working capital, it is likely to become insolvent and may even be forced into bank ruptcy. So working capital plays vital role in the success and failure of the business. The major current assets are marketable securities, amount of receivable, inventory and cash, current assets is important for manage the other factory assets and expenses. For example purchase materials, merchandise goods, fuel, labour staff etc. It create finished goods and inventory sold in market and change to cash. The basic current liabilities are account payable, bank over draft and outstanding expenses etc. Each of current assets and current liabilities must be managed efficiently in order to maintain the liquidity of the firm while not keeping too high level of any one of them. Each of the short term sources of financing must be continuously managed to ensure that they are obtained and used in the best possible way. The interaction between current assets and current liabilities is therefore the main theme of the theory of management. (Khan and Jain 2003:15)

Thus the working capital plays crucial role in the success and failure of the organization. The term circulating working capital is used to designate those assets that are changed with relative rapidity from one from into another, i.e. from cash to inventories to receivable to cash during the course of manufacturing cycle. The financial decision on working capital management is planning, utilizing and controlling its current assets, short term assets in term of the requirement of the company and liquidity position of the organization. The skill of working capital management should be unique to make an efficient use of funds for minimizing the risk of loss to attain profit objectives.

2.1.1 Concept of WC

Every firm requires investing the assets, they does not invest only fixed component of assets but also invest to maintaining certain investment in current assets. The term of working capital management is closely related with short term financing and it is concerned with collection and allocation of the resources. Working capital management is closely related to management of current assets and current liabilities. Thus the management of working capital is no longer viewed as an accounting task but as a strategic method for increasing the financial performance of leading organization. So the working capital management covers all decisions of an organization involving cash flows in the short-run with emphasis on the management of investment. In current assets and their financing. It focuses on the co-ordinate control of the firm's current assets and current liabilities. The excessive and inadequate levels of working capital are harmful for a firm. The excessive level of current assets of a firm means to use more-long-term fund. Which is costlier than current liabilities, on the other hand the inadequate level of current assets may lead the firm into bankruptcy, as it becomes unable to satisfy its current obligations timely. There fore the level of working capital must be just optimal neither more nor less. The optimum working capital insists on maintaining a trade off between profitability and cost associated with current assets investment and financing policy of a firm. There are two main concept working capital

1) Gross working capital concept
2) Net working capital concept

1) Gross Working Capital Concept

The gross concept emphasizes on the level of investment associated to total current assets. It focuses on maintaining an optimal level of current assets. A firm should not neither excessive nor inadequate investment in current assets. The level of current assets may be fluctuating with the changing business activity. (Pradhan-119)

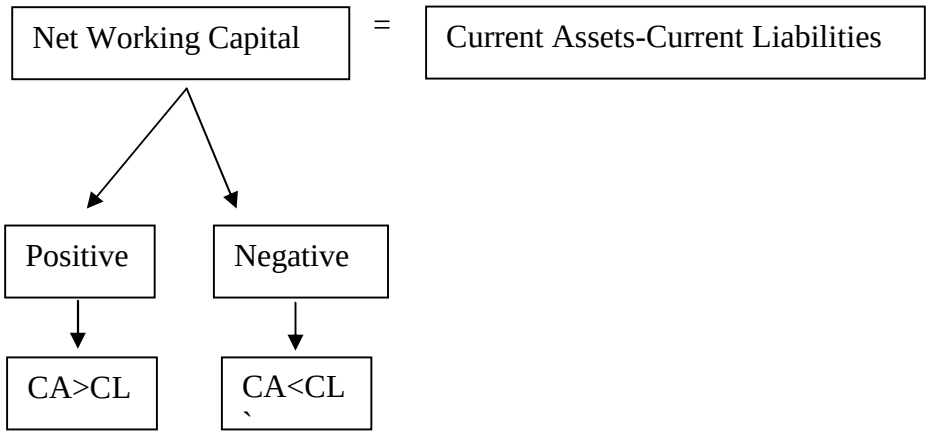
This concept makes the implied meaning of working capital to current assets only. Current assets includes cash short-term securities, inventory and account receivables. Which can be converted into cash with in an accounting cycle that is,

usually a period of one year. Thus the gross concept of working capital can help earning more profit through maximum utilization of current assets.

2) Net Working Capital Concept

Simply not concept of working capital management refers to the difference between current assets and current liabilities. on other words net working capital indicates whether the current assets have been solely financed by current liabilities or long-term sources have been also used and alternative definition of net working capital is that portion of current assets which is financed with long-term finance. It is not very useful to compare the performance of different firms as a measure of liquidity but it is quite to useful internal control. This concept helps to compare the liquidity of the firm over a time. (Khan and Jain, 2003-15.4)

The gross concept fails to consider current liabilities so that net concept of working capital arises in the organization. The current liabilities are those liabilities, which can be claimed by outsider suppliers within a year. Creditors, bills payable and outstanding expenses are included in current liabilities. There are two types of net working capital one is positive net working capital and another is negative net working capital. When current assets are in excess of current liabilities that is called positive net working capital and when current liabilities are excess of current assets is called negative net working capital. So the concept helps to determine mixture of short term capital and long term capital of business organization. This concept is also known as qualitative concept of working capital.



The definitions described above convey in some way or other, same meaning, it seems that there is consensus on the following special characteristics of the working capital.

a) Short Life

Working capital is characterized by assets with a life span of less than one year such as cash marketable securities, account receivable, inventories etc. This short life span leads to high volatility in the level of investment required to finance of working capital.

b) Nearness to Cash or Liquidity

Cash is the most liquid assets holding zero conversion time and 100 percent conversion rate. But for inventory and marketable security two factors i.e. (i) nearness to cash or amount of time required to convert assets into cash and (ii) price realized on conversion must be considered.

c) Lack of Synchronization

Since the enterprise cannot produce on order only and cannot insist on cash payments there is always the problem of synchronization in cash receipts and disbursement it is also due to the level of investments in working capital that is affected by the sales volume, production policies and collection policies.

2.1.2 Types of Working Capital

The working capital is classified as permanent and variable working. The level of working capital associated to a firm is influenced by many factors. The working capital is necessary for continuous production and sales with out any interruptions.

a) Permanent Working Capital

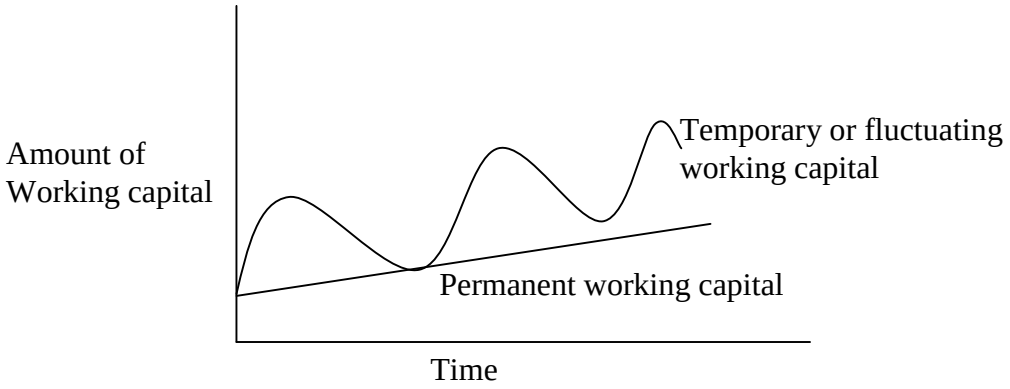
Permanent working capital is the minimum level of working capital that a firm must maintain at all times. There is certain level of current assets that a firm must hold at all times for regular operation of its business. This level of current assets is known as permanent current assets and the need some permanent working capital level arise because of holding fixed investment in permanent current assets. Permanent working capital increase due to growth of organization.

b) Temporary Variable Working Capital

The need for working capital over and above the permanent working capital were fluctuate over the time, depending on the seasonal fluctuate in production and sales level associated to the firm. This fluctuating working capital over and above the permanent working capital is known as variable or temporary working capital. It is the amount of current assets that varies with seasonal requirement for example, if there is

a peak selling season during any month the firm has to maintain additional investment in receivables and inventories. As a result, the need for working capital increases above the permanent level. The relationship of permanent and temporary working capital over the period is shown in below figure.

Figure 2.1



Source: John J. Hampton, 1998

The figure shows that permanent working capital for the firm is stable over the time and variable working capital fluctuates over the time. However it should be noted that the need for permanent working capital also increases over the time for growing firm. Therefore, the permanent working capital line is not necessarily the horizontal as shown in the figure. In such case `it is sloping upward.

2.1.3 Factors Affecting Working Capital

The total working capital requirement is determined by a wide variety of factors. These factors, however, affect different enterprises differently. They also vary from time to time in general, the following factors are pertinent for having an over-all view of the forces affecting working capital needs.

1) Nature and Size of Business

The working capital requirements for company depend upon the nature and size of business. If a firm belongs to financial, trading sector and it requires very large sum of money as working capital relatively to public utilities. While manufacturing's concern lies between these two extremes. In manufacturing companies stock in trade represents a large investment.

2) Production Policy

If a firm adopts steady production policy, the investment in inventories will build up during off seasons. As a result, working capital need of the firm increases.

3) Cash Conversion Cycles

Cash conversion cycle is the length of time period lag between the time cash out flow occurs in the firm of purchase, investment in inventories and receivables and the time cash inflows occur in the from of cash sales or collection of credit sales. Longer the cash conversion cycle larger will be the working capital requirement for the firm.

4) Credit Policy

A firm may apply relatively liberal or strict credit policy. If the firm has liberal credit policy it extends more credit to large number of customers. This results into increase in investment in receivables thus causing the level of working capital to increase.

5) Growth and Expansion

If a firm is growing in term of its size and operation needs to expand its operating capacity. Because of expansion need of the firm, it has to maintain additional investment in working capital in terms of additional inventories or raw material, work-in-progress, finished goods, receivable salaries and ways to additional manpower and so on.

6) Manufacturing Cycle

It has great impact of working capital needs because the shorter the manufacturing period and efficiency in production, the lesser the need of working capital to finance in working capital and vice versa.

7) Level of Taxes

The level of taxes also influences working capital requirement. The amount of taxes to be paid in advance is determined by prevailing tax regulations. But the firms profit is not constant or, cannot be predetermined. Tax liability in sense of short term liquidity is payable in cash. Therefore, the provision of tax amount is one of the important aspects of working capital planning.

2.1.4 Working Capital Policy

Working capital policy refers to the firms basic policies regarding target levels for each category of current assets and how much current assets will be financed. What level of current assets will be invested and financed in the firm. If firm used to either current assets financing policy or current assets investment policy. The working capital investment and financing policy involves a trade off between profitability versus risk. Any firm has to find out the different sources of funds for working capital. Thus working capital policies regarding to the level of each category of current assets and their financing and discussed in the insuring part of this section.

A) Current Assets Investment Policy

Current assets investment policy calls for maintaining optimal level of current assets, both in total and by specific account. There are three alternative current assets investment policies which are as follows.

i) Relaxed Working Capital

This is also known as Eat cat current assets investment policy. This policy the firm holds relatively large amount of cash, market able securities and receivable to support a given level of sales. This policy creates longer inventory, longer cash conversion cycle and longer receivable collection period due to sales applying liberal credit policy. Thus this policy provides the lowest expected return on investment with lower risk.

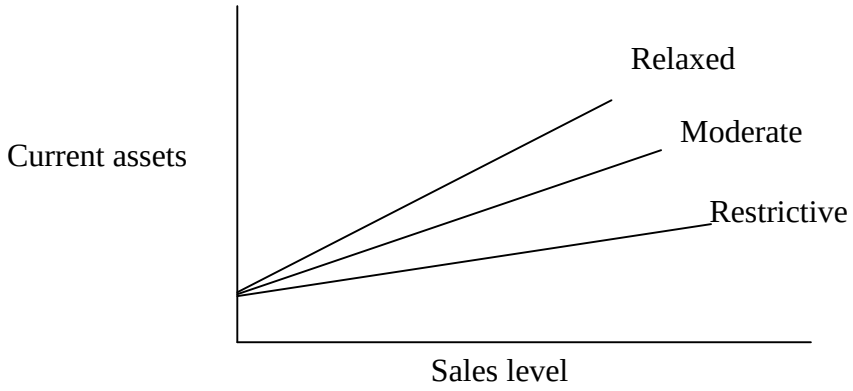
ii) Restrictive Working Capital Policy

In this policy a firm holds the minimum amount of cash, marketable security receivable and inventory to support a given level of sales. This policy creates short cash conversion cycle, receivable period and inventory. The company follows tight credit policy and bears the risk of losing sales. This is the greatest risk. However, this policy provides the highest return on investment.

iii) Moderate Policy

In this policy the from hold’s neither large nor minimum amount of cash, inventory, receivable and marketable securities. So the firm holds the amount of current assets in between the relaxed and restrictive policies. Risk and return both are moderate in this policy. We can show these policies with the help of following figure.

Figure 2.2



B) Current Assets Financing Policy

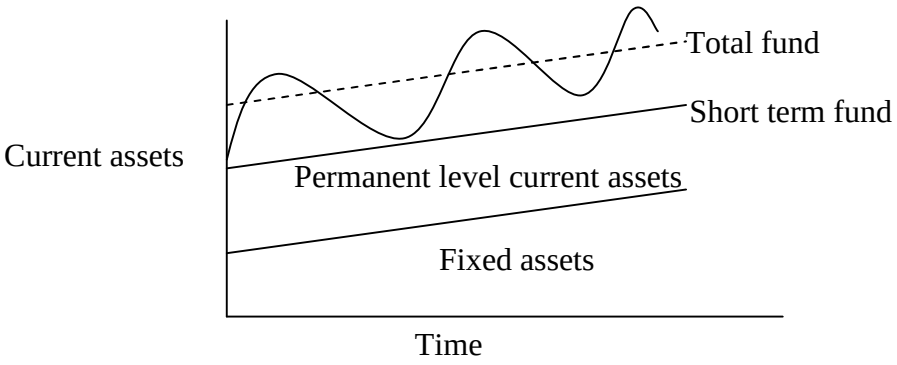
This policy concerned with determining the appropriate mix of long-tem and short term funds to meet the investment in current assets. It is the manner in which the permanent and temporary current assets are financed. Current assets are financed with funds raised from different sources. But cost and risk affect the financing of any assets thus, current assets financing policy should clearly out line the sources of financing current assets.

There are number of approaches available for determining the level of risk return associated with current assets financing. However, we concentrate into three alternative current assets financing policies.

i) Aggressive Policy

In aggressive policy, the firm finances apart of its permanent current assets with short term financing and rest with long term financing. It carries a low of current assets to sales. An aggressive policy results in higher risk and higher profitability.

Figure 2.3

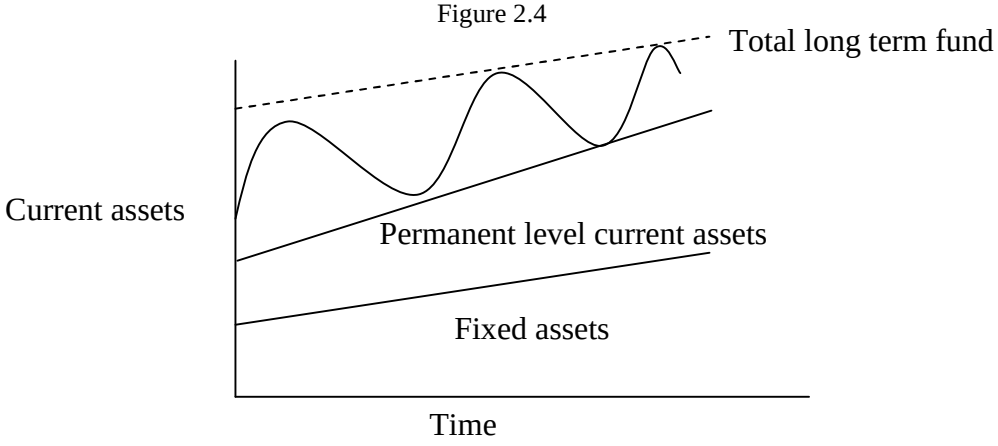


Source: Weston, Basley and Verighm, 1996

ii) Conservative Policy

This approach requires that the firm finance its total funds requirements with long term fund and use short-term financing only when there is an unexpected cash outflow. This policy leads to high level of current assets, with long conversion cycle, low level of current liabilities and high interest cost. The firm's liquidity position is higher than that of aggressive policy. So that, the risk and return are lower in this policy.

Figure 2.4

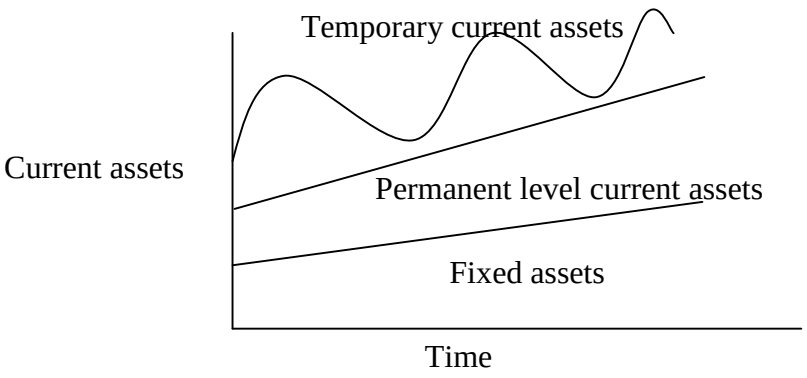


Source: Weston, Basley and Verighm, 1996

iii) Moderate Policy

This policy falls in between the aggressive and conservative approach. The moderate approach to current assets financing ranges between high. Profitability, low-liquidity and low-profitability high-liquidity states. It carries an average level of current assets to sale. It leads to neither high nor low level of current assets and current liabilities. in this policy temporary working capital is financed by short-term financing and permanent by long-term financing.

Figure 2.5



Source: Weston, Basley and Verighm, 1996

2.1.5 Significance of Working Capital

Every firm needs working capital to operate day to day transaction. It helps to meet daily requirement of business. The working capital management is significant for maintaining a desired scale of operation. The relationship between growth in sales and working capital used is direct and close. As each firm's is always maximizing sales revenue it must involving in working capital management. Before starting the production, it has purchase raw material and paid salary and wages to its staff and labour. While the firms starts production and produce finished product, it has wait for sale of them in this period firm also has spend on advertising and promotion expenses which helps increase in sales. To operate all above process, the firm has to invested large fund in current assets. Therefore, every firm needs working capital management.

The need for working capital can not be over emphasized. The objection of financial decision making it to maximize the sales revenue of the shareholders. The firm should earn sufficient gain from its operation. Every firm needs to hold the working capital component such as cash, receivable, inventory etc. A good working capital management reflects in terms of adequate level of account receivable, inventory and cash flow in and out of the firm. Working capital management is particularly significant for smaller firm, since they carry a higher percentage of current assets and current liabilities. The survival of these firms largely depends the effective working capital management. Due to their limited access to the long-term capital market, they have to rely heavily on the short-term borrowing, trade credit and so on. Effective working capital management functions well and survive for a long term. Therefore, every firm needs working capital to following motive.

i) The Transaction Motive

Transaction motive require a firm holds current assets and inventories to easily running of production and dales operations. Generally a business firm invests on marketable security that can be converted into cash in a short time. It is temporary investment. Therefore, a business firm has to manage working capital for its transaction motives.

ii) The Speculative Motive

The firm's cash and marketable security accounts may raise to rather sizable levels on a temporary basis as fund are accumulated to meet specific future needs

(Weston and Brijham 1982). Speculative motive refers to the desire of a firm to take advantage of these opportunities.

1 Opportunities of profit making investment.

2 To purchase at favorable price.

3 An opportunity to purchase raw material at a reduced price on payment of immediate cash.

4 To speculate on interest rate.

To catcher these opportunities the firm has to manage cash and marketable securities. Therefore, case and marketable securities are needed for speculative motives.

iii) The Precautionary Motive

The precautionary motive is the need to hold cash and inventory to safeguard against the risk and uncertainty. Thus the firm needs to the working capital to meet any contingencies in future.

2.1.6 Working Capital Cycle

Firm's liquidity has too major aspect ongoing liquidity and protective liquidity. Ongoing liquidity refers to the inflow and out flow of cash through the firm as the product acquisition, production, sales, payment and collection takes places over time. Protective liquidity refers to the ability to adjust rapidly to unforeseen cash demands and to have back up means available to raise cash.

The firm's ongoing liquidity is a function of its working capital cash flow cycle. As raw materials are purchased, the firm's current liabilities increase through account payable, subsequently, the firm pays for these purchases. During the same time, raw materials are converted into finished goods through the production process. After getting the finished good inventory they can be sold either for cash or in credit, in later case, receivables are created. Finally, the account receivables are collected, resulting in cash. Ongoing liquidity is influenced by all aspect of cash cycle, since, increase in purchase, inventory, or receivables will decrease liquidity. A decrease in any of the three will increase ongoing liquidity.

2.2 Review of Related studies

It is also important to review the relevant research studies relating to working capital to add input in this study. This sechon mainly yocus on the review of journal articles published by the management exports in working capital management and the review of different thesis, which are related to this study.

Review of Journals and article

This section mainly focus on the review of journals published by the management of experts in working capital management. It is not possible to estimate working capital needs accurately, the firm must decide about levels of current assets to be carried. The current assets holding of the firm will depend upon working capital policy. It may follow a conservative or an aggressive policy. These policies have different risk return implications. Working capital management capital management is usually managed as associated the administration of these assets namely cash, inventory, marketable security and receivable and the administration of current liability. This means the working capital management is concerned with the problem that arises in attempting to manage current assets, current liabilities and interrelationship that exists between them (Van Horne: 1970)

In Mr. Shrestha's article working capital management in public enterprises. He described conceptual setting sources of working capital and types of working capital. The study has based on sample of ten public enterprises. From the analysis that the liquidity and profitability position of these enterprises. He found that out of ten PEs four were operating in adequate liquidity position and six were operating losses with the references of his findings he has brought certain policy issues such as lack of suitable financial planning, negligence of working capital management, deviation between turn over and return on net working capital. At the end he has made some suggestive measure to overcome from the above policy issue i.e. identification of needs funds regular check up accounts development of management information system, positive attitude towards risk and profit and determination of right combination of short term and long-term sources of funds to finance working capital requirement (Shrestha 1982-1983).

A study on 'A comparison of financial performance of MPES and Private Manufacturing Enterprises' made by Rajendra Prasad Sharma selected altogether six

textile industries, three from public and private sector each for the study. In this study it was concluded that the net working capital position of both sectors, although fluctuating has positive working capital. There was very high liquidity position of public sector industries. Where as majority of private sector industries have adverse situation. Among current assets and there was encouraging use of cash and bank though inventory turnover in public sector-industry were relatively lower than that of private sectors while debtors turnover was more or less similar in both sectors. He also found that trade credit and other internal provision though fluctuating in nature were the main sources of financing working capital in both sector. And majority of private sector industries had relatively better use of fixed assets than other industries moreover, the earning power of public sector textile industries was very low and even negative for many years while that of private sector was quite encoring. He also pointed out that both sectors seemed to have neither any sort of dividend policy nor they did pay any sort of dividend. Thus there was negligible direct contribution of textile industries in the revenue generation of government during the period under study ("Sharma 1985").

"The Demand for working capital by Nepalese corporation" article by Dr. R.S. Pradhan. This analysis covers 12 years data from 1973 to 1984 for nine manufacturing public enterprises in this analysis, the regression analysis has been adopted. In this study, he has dealth with various issues i.e. type of working capital policy followed by those PEs, liquidity position, structure of working capital nature of working capital and its various components with change volume of sales in those PEs. The earlier studies concerning the demand for cash and inventories by business firm didn't report unanimous finding. This study relates to rates of cost, capacity utilization, preserve of economic scale and the speed with which actual cash and inventories respectively. All the selected PEs had a positive net working capital and much of the growth in net working capital at deflated prices had been much lower.

The liquidity measures showed a poor liquidity position in majority of PEs. It has been founded that the organizations had either negative cash flow or earning before tax, they had excessive net current debts, which could not be paid with in a year. The regression results, suggests strongly that the demand for working capital and its components is a function of both sales and their capital cost. The estimated results show that the inclusion of capacity utilization variable in the model seems to

have contributed to the demand functions of cash and net working capital only. Thus the capital demand function was not clear. Finally it provides an extensive and comprehensive survey on the overall liquidity position, working capital policy, working capital utilization and demand function of the current assets. (Pradhan 1986)

Weinurb and Visscher (1998) have carried out a study on industry practice relating to aggressive, conservative working capital policies. This study looked at ten diverse industry groups over an extend time period to examine the relative relationship between aggressive and conservative working capital practices. Results of strongly show that the industries had significantly different current assets management policies. Additionally the relative industry ranking of the aggressive/conservative liability management was also significantly different. Interestingly, it is used where there is a high and significant negative correlation between industry current assets and liability policies. Relatively aggressive working capital management seems balanced by conservative working capital financial management.

Zeng (2002) made an empirical study on the working capital channel and cross-sector co-movement. The paper studied cross-sector co-movement, one of the defining characteristic of business cycle, in a monetary framework. The study argues that monetary factors might be important for understanding this phenomenon through a working capital channel. The study showed that in a strictly portfolio adjustment model where firm borrow to finance working capital, appositive money supply shock drives the nominal interest rate down, thereby stimulating firm's borrowing and causing employment to rise in different sectors. A positive aggressive technology shock can also drive the nominal interest rate down upon impact and reduce co-movement when the elasticity of labour supply is large.

Mahat (2004) has published article relating to "Sponatneous Resoureces Working Capital Management". The article has defined the three major sources of working capital i.e. equity financing, debt financing and Spontaneous sources of financing, regarding the working capital management. Debt financing include short term, bank financing such as bank overdraft, cash credit, bills purchase and discounting, letter of credit etc. where as spontaneous sources of working capital include trade credit, provisions and accrued expenses.

The articles has defined that working capital management is one of the important pillars of corporate finance. However, Nepalese industries are facing difficulty in their survival by the cause of recession, which can bring best and worst in corporate finance such as environment should be enough to cope with the possible worst happening in future for working capital management. The study has said that managing the working capital resources for a profit making industries are routine affairs of just making payment and arranging collection of debtors. In contrast, the company in debt trouble, it is rather difficult to meet its working capital gap by the way of debt financing, the company should have to bear interest, which may cause to increase in the percentage of operating expenses to the turnover and depletion in the profit. Spontaneous sources of working capital will better to working capital in order to improve its performance.

Consequently in a changed economic scenario, ever company should realize that inability to manage working capital might land them in a vicious circle that can be hard to get out form. It is indeed essential for industries to tighten their belts and check their financial stability to face and stand in forth coming competitive day.

Peel and Wilson (1996) have stressed the efficient management of working capital, and more recently good credit management practice as being pivotal to the health and performance of the small firm sector. Along the same line, Berry et.al. (2002) finds that SMEs have not developed their financial management practices to any great extent and they conclude that owner-managers should be made aware of the importance and benefits that can accrue from improved financial management practices. The study conducted by De Chazal Du Mee (1998) revealed that 60% enterprises suffer from cash flow problems. Narasimhan and Murty (2001) stress on the need for many industries to improve their return on capital employed (ROCE) by focusing on some critical areas such as cost containment, reducing investment in working capital and improving working capital efficiency. The pioneer work of Shin and Soenen (1998) and the more recent study of Deloof (2003) have found a strong significant relationship between the measures of WCM and corporate profitability. Their findings suggest that managers can increase profitability by reducing the number of day's accounts receivable and inventories. This is particularly important for small growing firms who need to finance increasing amounts of debtors.

Mauritius provides a good case study for this paper as it looks at the small and medium sized enterprises operating in the manufacturing sector of a small island developing state. Most of the previous studies on working capital management and financial management of small firms have focused on the US, UK and some other developed countries like Belgium and Australia.(studyfinance.com)

Samiloglu and K. Demirgunep (2008) has published article about the effect of working capital management on firm profitability. Hence the aim of this study is to analyze the effect of working capital management on firm profitability. In accordance with this aim. To consider statistically significant relationship between firm profitability and the components of cash conversion cycle out length a sample consisting of Istanbul stock Exchange (ISE) listed manufacturing firm for the period 1998-2007 has been analyzed under a multiple regression model.

The article has defined that efficiency in working capital management is os vital for especially production firms whose assets are mostly composed of current assets. it must be avoided to recede from optimal working capital level by bringing the aim of profit maximization in level by bringing the aim of profit maximization in level by bringing the aim of profit maximization in the foreground. Or just in direct contradiction, to focus only on liquidity and consequently pass over profitability. While excessive levels of working capital easily result in a substandard return on assets. Inconsiderable amount of it may incur shortages and difficulties in maintaining day to day operations.

Working capital is also a major external source of capital forces especially small and medium size and high growth firms. These firms have relatively limited access to capital markets and tend to over come this complication by short form borrowing. Studies regarding working capital are mostly related with improving models to determine optimal liquidity and cash balance. Rather than analyzing underlying reasons of relationship between liquidity. Working capital management practice and profitability.

Working capital management involves the relationship between a firm's short-term assets and it's short-term liabilities. The goal working capital management is to ensure that a firm is able to continue its operations and that it has sufficient ability to satisfy both maturing short-term debt and upcoming operational expenses. The

management of working capital involves managing inventories, account receivable and payable and cash (study finance.com 2009).

Stephen Bush (2011) published article about the working capital management and commercial finance consulting. He has served a business government advisor for over 25 year and is a commercial loan expert.

According to this article avoiding critical problems is vital for a small business owner seeking help with commercial loan. Successful working capital management specially requires that problem lenders be avoided for business loan ad commercial mortgage financing.

One of the most serious working capital financing scenarios is a lender that causes difficulties for their small business commercial borrowers on a regular basis. It is lender which inform commercial borrowers should be prepared to avoid unless realistic alternative of options. For commercial loans and commercial mortgages are totally impractical. (ezine articles.com)

Working capital is a business bold as well as the oxygen that gives your business its every breath In other words, working capital is what keeps your business alive and functioning working capital is obviously vary important.

Have your noticed that your business cash flow is not a steady as you wish? has it become difficult to pay for your business day- to day expenses ? If so, you might be need of working capital.(Answer. com)

Review of Previous Related Thesis

This part is mainly focused on the review of different thesis, which are relating to this study. So many thesis works have done in the different aspect of working capital management of different organization is also review for the purpose of justifying the study. Some of these relevant unpublished dissertations of master levels students in management of different Nepalese organizations have been review as follows:

Yogi, Dhruba Nath (1999), has conducted his research on “working capital management of Nepal lever limited”. The main objectives of the study were to analyze the liquidity, composition of working capital assets utilization and

profitability position and to examine the relationship between liquidity and profitability of NLL. He found that

The liquidity position of the company is increasing trend and satisfactory. There is not proper utilization of current assets but inventory turnover is increasing trend and it looks better during his study period.

Another study was conducted by Mr. Deependra Raj Sharma on "A study on working capital management of Nepal. Battery Company limited (NBCL). He has covered the time period by five fiscal years from 049/50 to 053/54. His objectives were to analyze the liquidity composition of working capital, assets utilization and profitability. He has used to secondary data ratio analysis and karl pearson's correlation coefficient have been used. He has found that

1 The current assets, inventory holds the longest portion followed by miscellaneous current assets, sundry debtors and cash balance respectively.

2 Inventory holds the largest portion of NBCL in a fluctuating trend.

3 There is positive correlation in between working capital and sales, the relationship is insignificant because of fluctuating sales volume.

4 It shows less utilization of working capital and net working capital. (Sharma, 1999)

Mr. Om Bikram Gurung(2002) "Study on working capital management of Nepal liver limited." The objective of this study is to analyze the liquidity, composition of working capital, assets utilization and profitable position of NIL. He has taken five years sample period from 053/54 to 057/58. He has used ratio analysis and coefficient of correlation as financial and statistical tool respectively and used secondary data. He found that

2 Inventory holds the major portion of current assets followed by miscellaneous current assets, sundry debtors, prepaid expenses and advances and cash and bank balance. All the components of current assets are fluctuation during observed period.

3 Liquidity position of NLL is not satisfactory since current and quick ratio are below satisfactory level but increasing trend implies that liquidity position can be expected to be good in future.

4 Current ratio contains high amount of inventory and receivable but they don't show any significant relation between A and CL.

5 The company has preferred short term financing rather than long term financing which has been indicated by the increasing trend of current liability to long term liability ratio. It applies firm's moderate financing policy. (Gurung, 2002)

Niraj K.C. (2003), was comparative study of "working capital management of Nepal Bank Limited and Nepal Arab Bank Limited." the objective to analyze the comparative study of working capital management of NBL and NABL. He used to ratio analysis tool the found that liquidity position of NBL is better that BABIL, profitability position on NABIL is for better than NBL although NBL has earned higher interest than NABIL. NABIL has better turnover and investment efficiency on loan and advance than NBL. The management of loan and advance is more problematic in NBL than NABIL.

Shah, Shabitri has carried out his study on working capital management of selected manufacturing company listed in "His objective was to examine the working capital management of manufacturing company with the impact of working capital on profitability and working capital policy of manufacturing companies. He used ratio analysis and coefficient of correlation by karl pearson's method for financial tool and statistical tool. She found that

1 Cash has occupied smallest portion of CA and cash conversion cycle is 26 days.

2 Company has held highest portion of inventory and liquidity position of the company is not well. i.e. current and quick ratio are below standard value and turnover position of the company was also found weak because of high collection period.

3 Inventory constitutes the most important and largest elements of working capital.

4 Current assets with respect to total assets are in increasing trend and it has occupied high portion than fixed assets.

Mr. Aryal (2004), has carried out an analysis of working capital management of Hetauda Textile and Balaju Textile ltd. The objectives of his study were to analysis the liquidity, solvency, utilization and profitability position, and overall comparison of working capital management of both textile companies. He has used ratio analysis and t-test for the analysis. The findings of this study were as follows:

The liquidity position of Hetauda textile ltd. was better than that of Balaju textile ltd. But both companies have not followed a proper working capital policy.

1 Total assets turnover of both companies was not satisfactory and there was not significant different of total assets turnover.

2 Solvency position of Hetauda textile was better than that of Balaju textile.

3 Cash balance maintained by Balaju textile ltd. was better than that of Hetauda textile.

4 Profitability position of Hetauda textile was better than that of Balaju textile however both companies have not good profitability position during the study period.

Keeping in views the fact that there are many study of working capital management in the context of Nepalese manufacturing companies. Now Nepal has got the member of WTO and has followed liberalization, privatization and globalization policy. So, the Nepalese manufacturing companies are facing more complex problem. They are strike, completion with many multinational companies in global market. Many Nepalese manufacturing have been running vary critical period for the survival of those manufacturing industries because of the instability of political situation. Working capital plays vital for the success and failure of the firm, how it is managed, every manufacturing industries to make strong and competitive to maintain sound working capital management. The working capital management practice in manufacturing companies situated at Nepalgunj industrial state is different from other previous research works. I think that it is necessary to bring out a fresh study of manufacturing industries with respect of to working capital management. This study is based on secondary data and has used ratio analysis and standard deviation and co-efficient of correlation, between sales and net working capital. As a researches chosen this subject to throw light on working capital position and to suggest the possible

measures for the betterment and welfare of the manufacturing industries situated at Nepalgunj industrial estate.

Miss. Reena Agrawal (2003) carried out the analysis of "Working Capital Management of Manufacturing sector of Nepal" (with special Reference to Battlers Nepal Ltd. and Nepal Lever Ltd. The objectives of her study were to analyze the variable affecting working capital of manufacturing companies liquidity position, turnover position. She has used ratio analysis and statistical tools. And the findings of this study were as follows:

- The study reveals that the components of current assets are highly fluctuating during the study period. The less liquid assets inventory holds the larger portion of current assets. It shows that current assets absorb higher percentage of total asserts.
- Both the enterprise is not following appropriate working capital policy as they adopted conservative financing policy.
- Profitability position is seems to be satisfactory but these ratios are widely fluctuating during the study period.
- Inventory conversion cycle and payable deferral period for better cash conversion cycle and to reduce the need for extra working capital. Cash conversion cycle on an average is satisfactory but it needs to maintain consistency on it.

Mr. Dikpal Subedee (2003) study on Working Capital Management of Manufacturing Companies Listed in NEPSE. The objective of the study was to examine working capital management of the Nepalese mfg company, the impact of working capital on profitability, current assets and current liabilities policy and the relationship between liquidity and profitability of mfg company.

He has used financial tools and statistical tools. And the findings of the study were as follows.

- The fluctuation in the current assets holding lead to conclude that the selected mfg. companies do not seem to have seriously examined their working capital policy.

- Working capital policy shows that management has not seriously examined the working capital policy so that most of the manufacturing companies are following aggressive policy but opposite impact in revenue.
- High variability of working capital and lower liquidity position in mfg. companies prove that fact that the mfg. Companies have not made suitable financing planning for determine there working capital.
- Delay in payment of the obligation hampers the credit worthiness of the firm and further obligation loan and other facilities. Due to poor collection and payable policy of Nepalese Manufacturing Companies the conversion period seem to be negative.
- Overall profitability of the Nepalese mfg. companies is positive, some of the companies' profitability is negative. Thus from our analysis it can be said that some of the Nepalese manufacturing companies are suffering from financial sickness.
- Because of higher percentage of inventory it here is positive correlation between variables. This shows fair liquidity position of the company.

Miss Pushpa Adikari (2005) study on "Working Capital Management practice in Listed Manufacturing Company of Nepal" (a case study of Bottlers Nepal Ltd. Balaju). The objective of the study was to analyze the liquidity, long term solvency assets utilization and profitability position, working capital depends upon the mature of financing current assets or not. And she has used ratio analysis. And the findings of the study were as follows:

- Current assets hold the largest portion of the current assets ratio, Inventory holds the largest portion of current assets.
- The overall quick ratio position of the company has found favorable.
- Receivable collection period of the company is very low. Most of the sales in cash. So the receivable period of the company is satisfactory.
- Payable deferral period of the company is very fluctuating. It affects the companies credit is decrease due to the late payment of sundry creditors.
- Return on net worth was found to be fluctuating during the study period which indicates that wealth maximization of share holders has not given an emphasis.

Mr. Raju Gyawali (2008), has carried out the analysis of "Working Capital Management of Uni-lever Nepal Limited." The objective of his study were to analysis of the liquidity and profitability position structure and utilization of working capital policy and the factor determining of working capital. He has used ratio analysis and statistical tools (SD., Correlations and Regression). The finding of this study were as follows:

- The current assets turnover ratio of ULN Ltd is not in full satisfaction level.
- Liquidity position is unable to meet standard or it is below the standard value. So the liquidity position of UCN Ltd is poor.
- The outcome of cash conversion cycle is not satisfied condition for long run because analysis shows that there is long payable deferral period, short inventory conversion period and short receivable collection period.
- Overall return position of company is also not in favourable condition because by inefficient Utilization of current asserts. Total assets and share holder's wealth.
- The correlation co-efficient of the variables selected for the statistical analysis show that the company has insignificant relationship and negative correlation with each others except with CBB and CA. Inventory and sales and Inventory and production.

Sanu Babu Bartaula (2009) Study on "Working Capital Management of Sumy Distilleries Ltd." The objective of the study is relationship between working capital management and profitability of the company, liquidity position, and the size of investment in each type of the working capital. He used ratio analysis and coefficient of correlation.

The finding of this study was as follows:

- The proportion of current assets with respect to total assets and net fixed assets. Shows that current assets absorb high percentage of those total assets as the higher ratio indicates the greater amount of working capital which will decrease risk and profitability.
- Because of higher percentage of inventory, there is positive correlation between variables. This shows fair liquidity position of the company.
- The profitability position of the S.D. Ltd. during the study period is not satisfactory.

CHAPTER- THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research method is necessary for making any study systematic and complete. Research methodology is a sequential procedure and methods to be adopted in systematic study (Kothari,-1984, 19). Any study can be meaningful in that time when the researcher adopted better research tools. The research tools help to come meaningful conclusion of any study. The working capital management practice of manufacturing companies situated at Nepalgunj Industrial estate. In this chapter the research has been focus on research design, nature and sources of data, sample and population, data collection method and which tools are more suitable for the analysis of data.

3.2 Research Design

Research design is a way of the collection and analysis of the data. Research design is the arrangement of conditions for collections and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure, all (claive selltiz and others-1996). The research design includes definite procedure and techniques, which guide to sufficient way for analyzing and evaluating this study. This study establishes the relationship between two or more variables and it to be termed as analytical, informative, descriptive and challenging and feedback study. So the research design of this study is based on descriptive and analytical research. In this study working capital management financial tools as well as statistical tools as analysis of secondary and primary data as qualitative analysis of manufacturing industries are employed to achieve prescribed result.

3.3 Nature and Sources of Data

This study is mainly based on secondary data relating to financial reports are directly obtained from related manufacturing industries but some additional information has been collected through personal interview with selected person of sample industries. The secondary data obtained from financial statement, annual report, published and unpublished official records, official website and journals. All

the collected raw data are arranged, calculated and tabulated to achieve the meaning object of the study.

3.4 Population and Sample

Currently there are 27 manufacturing industries situated at Nepalgunj Industrial estate. Out of them only five manufacturing industry are taken as sample for this study. Which are producing different products. Financial statement of latest 5 year data from fiscal year 2064/065 to 2068/069 have been taken as sample data for the complete this study of working capital management.

The samples of manufacturing industries are as follows:

1 Binaya Food Industry (BFI)

2 Krishana Kamal Textile (KKT)

3 Laxmi Plastic Industry (LPI)

4 Modern Doors and Wood Pro. Pvt. Ltd. (MDW)

5 Vinod Metal Industry (VMI)

3.5 Data Collection and Processing Procedure

The study is mainly used upon the secondary data, the data collection from related manufacturing industries and CBS. The supplementary data and information obtained from unpulished and published official records of related manufacturing industries, library and different website. If it requires personal talk and interview with some professors, teachers and related employees.

The obtained data are presented various tables, diagrams and charts with supporting interpretation.

3.6 Tools and Techniques of Analysis

Quantities and qualitative method are used for analyzing working capital management practice manufacturing industries situated at Nepalgunj industrial estate. Here, the collected data has been classified tabulated and analyzed the quantitative and qualitative method and result are presented and analyzed by using diagram and chart where necessary.

3.6.1 Quantitative Method

For measuring the effectiveness of working capital management, two tools can be used in this study. They are as follows:

1 Financial tools

2 Statistical tools

3.6.1.1 Financial Tools

Financial tools are any formal and original tools that help to give meaningful financial information relating to any organization. The ratio analysis is widely used for the financial analysis ratio analysis is a mathematical relationship between two related items expressed in quantitative form. It is explained with reference to the items shows in financial statements, then it is called accounting ratio. So the ratio is the measurement of quantitative relationship between two or more items of financial statement connected with each other. The quantitative relationship may be express by follows ratio to analyze and determine financial position of an organization.

Liquidity Ratios

Liquidity ratios focus on current assets and liabilities and are used to ascertain the short-term-solvency position of the firm it ensure that from does not suffer from lack and high of liquidity. The two primary tests of liquidity are current ratio and quick ratio.

Current Ratio

A current ratio is the quantitative relationship between current assets and current liabilities. It evaluates short term debt paying ability of the firm it shows the solvency and financial strength of the firm. It is calculated by dividing current assets by current liabilities.

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$$

Higher the current ratio indicates that the firm has sufficient liquid and has ability to pay its current obligation in time when they become due, lower current ratio indicates insufficient liquid to meet current obligations in time when they become due.

Standard current ratio is 2:1

Quick Ratio

Quick ratio measures the short term liquidity of the firm. Quick ratio, also termed as acid-test ratio or liquid ratio. An assets is liquid if it can be converted into cash without a loss of value within one year. Quick ratio defined as the quantitative relationship between quick assets and current liabilities.

Standard quick ratio is 1:1

It quick ratio is higher the standard shows strong short-term solvency of the firm and lower shows poor short-term solvency of the firm. It is calculated as

$$= Quick\ Ratio\ (QR) = \frac{Quick\ Assets}{Currernt\ Liabilities}$$

$$Quick\ Assets(QA) = \frac{Current\ Assets - \Pr epaid\ \ Expenses - Inventory}{Current\ Labilities}$$

Activity turn over ratio

It measures the efficiency of the firm. How are the assets help to increase the sales and efficiency of the firm are the firm managed and utilizes its assets? So the relationship between sales and assets are indicates by turnover ratio. There are following turnover ratios

Inventory turnover ratio

Inventory turnover ratio indicates whether the investment in inventory is efficiently used or not.. It indicates how quickly inventory can be converted into sales. The ratio is calculated as:

$$Inventory\ Turnover = \frac{Sales}{Inventory} = ...times$$

Higher turnover indicates the good inventory management of the company.

Receivable/ Debtors Turnover Ratio

It indicates the number of times the debtors rotate in year. Higher and lower turnover indicates cash collection is very fast more efficient management of debtors and slowly cash collection. The formula of debtors turn over ratio is:

$$Debtors\,Turnover\ Ratio = \frac{Credit\ Sales}{Average\,Debtors}$$

Total assets turnover ratio

This ratio measures the efficiency of utilizing total assets towards contribution of sales. Higher turnover ratio indicates better firm's performance and voice-versa. It is calculated as

$$Total\ Assets\,Turnover\ Ratio = \frac{Sales}{Total\ Assets} = ...Times$$

Ratio of current assets to total assets

(CATA) the ratio indicates what percentage of enterprise total as are invested in the form of current assets.

$$CATA = \frac{Current\ Assets}{Total\ Assets} \times 100$$

As the percentage increases the risk and profitability of enterprises would decrease.

Profitability Ratio

Profitability is an indicator of efficiency of the business organization, it measure the management overall efficiency as shown by the return generated from sales and investment. Higher the profitability ratio shows the efficiency of the management. The following ratios have been used in this study.

Return on Current Assets

This ratio analysis is the earning power of the current assets of the organization. It is calculated as follows:

$$\mathrm{Re}turn\,on\,current\ assets = \frac{Net\ profit}{Currernt\ Assets}$$

Return on Net Working Capital

It is measures the profitability of net working capital and efficiency of working capital the ratio calculated as

$$\text{Return on net working capital} = \frac{\textit{Net profit}}{\textit{Net working capital}}$$

Cash Conversion Cycle (CCC)

The cash conversion cycle model focuses on the length of time between the company makes payment and when it receivable cash inflows. It is calculated as:

CCC=ICP+RCP-PDP

It shows that how much of time does cash collected by firm.

Inventory Conversion Period

It refers to the length of time required for converting raw materials into finished goods and then to sell these goods.

$$ICP = \frac{\textit{Inventory}}{\textit{Sales per day}}$$

Receivable collection period (RCP)

It also refers to as days sales outstanding average collection period is the average length of time required to collect accounts receivable once goods have been sold in credit.

$$RCP = \frac{\text{Receivables}}{\textit{Sales per day}}$$

Payables deferral period (PDP)

It is defined as the length of time between purchase of material and labour and the payment of cash for them. It is calculated as payables divided by cost of good sold per day.

$$PDP = \frac{\textit{Payable}}{\textit{Cost of good sold} / 360}$$

Cash conversion cycle has explored one important point that the level of working capital investment depends upon the length of cash conversion cycle. If the firm is able to shorten its cash conversion cycle, the working capital requirement also could be reduced. The length of cash conversion cycle is positively related with ICP and RCP but negatively related with PDP. Therefore, cash conversion cycle of a firm could be shortened by reducing ICP and RCP and increasing the length of PDP. This

would improve profit, because the shorten the CCC the smaller the need for external financing and thus the lower the cost of such financing.

3.6.1.2 Statistical Tools

A brief introduction of the statistical tools that have been used in this study are given below.

1) Standard Deviation (SD)

The standard deviation is the square root of the average of the square distances of the observation from the mean. There are different formula used to calculate standard deviation among them following formula has used in this research study.

$$SD \pm \sqrt{\frac{\sum (x - x)^2}{N}}$$

Co-efficient of variation (CV)

The relative measures of dispersion based on the standard deviation are known as the coefficient of standard deviation. The percentage of measure of co-efficient of standard deviation is called co-efficient of variation. $C.V = \frac{S.D}{mean} \times 100$

It is used for comparing the homogeneity and the uniformity of two or more distributions.

I) Coefficient of Correlation

Correlation is defined as statistical measure which is used to study the degree of relationship between two or more than two variables. Two or more than two variables are said to the correlated if change in the value of one result in a corresponding change in the value of other variables. Correlation is an analysis of the co-variance between two or more than two variables and correlation deals to determine the degree of linear relationship between two or more variables. It does not tell us anything about cause and effect relationship. Thus correlation coefficient is associated between two in variables one is dependent and another is independent.

Properties of Simple Correlation Coefficient

1) It is symmetric i.e. $r_{12} = r_{21}$
2) Its value lies between -1 to +1
3) It is independent of change of origin as well as change of scale.
4) It is a pure number independent of the unit of measurement.

It is geometric mean of two regression coefficient

Interpretation of correlation coefficient

1 if r = +1 there is perfect positive correlation between the variables.

2 if r = -1 there is perfect negative correlation between the variables.

3 if r = 0 there is no correlation

4 if r = s closer to +1, there is very positive correlation.

5 if r is closer to -1, there is high degree of negative correlation.

if r is closer to 0, there is low degree of positive or negative correlation. Correlation coefficient (r) can be calculated as follows:

$$r_{xy} = \frac{\sum xy}{\sqrt{x^2}\sqrt{y^2}}$$

where x and y are two variables measured from their means.

i.e. $x = \left(x - \bar{x}\right)$

$y = \left(y - \bar{y}\right)$

Probable error (PE) of the correlation

The probable error is used to measure the reliability and test of significance of correlation coefficient. The probable error of the correlation coefficient is the basis for the interpretation of its value. It is defined by.

$$\text{PE (r)} = 0.6745 \times \frac{1 - r^2}{\sqrt{n}}$$

Where r = correlation coefficient

n = number of pairs of observations

interpretation of PE

i) if r < PE (r) it is insignificant, i.e. there is no evidence of correlation

ii) if r > 6PE (r) it is significant

iii) if PE (r) < r < 6PE, we can not draw any conclusion

Simple Linear Regression Model

The regression analysis is a statistical method for determining the nature of relationship that exits among two or more than two variables and making estimates or predictions from that relationship. In case of simple linear regression analysis a single variable is used to predict another variable on the assumption of linear relationship between the given variables. The various to be predicted is called the dependent variable and the variable on which the prediction is called the independent variable.

Simple regression equation, which is used in this study, is as follows.

The regression equation of x on y

$$\left(x-\bar{x}\right)=r\frac{\pm x}{\pm y}\left(y-\bar{y}\right)$$

The regression equation of y on x

$$\left(y-\bar{y}\right)=r\frac{\pm y}{\pm x}\left(x-\bar{x}\right)$$

Where

r = simple correlation coefficient between x and y

$\pm$ y = standard deviation of y

$\pm$ x = standard deviation of x

$\bar{x}$ = mean of x series

$\bar{y}$ = mean of y series

x = dependent variable

y = independent variable

3.6.2 Qualitative Method

When ever qualitative method gives us insufficient result in that time we used to option survey for qualitative method. A list of question will be asked to fill out paper to the selected person of the sampled companies on the bases of replies analysis can be made. Personal interview also will be taken with the selected of sample industries.

3.7 Definition of Key Terms

To clarify the misunderstanding and confusion, the key terms used in this study are defined as follows.

i) Current assets:- Current assets are those assets which are converted into cash within year. It includes cash, in hand and bank, receivable, Inventory and miscellaneous current assets.

ii) Current liability:- It includes account payable, loan and advance, provision of taxation, and miscellaneous current liabilities and provision.

iii) Sales:- Sales include only trading sales and it is not include miscellaneous sales.

iv) Fixed Assets:- It consists of the assets which are permanent in a nature. It include, land and building, plant and machinery, furniture and fixture, vehicles etc.

v) Inventory:- Stock of raw material, work in progress, finished goods, chemicals and other goods are included in inventory.

vi) Receivable:- Receivable is known as credit sales, which is not recovered. It includes trade and other debtors.

vii) Payable:- It includes the amount of sundry creditors which the company has to pay within a year.

viii) Total Assets:- Total of balance sheets assets side or sum of CA and FA.

ix) Net Working Capital:- It is the different between current assets and current liabilities.

CHAPTER–FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter is the main body and longest section of this study in which an organized, and presentation of results are included. The collected data were processed and analyzed in according to using different tools. This chapter covers the presentation of arguments, interpretations, analysis and findings.

In this study we use the major variables which are concerned with working capital management. Total assets, current assets, current liabilities, net profit, sales and cost etc are the main variables of this study which are collected through financial statement annual reports of sample manufacturing industry and direct personal interview method also used. Data collection and presentation are not sufficient for any study. So that we analyzed the data by using different types of financial and statistical tools. To examine and interpretation of data to the purpose of working capital management of practice of manufacturing industries situated at Nepalgunj industrial estate. This study is based on both primary as soon as secondary data at this chapter, we deal about the working capital policy followed by sample manufacturing industries and then sound financial position of industries have been analyzed by applying various tools.

4.2 Composition of Working Capital

Every firm's has need to two types of assets i.e. fixed assets and current assets. Current assets are needed for day a day operation of firm's activities and fixed assets are no long term nature. So the firms needed to invest their some proportion of capital in current assets. Variable of current assets are composition of working capital. The investment in current assets and composition of working capital of selected manufacturing industries is analyzed as

4.2.1 Investment in Current Assets

For day to day letter management, the industry has maintained appropriate level of current assets and proper utilization of available resources. Investment in current assets is gross concept of working capital. So each component of current asset would be managed effectively.

The major components of current assets are cash, receivable and inventory. Which are daily uses in operating activities of industries. Receivable and inventories are less liquid than cash because they have to wait for conversion into cash. Cash has zero conversion periods and hundred percent liquid. High ratio of cash to current assets shows high liquidity of current assets but it is poor cash management. The firm should keep some cash reserve for take advantage. Position of current assets, its components should be examining separately i.e. position of receivable and inventories to its total current assets, level.

Table 4.1

Average ratio of receivable and inventory to current assets of 2068/069

(in times)

Industry	Receivable to CAs	Inventory to CAs
KKT	0.42	0.41
BFI	0.25	0.28
MDW	0.26	0.35
LPI	0.45	0.23
VMI	0.29	0.43
Overall Company average	0.33	0.34

(i) Ratio Inventories to Current Assets

What percentage of inventory to current assets is show the ratio. Higher ratio of inventory to CAs mean higher level of inventory holdings by the industries high inventory causes of higher holding cost, of lower than profitability and lower inventory turnover. It is sign of poor inventory management and to follow liberal inventory policy.

The above table shows the overall average ratio of inventory to CAs is 0.34 times The ratio of inventory to CA of KKT, BFI, MDW, LPI and VMI is 0.41, 0.28,

0.35, 0.23, 0.43 and 0.34 times respectively. The highest ratio is 0.45 times is VMI and lowest ratio is 0.23 times of LPI ratio. Higher ratio of inventory to CAs causes of higher carrying and holding cost. It is the result of less efficiency inventory management, the industry average ratio of inventory to CA is different during the study period. Inventory depends upon the nature of business.

(ii) Ratio of Receivable to Current Assets

The ratio states, what percentage of current assets is in the froms of receivable. Higher receivable to CAs ratio shows the liberal credit policy of the industry.

The above table shows overall average ratio of receivable to current assets is 0.33 times The ratio of KKT, BFI, MDW, LPI and VMI are 0.42, 0.25, 0.26, 0.45 and 0.29 times respectively. The lowest ratio is 0.25 times of MDW and highest ratio is 0.45 times of LPI. The ratio of receivable to current assets shows that inconsistent credit policy of selected manufacturing industry. It is also widely varied among the sample manufacturing industries during the study period.

4.2.2 Ratio of Current Assets to Total Assets

This ratio shows, what level of the companies' total assets is current asset. Higher the level of current assets indicates good liquidity position of company but it affects on the profatibility and risk. The ratio of current assets to total assets has been calculated and analyzed as follows:

Table 4.2
Ratio of Current Assets to Total Assets

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	0.843	0.858	0.837	0.865	0.826	4.229	0.84
BFI	0.303	0.343	0.367	0.373	0.373	1.759	0.35
MDW	0.698	0.801	0.840	0.869	0.829	4.037	0.80
LPI	0.489	0.523	0.504	0.566	0.620	2.702	0.54
BMI	0.711	0.707	0.800	0.792	0.732	3.742	.75
Total	3.044	3.232	3.348	3.465	3.38	16.469	3.29
Average	0.60	0.646	0.66	0.693	0.67	3.29	0.66

Source: Annex - 1 and 2

The above 4.2 table shows that the ratio of CAs to total assets is varied within the selected manufacturing industries. The highest ratio is 0.869 times of MDW in F/Y 2067/068 and the lowest ratio is 0.303 times of BFI in F/Y 2064/065.

(i) Yearly Average Ratio of CAs to Total Assets

The overall average ratio is 0.65 times from 2064/065 to 2068/069 during the study period. Highest average ratio is 0.69 times in fiscal year 2067/068 and lowest 0.60 times in F/Y 2064/065. The yearly average ratio indicates that CA of total assets is increasing trend during the 2064/65 to 2067/068 but in F/Y 2068/069 the yearly average ratio is lower than the F/Y 2067/068.

(ii) Industry Average Ratio of CAs to Total Assets

The table 4.2 shows that the overall average ratio of current assets to total assets of manufacturing industries. The highest ratio of CA to total assets is 0.84 times KKT and the lowest ratio is 0.35 times of BFI. Overall industry average ratio is 0.65 times It shows the manufacturing industries use 3.29 times CA to total assets.

The industry average ratio of CA to total assets is fluctuating during the study period. LPI and BFI have minted the ratio below than overall industry average ratio and other have higher than company average ratio.

4.3 Working Capital Policy

Working capital policy refers the decision concerned with determining the appropriate level of for current assets and current liabilities. Every firm adopt different working capital policies i.e. aggressive, moderate and conservative policy. One of the most important facts that how much current liabilities should be used finance current assets. Here the researcher tried to analyze on the basis of variables and ratios of the selected manufacturing industries by taking latest five years data for F/Y 2064/065. It indicates what working capital policy had been following by selected manufacturing industries situated at Nepalgunj industrial estate. This section is divide into two part one is individual. Industry wise for different period and different industry wise for same period. The analysis process is presented and described as follows:

4.3.1 Analysis Based on Variable of Working Capital

At first which working capital policy is followed by the selected manufacturing industries for the working capital management by examine and analysis of the variables of working capital. For this the variables of working capital have to be examined and analyzed as follows.

4.3.1.1 Level of Current Assets and Current Liabilities

Current assets are those assets which are converted into cash within a year from operating activities. Each firm has tried to maintain the appropriate level of current assets to run the firm smoothly. Every firm financed in current assets and current liabilities by using conservative or aggressive working capital policy. A conservative policy shows to higher level of current assets and lower level of current liabilities and the aggressive policy has just opposite effects.

Current liabilities are those payments which are paid within a year. It is integral part of the working capital policy. Firms should maintain the optimum level of liquidity in order to meet the current liabilities. So the level of current assets and current liabilities of sample manufacturing industries are given as following table.

Table 4.3

Level of current assets

Total current assets (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	27.76	49.86	52.49	57.45	60.33	2717.89	49.58
BFI	41.93	59.70	46.34	49.04	53.94	250.95	50.19
MDW	137.84	140.34	123.37	128.49	134.92	665.16	133.03
LPI	420.99	445.73	341.35	346.08	397.99	1952.14	390.43
VMI	663.65	706.93	554.38	765.94	804.23	3495.38	699.08
Total	1292.17	1402.56	1118.38	1347	1451.41	6611.52	1322.03
Average	258.43	280.51	223.68	269.4	290.28	1322.03	264.46

Source: Annex–2

Table 4.4

Level of current liabilities

Total current liabilities (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	15.97	23.73	20.01	29.51	32.46	121.68	24.34
BFI	12.99	19.76	21.44	24.247	26.91	105.57	21.21
MDW	68.35	69.77	40.95	65.53	68.81	313.41	62.71
LPI	194.57	117.29	101.06	128.96	135.41	677.29	135.45
VMI	255.89	332.16	208.76	334.21	350.92	1481.94	296.39
Total	547.77	562.72	392.22	582.68	614.51	2699.89	539.98
Average	109.55	112.54	78.44	116.54	122.90	539.98	108.00

Source Annex–3

I) Single Industry in Different Period

The above table 4.3 shows that current assets level is different. The current assets of KKT, BFI, MDW, LPI and VMI is Rs 27.76 lakh to Rs 60.33 lakh, Rs 41.93 lakh to Rs 53.94 lakh Rs 137.84 lakh to Rs 134.92 lakh, Rs. 420.99 lakh to Rs 397.99 lakh and Rs 663.15 lakh to Rs 804.23 lakh respectively. It shows that the selected manufacturing industries are not able to maintain the consistency of level of current assets. The average level of current assets of overall industries average is Rs 264.46 lakh where as the individual industry average level of current assets of KKT is Rs 49.58 lakh, Rs 50.19 BFI, Rs 133.03 in MDW, Rs 390.43 of LPI and Rs 699.08 of VMI.

Similarly, table no 4.4 shows that there are also widely varied in the level of current liabilities for the industry. The level of current liabilities is increasing trend in BFI and fluctuating trend in other industry. Here increase trend of in KKT and MDW and VMF in F/Y 2065/066, then decrease in 2066/067 and again increases. But in LPI is decreasing trend during the period of 2066/067 the increasing trend.

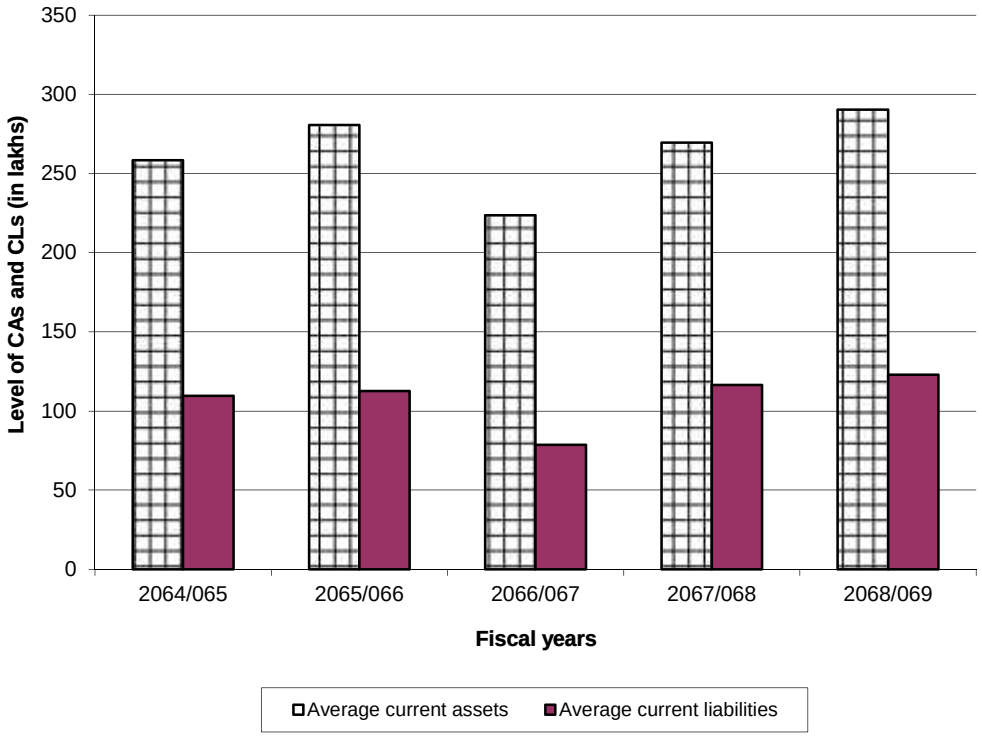
According to table no. 4.3 and 4.4 in all the selected manufacturing industries CA, is higher than current liabilities. There for we know that all the industry have adopted conservative financing approach.

II) Different Industries in Same Period

The industries overall yearly average level of CAs in F/Y 2064/065 are Rs 258.43, 280.51, 223.68, Rs 269.4 and lakh and Rs 290.28 lakh respectively, which is shown in table no. 4.3. The industries yearly average of is 264.46 which is higher than the yearly average in F/Y 2064/065 and F/Y 2066/067 and lower than the yearly average in F/Y 2065/066, F/Y 2067/068 and 2068/069.

Similarly, the level of current liabilities wide variation of in size of current liabilities between selected manufacturing industries. The industries yearly average level of CLS in F/Y 2064/065 to 2068/069 is Rs 109.55, 112.54, 78.44, 116.54 and 122.90 respectively. It shows that industries yearly average of CLs slightly increasing trends except F/Y 2066/067 during the study period. The level of current liabilities are wide variation in study period it shows that in consistency working capital policy of selected manufacturing companies.

Figure 4.1 Graphic presentation of level of CAs and CLs



The above figure 4.1 shows that the yearly average level of current assets and current liabilities are increasing trend and F/Y 2066/067 yearly average is lower than the overall industry average in selected manufacturing industries.

4.3.1.2 Level of Net Working Capital

The net working capital is different between total current assets and current liabilities of definite period. The net working capital indicates the firm's liquidity position as well as the pattern of current assets financing. The positive NWC indicated the higher level of CAs than CLs and negative NWC indicates the higher level of CLs than CAs and it also shows that the part of fixed assets also financing from short term fund. The position of net working capital in selected manufacturing industries as follows:

Table No. 4.5

Level of net working capital of selected manufacturing industries

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	11.79	26.13	32.48	27.94	27.87	126.21	25.24
BFI	28.94	39.94	24.9	24.57	27.03	145.38	29.07
MDW	69.49	70.57	82.42	62.96	66.11	351.55	70.31
LPI	226.42	268.44	240.29	217.12	262.58	1214.85	242.97
VMI	407.76	374.77	345.62	431.73	453.31	2013.19	402.63
Total	744.4	779.85	725.71	764.32	336.9	3851.18	770.23
Average	148.88	155.97	145.14	152.86	167.38	770.23	154.14

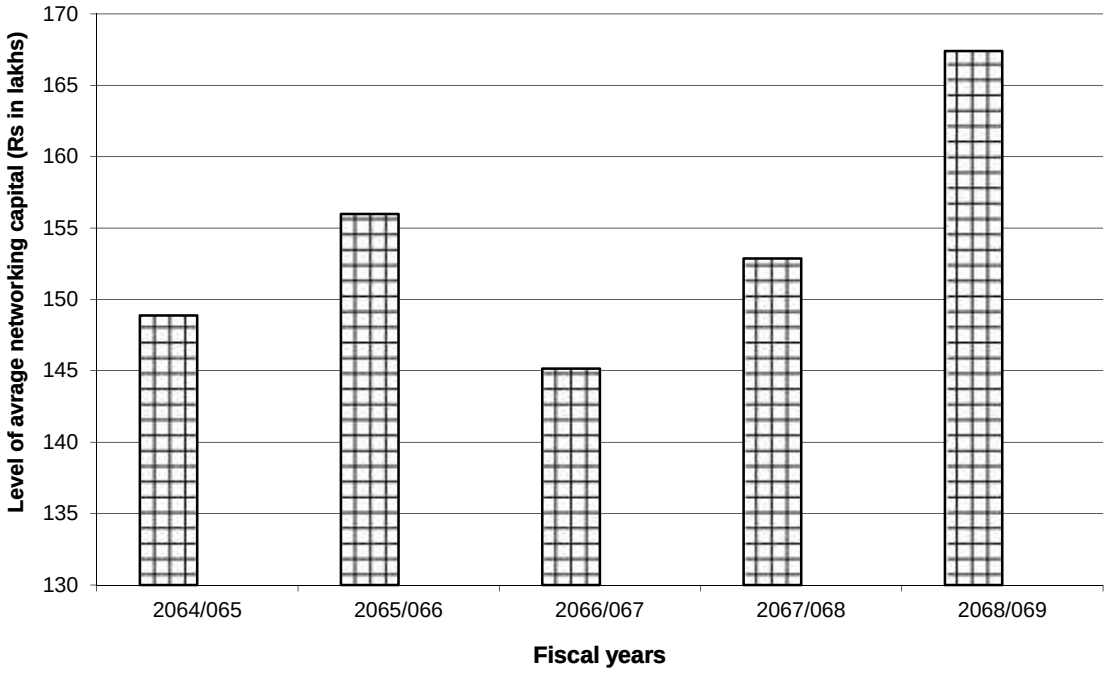
Source: Annex - 2 and 3

The above table shows that the level of NWC of selected manufacturing industries of the study period. In this study period, all the industries have positive net working capital. The overall all net working capital is Rs 154.04 lakh. The highest level of NWC is Rs 453.31 of VMI in F/Y 2068/069 and lowest level of NWC is Rs 11.79 lakh of KKT in F/Y 2064/065. It shows that, it is widely varied among the

industries. The highest NWC industry average is Rs 402.63 lakh of VMI and lowest level of NWC of industry average is Rs 126.21 lakh of KKT.

The lowest yearly average of NWC was Rs 145.14 lakh in F/Y 2066/67, it shows that level of NWC is fluctuating trend during the period. The trend of NWC during the study period is shown by graphic method.

Figure: 4.2 Graphic presentation of NWC



4.3.1.1 Cash Conversion Cycle

Cash conversion cycle represents the net time intercals in days between actual cash expenditure of the firm and the ultimate recovery of cash. The cash conversion cycle model focus on the length of time between the industries makes payments and when it receives cash inflows. It is calculated as:-

Cash conversion cycle (CCC) = Inventory conversion period +

Receivable conversion period – payable deferral period.

Inventory conversion period (ICP):- ICP refers to the length of time required for converting raw material into finished goods and then into sales. It is calculated as

Inventory conversion period (ICP) = $\frac{Inventory}{Sales\ per\ day}$

Receivable conversion period (RCP) = -Receivable conversion period is the average length of time required to collect account receivable once goods have been sold in credit.

Receivable conversion period (RCP) = $\frac{\text{Re}ceivable}{Sales\ per\ day}$

Payable deferral period (PDP) = It is the average length of time between purchase of materials and labours and the payment of cash for them.

Payable deferral period (PCP) = $\frac{Payable}{Costs/360}$

Table 4.6

Cash conversion cycle of selected manufacturing industries

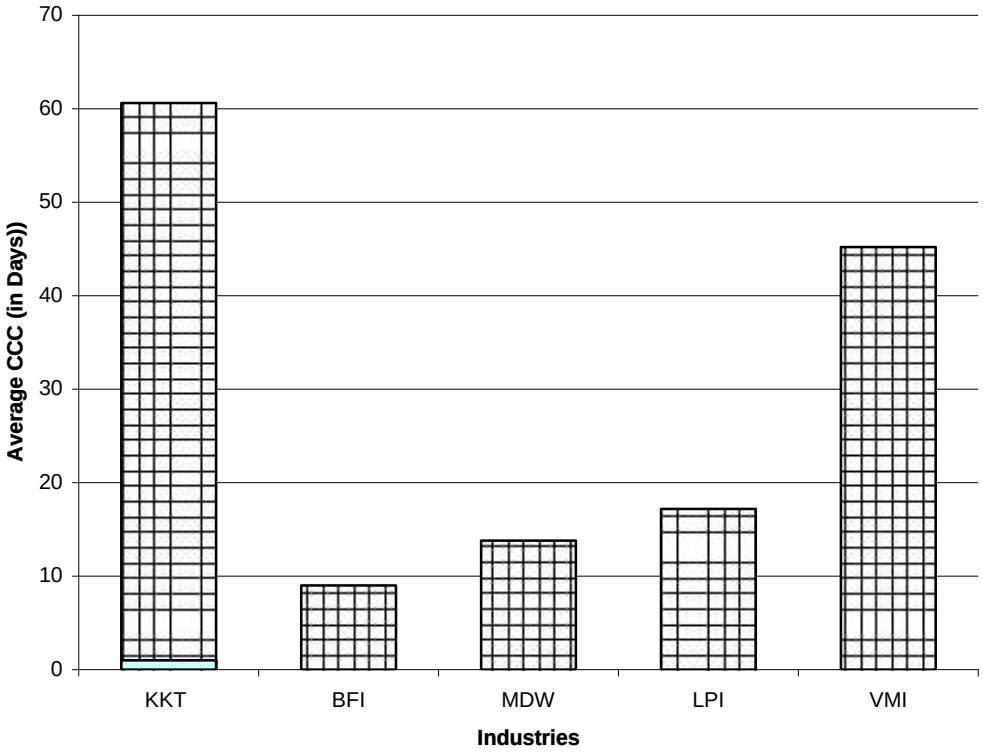
(in days)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	53	90	34	57	69	303	60.6
BFI	13	1	16	7	8	45	9
MDW	19	19	22	17	15	92	13.8
LPI	15	10	6	27	28	86	17.2
VMI	29	49	27	58	63	226	45.2
Total	129	169	105	166	183	752	150.4
Average	25.8	33.8	21	33.2	36.6	150.4	30.08

Annex:- 10, 11 and 12

The above table 4.6 shows the CCC of selected manufacturing industries situated at Nepalgunj industrial estate. It represent the average length of time that the firm must hold investment in working capital. It is affected by ICP, RCP and PDF. The overall average CCC is 30.08 days. CCC of BFI is satisfactory than other industries. Industries must be reduce their CCC by reducing ICP from quickly sales of finished goods, by reducing RCP from quickly collection and increasing PDP from slowing down the payment. CCC means, the firm must hold minimum days of manufacturing cost in working capital. Longer CCC is 90 days of KKT in F/Y 2065/66 and shorter CCC is 1 day of BFI in F/Y 2065/066. Industry average of CCC is to short in BFI which is satisfactory than other individual.

Figure 4.3 Graphic presentation of cash conversion cycle industry wise



4.3.2 Analysis Based on Liquidity Ratio

Liquidity ratio measures the firm's ability to satisfy its short-term commitments out of liquid assets. These ratios focus on current assets and current liabilities and are used to short-term-solvency position of firm. One of the main objectives of working capital management is to maintain good liquidity position of a firm. Liquidity position on the firm depends on its working capital policy. The firms

follow the aggressive policy, it has low liquidity and the firm follow conservative policy, it has high liquidity position. Thus, liquidity position of selected manufacturing industries is analyzed as follows:

(I) Current Ratio

The current ratio measures the ability of the firm to meet obligations due within one year. To measures the liquidity position of a firm's current ratio is main financial tool. As a conventional rule the ratio 2:1 is employed as a standard of comparison. Current ratios less than 2:1 are typically considered very low and 1 indicate financial difficulties. Higher current ratio shows better the liquidity position and less the needed for additional working capital. The current ratio of selected manufacturing industries is calculated as follows:

Table 4.7

Current ratio of selected manufacturing industries

(in times)

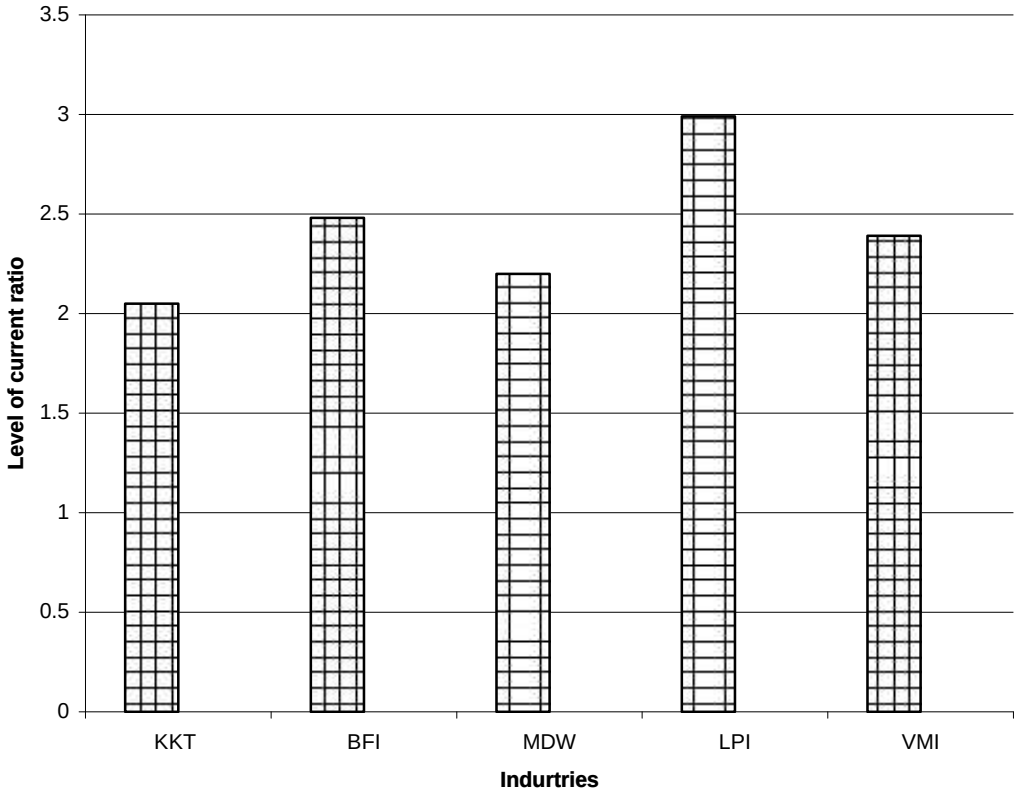
Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	1.73	2.10	2.62	1.95	1.86	10.26	2.05
BFI	3.22	3.02	2.16	2.00	2.00	12.4	2.48
MDW	2.01	2.01	3.08	1.96	1.96	11.02	2.20
LPI	2.16	3.80	3.38	2.68	2.94	14.96	2.99
VMI	2.59	2.13	2.65	2.29	2.29	11.95	2.39
Total	11.71	13.06	13.89	10.88	11.05	60.54	12.11
Average	2.34	2.61	2.79	2.18	2.21	12.11	2.43

Source: Annex 2 and 3

The table no. 4.7 shows that the current ratio of selected manufacturing industries. The overall current ratio of the company is not satisfactory. The highest average current ratio is 2.99 times of LPI and lowest 2.05 times of KKT and overall company average current ratio is 2.43 times, which indicates above the standard. This

current ratio shows that all the manufacturing industries follow the conservative working capital policy because they have used more CAs than CLs in the study period.

Figure 4.4 Graphic presentation of current ratio of selected industries



4.4 Analysis of Turnover Position/ Assets Management Ratios

Turnover ratios measure for how effectively the firm's assets are being managed and utilization of assets towards the sales. How have the assets contributed in sales. The help of turn over ratio, how firm utilization and improvement of working capital. Following ratios are calculated to measure how efficiently a firm uses their assets.

4.4.1 Total Assets Turnover Ratio

Total assets turn over ratio measures the efficiency of assets management in relation to all of the firm assets items. It measures the firm's ability to make effective utilization of its total investment in assets in term of generating sales revenue. Higher total turnover ratio provides efficient investment in all type of assets. A low ratio

indicates that the firm is unable to generate sufficient business volume in term's of generating sales revenue. It is calculated and presented as follows:

Table 4.8

Total assets turnover ratio

(in times)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	1.27	1.10	1.08	1.38	1.32	6.15	1.23
BFI	0.44	0.59	1.02	1.17	1.11	4.33	0.87
MDW	1.29	1.50	1.85	2.03	1.93	8.6	1.72
LPI	1.07	1.15	1.45	1.68	1.69	7.04	1.41
VMI	1.05	1.04	1.55	1.19	1.16	5.99	1.20
Total	5.12	5.38	6.95	7.45	7.21	32.11	6.42
Average	1.02	1.08	1.39	1.49	1.44	6.42	1.28

Source: Annex = 1 and 4

i) Industry Average of Total Assets Turnover Ratio

The table no 4.8 shows that the total assets turnover ratio of the selected manufacturing industries. The highest ratio is 2.03 times of MDW and lowest ratio is 0.44 times of BFI. It indicates BFI is not able to utilize its total assets towards the sales. The overall company average is 1.28 times in study period. The trend of this ratio is fluctuating. Only LPI and MDW have greater the average total assets turnover ratio then overall company average.

ii) Yearly Average of Total Assets Turnover Ratio

The above table shows the total assets turnover ratio of selected manufacturing companies with yearly average and individual industry wise. It covers F/Y 2064/065 to 2068/069. The overall company average turnover ratio is 1.28 times. The lowest yearly average turnover ratio is 1.02 in F/Y 2064/065 and highest ratio in F/Y

2068/069. So the trend of yearly average total assets turnover ratio is increasing on the study period.

4.4.2 Current Assets Turnover Ratio

The current assets turnover ratio indicates the relation of sales and current assets, how is the current assets utilizing and managing for generating the sales. High and low current assets turnover ratio indicates maximum and minimum utilization of current assets during the year respectively. The ratios are calculated and presented as follow.

Table 4.9

Current assets turnover ratio

(in times)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	1.51	1.29	1.30	1.60	1.60	7.30	1.46
BFI	1.48	1.74	2.77	3.14	3	12.13	2.43
MDW	1.85	1.88	2.21	2.34	2.35	10.63	2.13
LPI	2.19	2.19	2.89	2.97	2.71	12.95	2.59
VMI	1.48	1.46	1.94	1.50	1.47	7.85	1.57
Total	8.51	8.56	11.11	11.55	11.13	50.86	10.17
Average	1.70	1.71	2.22	2.31	2.23	1.17	2.03

Source: Annex = 2 and 4

The above table 4.9 shows the current assets turnover ratio of selected manufacturing industries. The ratio is fluctuating in study period. The company overall average ratio is 2.03, times which is greater than VMI and KKT and lower than BFI, MDW and LPI. Higher the ratio is indicator of better utilization of current assets and lower is vice-versa.

The yearly average current assets turnover ratio is increasing trend. The overall yearly average ratio is 2.03 times during the period F/Y 2064/065 to 2068/069. The highest current assets turnover ratio in 2068/069 and lowest is 1.70 times.

4.4.3 Inventory Turnover Ratio

Inventory turnover ratio measures how a firms average investment in inventory is capable of generating sales. It is the test of the liquidity of firm's investment in inventories. The excessive investment in inventory is unproductive, as idle assets earn nothing. Low inventory turnover ratio indicates that the firm is holding excessive stock of inventory and is unable to turn it over into sales. Higher the inventory turnover ratio, the more time a year the firm is moving or turning over its inventory. It is calculated as follows.

Table 4.10

Inventory turnover ratio

(in times)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	4.20	3.72	5.30	4.00	3.82	21.04	4.21
BFI	15.18	21.41	13.71	11.72	10.70	72.72	14.54
MDW	5.74	7.40	19.52	6.95	6.63	46.24	9.25
LPI	5.72	11.84	24.25	12.57	12.01	66.68	13.34
VMI	4.38	4.61	8.47	3.66	3.43	24.55	4.91
Total	35.22	48.98	71.54	38.9	36.59	231.23	46.25
Average	7.04	9.80	14.31	7.78	7.32	46.25	9.25

Source: Annex = 4 and 7

The table 4.10 shows the inventory turnover ratio of selected manufacturing industries. The ratio's trend in fluctuate during the study period. It is causes of poor management of inventory. The overall average of the ratio is 9.25 times in the

industries. BFI, MDW and LPI have higher ratio than overall average of inventory turnover ratio and KKT and VMI have lower ratio then overall average.

4.4.4 Receivable Turnover Ratio

Receivable turnover ratio (RTR) measures how many times the accounts receivable turnover occurs during the year. It is a general measure of productivity of investment in account receivable and the test of the liquidity of account receivable of a firm. Low receivable turnover ratio indicates that the firm is making excessive investment in account receivable and still unable to make timely collection of credit sales. High receivable turnover ratio shows the better liquidity and quick collection of account receivable. It is calculated and presented as follows.

Table 4.11

Receivable turnover ratio

(in times)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	3.99	2.96	3.69	4.18	3.82	18.64	3.73
BFI	9.81	19.60	9.95	13.21	13.03	65.6	13.12
MDW	5.74	4.76	8.27	9.87	9.02	37.65	7.53
LPI	5.72	9.81	8.94	6.64	6.07	37.18	7.44
VMI	4.38	5.20	5.06	5.72	5.12	25.48	5.10
Total	29.64	42.33	35.91	39.62	37.05	184.55	36.91
Average	5.93	8.47	7.18	7.92	7.41	36.91	7.38

Source: Annex 4 and 8

The table 4.11 shows the receivable turnover ratio of selected manufacturing industries. The ratios trend in fluctuate during the study period. The overall average of the receivable turnover ratio is 7.38 times. The ratio of BFI, MDW and LPI are higher than 7.38 times and rest industries ratio is lower than the overall average. It is sign of the industry unable to poor management of account receivable.

4.4.5 Net Working Capital Turnover Ratio

The number of times the average net working capital is turned over during the year shows by net working capital turnover ratio. The time taken to convent current assets into cash i.e. the working capital need for manufacturing industries also depends upon the turnover rate. This turnover depends up the level of working capital and working capital policy followed by the industry. Lower level of working capital shows high turnover and vice-versa. It is cause of aggressive and conservative policy.

Table 4.12

Net working capital turnover ratio

(in times)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	3.55	2.46	2.10	3.29	43.46	14.86	2.97
BFI	2.14	2.60	5.15	6.26	5.98	22.13	4.43
MDW	3.66	3.73	3.30	4.77	4.77	20.23	4.05
LPI	4.08	3.63	4.10	4.73	4.11	20.65	4.13
VMI	2.41	2.98	3.11	2.67	2.60	13.77	2.75
Total	15.86	15.41	17.77	21.74	21.32	92.1	18.42
Average	3.17	3.08	3.55	4.35	4.26	18.42	3.68

Source: Annex 3 and 4

The above table shows that net working capital turnover ratio, all ratio are positive. The overall net working capital turnover ratio of the selected manufacturing industries is 3.68 times. The highest is 4.13 times of LPI and lowest is 2.75 times of VMI. The trend of net working capital is fluctuating. Yearly average is 3.17, 3.08, 3.55, 4.35 and 4.26 times of F/Y 2064/065 to 2068/069.

4.5 Analysis of Profitability Position

Profitability is the end results of a number of corporate policies and decisions. It is a pressure of operating efficiency and the search for it provides an incentive to

achieve efficiency. For our analysis profitability can be measured with the help of following ratio. Higher the profitability is an indicator of efficiency and vice-versa.

4.5.1 Net Profit Margin Ratio

Net profit margin is the ratio between net income and sales of a firm. It shows firm ability to generate net income per rupee of sales. The net profit margin ratio of selected mfg industries are calculated and presented as below.

Table 4.13
Net Profit Margin Ratio

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	6.25	3.85	3.94	4.07	4.06	22.17	4.43
BFI	2.73	1.91	1.44	1.36	1.43	8.87	1.77
MDW	5.95	8.15	9.78	10.00	10.01	43.89	8.78
LPI	4.59	3.90	5.04	5.90	5.92	27.35	5.47
VMI	2.05	2.26	2.82	2.26	2.42	11.82	2.36
Total	21.57	22.07	23.02	23.59	23.84	114.09	22.82
Average	4.31	4.41	4.60	4.72	4.76	22.82	4.56

Source: Annex = 4 and 6

The table shows the net profit margin ratio of selected industries. There is no loss in any industry. All industries are operating in profit. The highest individual industry average net profit ratio is 8.78% of MDW and lowest on 1.77% by BFI. The yearly profit trend shows that overall average ratio indicates increasing slowly. Therefore F/Y 2068/069 have highest ratio 4.76 and lowest in F/Y 2064/065. The ratio of net profit margin indicates profits of the industries are satisfactory. They must be reduced their cost by improving management for earn more profit.

4.5.2 Return on Total Assets (RTA)

Return of total assets measures the overall effectiveness of management in generating profit with available assets in the firm. It gives the earning power of total investment.

The higher the firms return on assets the better, it is doing its operation and vice-versa. It is calculated and presented as follows.

Table 4.14
Return on total assets

(in percentage)

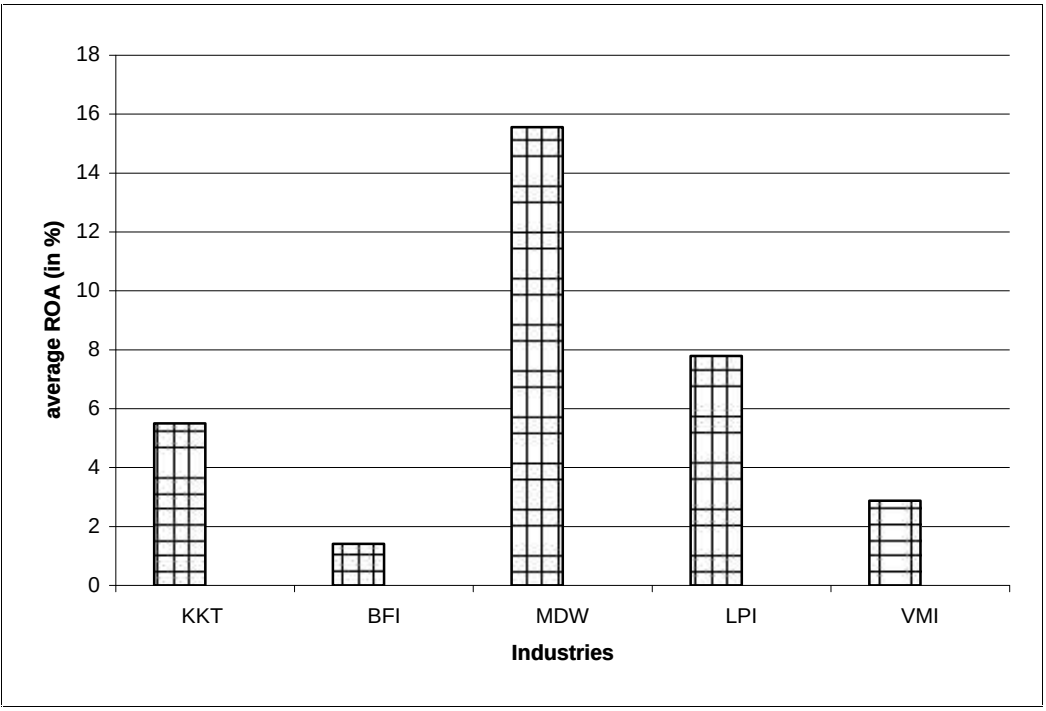
Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	7.95	4.25	4.29	5.65	5.38	27.52	5.5
BFI	1.23	1.14	1.46	1.60	1.60	7.03	1.41
MDW	7.68	12.24	18.15	20.33	19.41	77.81	15.56
LPI	4.93	6.77	7.34	9.95	9.97	38.96	7.79
VMI	2.16	2.34	4.38	2.67	2.81	14.36	2.87
Total	23.95	26.74	35.26	40.2	39.17	165.68	33.14
Average	4.79	5.35	7.12	8.04	7.83	33.14	6.63

Source: Annex 1&6

The analysis of above table (4.14), we found the ratio is widely varied within and among the sample manufacturing industries. All the years of the industries have positive in profit. The trends of company average of return on assets are fluctuating in nature. The overall company average of ROA for the study period is 6.63%which is higher than the 5.50%, 1.41% and 2.87% of KKT, BFI and VMI respectively. The higher and positive ROA is always show the better opposition of firm.

The trend of return on total assets during the study period of selected manufacturing

Figure 4.5 Graphic presentation or return on total assets



4.5.3 Return on Net Working Capital

How much working capital needed for the manufacturing companies determining by using return on NWC. Higher the return on net working capital means lesser the needs for the additional working capital. If there is higher level of NWC then return on net working capital is low that means the firm adept conservative approach of WC. Net profit is also source of WC. The return on net working capital is calculated by net profit divide by net working.

Table 4.15

Return on net working capital

(in percentage)

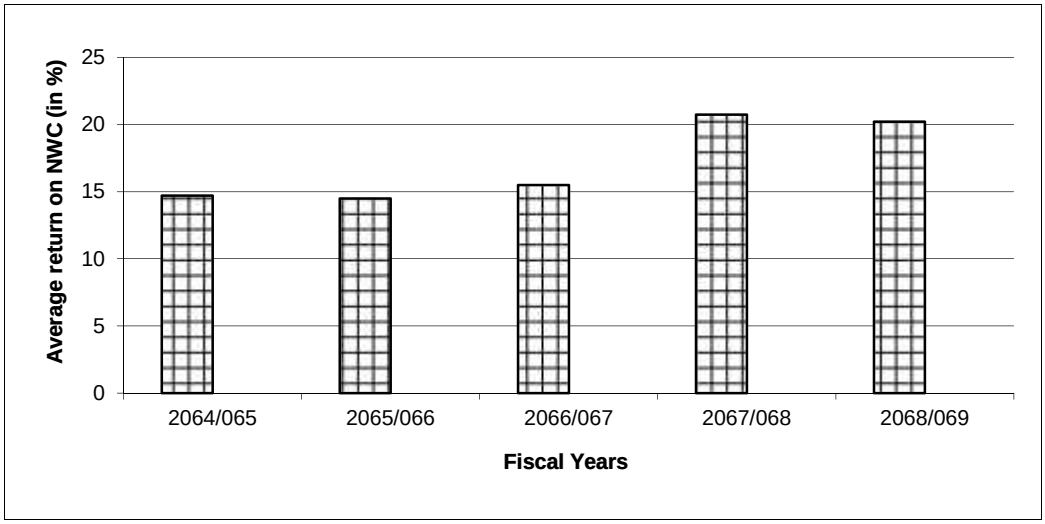
Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	22.22	9.45	8.28	13.42	14.10	67.47	13.49
BFI	5.87	4.98	7.43	8.59	8.58	35.45	7.09
MDW	21.80	30.45	32.32	47.76	47.75	180.08	36.01
LPI	18.80	21.45	20.65	27.99	24.31	113.2	22.64
VMI	4.95	6.24	8.77	6.02	6.30	32.28	6.45
Total	73.64	72.57	77.45	103.78	101.04	428.48	85.70
Average	14.72	14.51	15.49	20.75	20.21	85.70	17.14

Source: Annex 7 and table 4.5

The above table shows the company average and yearly average of five manufacturing companies. MDW has the highest industry average and VMI has the lowest industries which are 36.01% and 6.45% respectively. Here the overall industry average is 17.14%. Which is grater than the yearly average F/Y 2064/065 & F/Y 2066/067 and lowest than the F/Y 2067/068 & 2068/069.

The returns on NWC are varied in study period. This is the result of inefficient management of working capital and it's financed.

Figure 4.6 Graphic presentation of return on NWC



4.5.4 Size of Net Profit

Any firm wants to maximize their profit with out profit firm can't be run smoothly. So, profit is the most essential factor for smooth operation and growth of every company. There are two types of profit one is gross profit and another is net profit. Subtracting cost of good sold from sales is called gross profit and subtracts expenses from gross profit is called net profit. So net profit indicates the strength and better financial position of firm. The level of net profit is shown in following table.

Table 4.16

Level of net profit

(in 00,000)

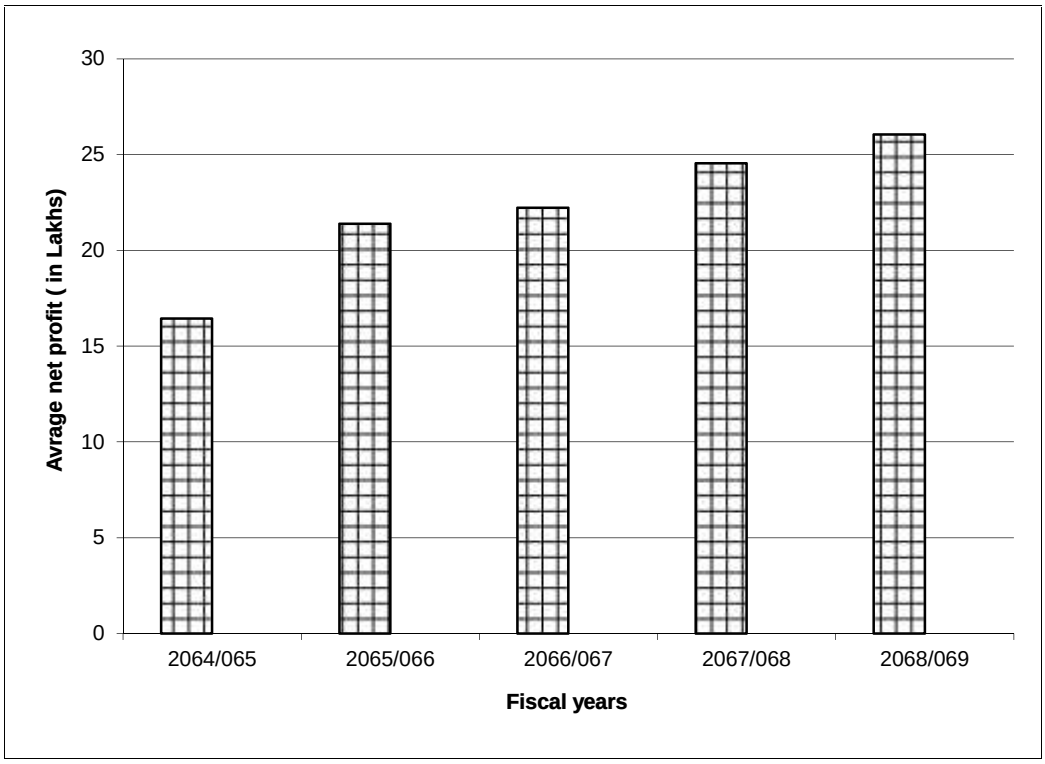
Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	2.62	2.47	2.69	3.75	3.93	15.46	3.09
BFI	1.70	1.99	1.85	2.11	2.32	9.97	1.99
MDW	15.15	21.49	26.64	30.07	31.57	124.92	24.98
LPI	42.48	57.63	49.64	60.79	63.84	274.38	54.88
VMI	20.19	23.42	30.34	25.98	28.58	128.61	25.72
Total	82.24	107	111.16	122.7	130.24	553.34	110.67
Average	16.44	21.4	22.23	24.54	26.05	110.67	22.13

Source: Annex = 6

The above table 4.16 shows that all the industries net profit is positive and increasing trend. It shows that the company able to follow suitable management approach. The highest average profit is Rs. 54.88 lakh of LPI and Rs. 1.99 lakh is lowest of BFI during the study period. The overall average net profit is Rs. 22.13 lakh.

The yearly net profit of selected manufacturing industries during the study period is given in figure.

Figure 4.7 Graphic presentation of net profit



4.6 Analysis of the Relationship between Working Capital Variables

The use of financial tools has already use in previous section for analysis of various variables which determines the working capital management. We use statistical tools to make the analysis more meaning fall and to see how for the relation between variables. Statistical tools are used for define relationship between various variables and it help to predict unknown variables with the help of known variables of working capital management. Here, following statistical tools are used to make this study meaningful and complete.

Relation between LA and CLs

(I) Relation between CAs and CLs

Correlation coefficient used for the find out the relationship between CAs and CLs. For regression analysis used to estimate the nature relationship of CAs and CLs, where CAs denoted by x and CLs denoted by (Y). X is dependent and y is independent variables. The analysis is used to find out the cause and effect between the variables relationship.

Table 4.17

Correlation coefficient	PE(r)	6Per	Regression equation
0.96	0.0236	0.142	x = 1.44y + 108.96

Source: Annex 13

Here the value of r is +0.96 which indicates the relation between CAs and CLs are very high correlated. It indicates increases in CL resulted into increase in CA too.

Since r > 6PE (r), it is significant, it shows increase in CAs also increases CL too and vice-versa. The regression 6 is positive 1.44. It is clear that regression coefficient of x on y gives the estimate of changes in x corresponding to unit change in y. So above regression equation indicates that increase in CL. Then that 1.44 percent increase in CA.

(II) Relation between Sales and Current Assets

The correlation coefficient is used to find out the cause and effect relationship between sales and CAs.

Table 4.18

Correlation coefficient	PE(r)	6Per	Regression equation
0.46	0.24	1.42	x = 128.99 + 0.26y

Source: Annex 14

The table no 4. indicates that the value of r is 0+0.46, it shows the relation between sales and current assets is low correlated. Since r < 6PE(r), the value of r is insignificance. However the variables are correlated. It is not evidence of increases in sales/CAs also will increases in CAs/ sales and vice-versa. Regression equation shows the regression coefficient ‘b’ is positive. It is sign of Rs one lakh increase in sales changes to increase in CA by 0.26 lakh. The value of constant a is 1.2899 i.e. CA is 128.29 lakh when sales is zero.

(III) Relationship Between Receivable and Sales

The tools correlation coefficient is used to analyzed and find out the relationship between receivable and sales.

Table 4.19

Correlation coefficient	PE(r)	6Per	Regression equation
0.96	0.0236	0.142	x = 0.28y – 66.40

Source: Annex 15

The above table shows that the value of r is +0.96 which indicates very high positive correlation between sales and receivable. Since > ^PE (r), it is significant, we prefect the increase in receivable leads to increase in sales. In regression equation, regression coefficient 'b' is 0.28y. It indicates the increase in the sales as a result of Rs 0.28 lakh increase in sales. Where constant value 'a' is -0.66 it shows. When sales is 66 at that time receivable is 0.

(IV) Relationship between Inventory and Sales

The tools of correlation coefficient is used to measure and find out the cause and effect relationship between the inventory and sales.

Table 4.20

Correlation coefficient	PE(r)	6Per	Regression equation
0.38	0.043	0.261	x = 28.14 + 0.22y

Source: Annex 16

The above table shows that the value of r is +0.38, it is low correlated between sales and inventory. The positive r indicates that increase in inventory leads to increases to sales. Since r > 6PE (r), it is significant. The regression equation, regression coefficient 'b' 0.22, it indicates 1 lakh increase in sales as result of Rs 0.22 lakh increase in inventory.

(V) Relationship between Sales and Net WC

The tool of correlation coefficient is used to measure and find out the cause and effect relationship between the inventory and sales.

Table 4.21

Correlation coefficient	PE(r)	6Per	Regression equation
0.65	0.174	1.04	x = 90.96 + 0.212y

Source: Annex 17

The above table shows that the value of r is +0.65 it is high positive correlated between sales and NWC. Since r < 6PE(r), it is insignificant, there is no evidence of correlation and it is not sure that sales net WC will increase the level of sales/NWC also increase and vice-versa. In regression equation, regression coefficient 'b' is 0.12. It measures the increase in Rs 1 lakh in sales as a result of increase in Rs 0.12 lakh of NWC.

(VI) Relationship between Net Profit and Net WC

The tool of correlation coefficient is used to measure and find out the cause and effect relationship between the net profit and net WC.

Table 4.22

Correlation coefficient	PE(r)	6Per	Regression equation
0.61	0.189	1.13	x = 18.55 + 0.26y

Source: Annex 18

The above table shows, the value of (r) is +0.61, it is high positive correlated. Since r < 6PE, it is insignificant and low correlated in regression equation, regression coefficient 'b' is 0.26. It measure the Rs 1 lakh in change in working capital as a result of increase in Rs 0.26 lakh in net profit.

4.7 Major Findings of the Study

After calculation and analysis, the major finding of this study during the study period of latest five year data of selected 5 manufacturing industries situated Nepalgunj industrial estate are as follows.

(1) All industry invest in their current assets in high level. The overall current asset to total assets is 0.66 times. It indicates good liquidity position of firm but at the same time it reversibly affects on the profitability of the firms. The highest average current assets to total assets ratio is 0.84 of KKT and lowest is 0.34 of in BFI.

(2) The ratio of receivable to current assets is widely varied among the companies. Overall company average of receivable to CAs ratio is 0.33 times. The highest ratio of LPI and lowest in BFI. Similarly the overall company average of inventory to CAs ratio is 0.34 times. The highest in VMI of 0.43 time and lowest in LPI of 0.23 times. It shows that composition of current is equal followed by receivable and inventory.

(3) All the selected manufacturing industries have high level of CAs. It shows all the industries have followed conservative working capital policy. Their cash conversation cycle is long in average. But lowest CCC is 1 days of BFI, in F/Y 2065/066 which indicates all sales are cash sales. Highest CCC is 69 day's of KKT in F/Y 2068/069, it is cause of increase sales due to credit policy. Due to long ICP and RCP, CCC is also long.

(4) Most of the selected manufacturing industries spend in high level of expenses in term of profit generate. Most of them by taking high level of risks and return is low. Total income is high and net income is low in the study period.

(5) Liquidity position of all selected manufacturing industries is low satisfactory level. All have been operating nearly to standard. Except KKT the current ratio shows overall average is 2.43 times. It shows that the industries have financed current assets.

(6) Net working capitals of manufacturing companies are satisfactory level. The overall average level of net working capital is Rs 154.04 lakh. Which is maintained by industries to meet short term obligency. The level of

working capital determinant of nature and size of business. So the trend of net working capital is significantly fluctuating in nature in yearly average.

(7) The turnover ratio shows that all the industries have not managed and utilized their assets to generate sales. The overall company average of total assets turnover ratio is 1.28 time. The analysis shows all manufacturing industries are not satisfactory level of turnover. The highest total asset to turnover ratio is 2.73 of LPI and lowest 0.44 of BPI. A company average current assets average turnover ratio 2.59 time of LPI and lowest is 1.67 times of KKT. Highest turnover ratio always shows the effective utilization of available resources of firms.

(8) The inventory turnover ratio in average of company is 9.25 which indicates inventory context into sales in nine times. The higher average inventory turnover ratio is 14.41 time of BFI and lowest 4.21 of KKT. Similarly the overall average receivable turnover ratio is 7.38 times. The highest receivable turnover ratio is 13.12 times of BFI and lowest ratio is 3.73 times of KKT. Most of companies does not able to collect debt with is short period times because must of the industries receivable turnover ratio is lower than average.

(9) The overall average percentage of net profit to sales is 4.56. The highest industry average percentage of net profit to sales is 8.78% in MDW and lowest is 1.77 of BFI. Yearly average is increasing in trend in study period.

(10) Under the statistical analysis relation between CAs and sales, sales and net working capital and net profit and net working capital are high degree of positive correlation. Correlation of coefficient is also grater than the 6 times probable error. So the relation between this items are significant. Correlation of coefficient between current assets and current liabilities and receivable and sales is low degree of correlation and its correlation of coefficient is less than 6 times probable error. So it is not significant

CHAPTER-FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

The study of working capital management in manufacturing industries situated at Nepalgunj industrial estate summarized as follows. The working capital policy and practices are different among the industries. The study covers the period of five fiscal year from 2064/065 data of manufacturing industries.

Introductions, statement of problem of this study are also included by focusing selected manufacturing industries. It has also attempted to set of objectives, limitation and significance of the study. In last of IST chapter is organization of the study. The second chapter review of literature gives the idea of working capital. Where different views from different writers are reviewed. Further the available dissertation in the context of management of working capital from various researcher in reviewed. From this review the gap is tried to find out and this study is further freed to full this gap so some extent.

The main objective of the study is to analyze the working capital policy in selected manufacturing industries. To full fill this objectives are describes in chapter three one suitable research methodology has developed. It includes ratio analysis, correlation and coefficient as financial and statistical tools respectively.

In chapter four, show to test. The relationship between cvarious components. Presentation of data in table form and analyzed systematically as per requirement of the study. Calculated different ratio and composition of working capital position, liquidity position in appendixes and result are analyzed. The overall study shows that the moderate policy used by the manufacturing industries.

Now, this chapter has been made to present summary of findings, conclusion and some suggestions for manufacturing industries situated at Nepalgunj industrial estate as recommendation.

5.2 Conclusion

An inconsistent has been experience in the application of working capital policy by the manufacturing industry. The management of working capital can not be neglected by industries. It plays important role in the operation of manufacturing

industries. Therefore manager should understand the importance of working capital. It is important to understand about what helps to the management of working capital and which factors are affecting of WC. Lack of proper management plan, negligence of administrative work, poor management system and unsuitable WC policy are main causes of failure of the manufacturing industries.

Lack of knowledge of working capital the industries should not flow appropriate policy of working capital and they also does not maintain stable and standard ratios. This is modern age and globalization stage. Most of industries sales their goods in credit and facing great problem in the collection of receivables. Due to changeable economic policies of the country some industries are facing the problem to manage their economic position and tax provision. Some selected manufacturing companies are operating in low profitability than overall average.

High CCC effects the profitability of the industry. So, industry decrease CCC by the effective management of WC. The statistical tools used and found of the WC variables of Mfg industry highly positive to each other. A positive correlation means both of the variables are moving towards the same direction.

In present context, the selected Mfg companies are facing certain issues like, negligence of WC, inefficient financial planning, deviation between liquidity turn over etc. This issues overcome if selected Mfg industries undertake measures like identification of needed funds, regular supervision and monitoring, right combination of long term sources and short term sources of fund to finance working capital needs, preparing effective sales plan needs, specific working capital policy improving liquidity position and by improving financial performance.

Finally, it can be concluded that WC Mgmt is very important aspect of financial management having impact on rise and profitability of the industry. The top level mgmt responsible for the better mgmt of WC.

5.3 Recommendation

The following based on the finding of the study following recommendations are forward for the improvement of the working capital management of manufacturing industries situated at Nepalgunj industrial estate.

1) The fluctuation of in the level of working capital of industries which indicates the manufacturing industries aren’t taking seriously of working capital

management. It is necessary for keeps of appropriate WC policy because lack of target WC level of holding in long run and absence of source of financing, the condition of financial situation of selected manufacturing industries are going to be downfall. The industries must be managed current assets is appropriate level. The industries should kept neither be excessive nor inadequate.

2) There should be neither over investment nor lower investment in A/R. The main determinant of the size of investment in A/R is terms of sales. The customers to be given credit, paying practices of customers, efficiency in collecting receivable and so on one of the way to control investment in receivable is to find out receivable as a percent of sales. The industries should be preparing a schedule of receivable, analyzing of credit for efficient management of working capital of selected manufacturing companies.

3) The management of working capital depends upon the effective inventory management. There is no specific policy related with inventory management. The management must give priority towards carrying cost, ordering cost, lead time and capacity utilization for effective inventory management, minimize the wastage, good store-keeping system, better material handling system and timely inspection system must follow.

4) The liquidity positions of the manufacturing industries are facing liquidity crises due to inconsistent. So the industries should be controlled its inventory and receivable. Long term expenditure to be reduce. Short term or long term debt or equity is to be issued to maintain appropriate liquidity position.

5) The working capital should be arranged in such way that it should generate maximum turnover. The working capital and net working capital are not fully utilized. The company should try to utilize its working capital to maintain sound turnover position.

6) Instead of conversion policy by adopting not matching financial policy. The cash conversion cycle is high. It can be reduced by reducing ICP and RCP and ICP reducing by processing and selling goods quickly, by reducing RCP quickly collection and adopt hard credit policy. By increasing PDP to the late payment of creditors. Better utilization and sound management of inventory,

receivable and creditors the conversion is reduce, it helps to improve overall conversion cycle of mgf. Industries.

7) Sales directly affect to the need of working capital. The level of WC will increase if sale is increase. To meet the industrial goal and survive in competitive market effective sales management is essential. All the selected mfg industries are adopt conservation WC policy so, they incurring less profit through bear higher risk. Thus they should develop portfolio investment policy to reduce risk.

8) The current assets turnover of some industry low as well as net working capital which indicates the utilize of current assets and net working capital during the study period is low. So the industries are used to maintained appropriate level of current assets interm of sales. For this, training is essential for the employees.

9) Selected manufacturing industries are suffering from high cost. Management should try to by identifying unnecessary expenses, misuse of facilities, overstating purchasing procedure, use of technology. To solve this position the industries should developed the cost control mechanism and provide training to staff, use new technology in production under capacity utilization also increase their cost. So to reduce high cost the industries would utilized their full capacity.

10) All the selected manufacturing industries should increase the efficiency of higher and lower level of employees. Training program should be held for the higher and lower level employees. Seminar, workshops organized for increasing efficiency to the employees in time to time. The skilled employees decrease the operating cost and increase profitability instead of unskilled employees. Management information system should be used in the manufacturing industries. Timely reports are to be prepared which helps in determining the amount of working capital needs.

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ANNEX–1

Total assets (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	32.93	58.05	62.66	66.34	72.98	292.96	58.59
BFI	137.93	174.55	126.17	131.46	144.60	714.71	142.94
MDW	197.20	175.21	146.76	147.85	162.64	829.66	165.93
LPI	860.92	850.63	675.95	610.38	640.9	3638.78	727.75
VMI	933.40	998.50	692.43	965.88	1014.17	4604.38	920.87
Total	2160.30	2256.94	1703.97	1921.91	2035.29	10080.49	2016.10
Average	432.48	451.39	340.79	384.38	407.06	2016.10	403.22

ANNEX–2

Total current assets (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	27.76	49.86	52.49	57.45	60.33	2717.89	49.58
BFI	41.93	59.70	46.34	49.04	53.94	250.95	50.19
MDW	137.84	140.34	123.37	128.49	134.92	665.16	133.03
LPI	420.99	445.73	341.35	346.08	397.99	1952.14	390.43
VMI	663.65	706.93	554.38	765.94	804.23	3495.38	699.08
Total	1292.17	1402.56	1118.38	1347	1451.41	6611.52	1322.03
Aver`age	258.43	280.51	223.68	269.4	290.28	1322.03	264.46

ANNEX–3

Total current liabilities (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	15.97	23.73	20.01	29.51	32.46	121.68	24.34
BFI	12.99	19.76	21.44	24.247	26.91	105.57	21.21
MDW	68.35	69.77	40.95	65.53	68.81	313.41	62.71
LPI	194.57	117.29	101.06	128.96	135.41	677.29	135.45
VMI	255.89	332.16	208.76	334.21	350.92	1481.94	296.39
Total	547.77	562.72	392.22	582.68	614.51	2699.89	539.98
Average	109.55	112.54	78.44	116.54	122.90	539.98	108.00

ANNEX–4

Sales (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	41.91	64.23	68.2	92.00	96.6	362.94	72.59
BFI	62.11	104.07	128.27	154.05	161.75	610.25	122.05
MDW	254.66	263.57	272.45	300.46	315.49	1406.58	281.32
LPI	924.66	976.19	985.85	1028.77	1080.21	4995.68	999.13
VMI	986	1035.61	1075.4	1147.7	1181.1	5425.81	1085.16
Total	2269.29	2443.67	2530.17	2722.98	2835.15	12801.26	2560.25
Average	453.85	488.73	506.03	544.60	567.03	2560.25	512.05

ANNEX–5

Cost of good sold (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	34.36	51.62	49.78	69.21	79.59	284.56	56.91
BFI	41.96	70.84	92.34	121.11	127.16	453.41	90.68
MDW	198.60	212.65	223.60	243.37	255.54	1133.76	226.75
LPI	721.24	732.14	710.27	715.55	751.		
VMI	808.94	1150.27	754.6	1125.3	1181.09	5020.2	1004.04
Total	1805.1	2217.52	1830.59	2274.54	2394.7	10522.45	2104.49
Average	361.010	443.50	366.12	454.91	478.94	2104.49	420.90

ANNEX–6

Net profit (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	2.62	2.47	2.69	3.75	3.93	15.46	3.09
BFI	1.70	1.99	1.85	2.11	2.32	9.97	1.99
MDW	15.15	21.49	26.64	30.07	31.57	124.92	24.98
LPI	42.48	57.63	49.64	60.79	63.84	274.38	54.88
VMI	20.19	23.42	30.34	25.98	28.58	128.61	25.72
Total	82.24	107	111.16	122.7	130.24	553.34	110.67
Average	16.44	21.4	22.23	24.54	26.05	110.67	22.13

ANNEX–7

Inventory (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	9.97	17.25	12.85	22.97	25.27	88.31	17.65
BFI	4.09	4.86	9.35	13.14	15.11	46.55	9.31
MDW	44.38	35.62	13.96	43.22	47.54	184.72	36.93
LPI	161.53	82.44	40.17	81.8	89.9	455.84	91.17
VMI	225.27	224.6	126.84	313.34	344.67	1234.32	246.93
Total	445.24	364.37	203.17	474.47	522.49	2009.74	401.8
Average	89.04	72.87	40.68	94.89	104.50	401.8	80.36

ANNEX–8

Receivable (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	10.50	21.68	18.49	21.98	25.28	97.93	19.59
BFI	6.33	5.31	12.89	11.66	13.41	49.6	9.92
MDW	49.80	55.43	32.94	30.43	34.99	203.59	40.91
LPI	110.95	99.51	110.27	154.80	178.02	653.55	130.71
VMI	122.14	198.96	212.20	200.33	230.38	964.01	194.60
Total	299.72	380.89	386.79	419.2	482.08	1968.68	393.74
Average	59.94	76.19	77.36	83.84	96.42	393.74	78.74

ANNEX–9

Payable (Rs in 00.000)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	11.70	18.41	18.21	22.96	26.40	97.68	12.46
BFI	6.06	7.17	11.87	17.32	19.91	62.33	19.54
MDW	63.12	62.71	25.04	48.27	55.51	254.65	50.93
LPI	182.85	107.05	97.46	111.38	128.08	626.82	135.36
VMI	220.99	282.86	181.35	322.1	370.41	1377.71	275.54
Total	484.72	478.19	333.93	522.03	600.31	2419.18	483.84
Average	96.94	95.64	66.79	104.40	120.06	483.84	96.77

ANNEX–10

Inventory conversion period (In days)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	86	97	68	90	94	435	87
BFI	28	17	26	31	34	136	27.1
MDW	63	49	18	52	54	236	47.2
LPI	63	30	15	29	30	167	33.4
VMI	82	78	42	98	105	405	81
Total	322	271	169	300	317	1379	275.8
Average	64.4	54.2	33.8	60	63.4	275.8	55.0

ANNEX–11

Receivable conversion period (In days)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	90	121	98	86	94	489	97.8
BFI	37	19	36	27	30	148	29.6
MDW	70	76	44	36	39	265	53
LPI	43	36	40	54	59	232	46.4
VMI	45	69	71	63	70	318	63.6
Total	285	320	289	266	292	1452	290.4
Average	57	64	57.6	53.2	58.4	290.4	58.08

ANNEX–12

Payable deferrable period (In days)

Industry	2064/065	2065/066	2066/067	2067/068	2068/069	Total	Average
KKT	423	128	132	119	119	621	124.2
BFI	52	36	46	52	56	241	48.2
MDW	114	106	40	71	78	409	81.8
LPI	91	56	49	56	61	313	62.8
VMI	98	89	86	103	112	488	97.6
Total	478	425	353	400	426	2072	414.4
Average	95.6	83	706	80	85.2	414.4	82.88

ANNEX–13

Relationship between current assets and current liabilities

Year	CAs (x)	CLs (y)	$x = \left(x - \bar{x}\right)$	$y = \left(y - \bar{y}\right)$	x^2	y^2	xy
2064/065	258.43	109.55	-6.03	1.55	36.36	2.40	-9.35
2065/066	280.51	112.54	16.05	4.54	257.60	20.61	88.92
2066/067	223.68	78.44	40.78	-29.56	1663.01	873.79	1205.46
2067/068	269.4	116.54	4.94	8.54	24.40	72.73	42.19
2068/069	290.28	122.90	25.82	14.49	666.67	209.96	374.13
n = 5	$\bar{x} = 264.46$	$\bar{y} = 108.00$			$\sum x^2 =$ 2648.04	$\sum y^2 =$ 1179.49	1701.34

Karl Pearson's formula to find out correlation coefficient

Now, $\pm\, x = \sqrt{\frac{\left(x - \bar{x}\right)^2}{n}} = \sqrt{\frac{2648.04}{5}} = 23.01$

$$\pm\, y = \sqrt{\frac{\left(y - \bar{y}\right)^2}{n}} = \sqrt{\frac{1179.49}{5}} = 15.36$$

Correlation coefficient (r) = $\frac{\sum xy}{\sqrt{x^2 \times y^2}} = \frac{1701.34}{\sqrt{2646.04 \times 1179.49}} = \frac{1701.34}{1766.63} = 0.96$

Now, PE(r) = $\frac{0.6745\left(1 - r^2\right)}{\sqrt{n}} = \frac{0.6745\left(1 - 10^2\right)}{\sqrt{5}} = -$

6PE(r) = 0.142

Again regression equation of x on y is

$$\left(x - \bar{x}\right) = r\frac{\pm\, x}{\pm\, y} = \left(y - \bar{y}\right)$$

or, $x - 264.28 = 0.96 \times \frac{23.01}{15.36}\left(y - 108\right)$

or, $x - 264.28 = 1.44\left(y - 108\right)$

x = 1.4y + 108.76

ANNEX–14

Relationship between current assets and sales

Year	CAs (x)	CLs (y)	$x = (x - \bar{x})$	$y = (y - \bar{y})$	x^2	y^2	xy
2064/065	258.43	453.85	-6.03	-58.18	36.36	3384.91	350.82
2065/066	280.51	488.73	16.05	-23.3	257.60	542.89	-373.96
2066/067	223.68	506.17	40.78	-5.86	1663.01	34.34	238.97
2067/068	269.4	544.60	4.94	32.55	24.40	1059.50	160.80
2068/069	290.28	567.63	25.82	54.98	666.67	3018.40	1491.58
n = 5	$\bar{x} = 264.46$	$\bar{y} = 512.05$			$\sum x^2 = 2648.04$	$\sum y^2 = 8040.05$	2168.21

Now, $\pm x = \sqrt{\frac{\sum (x - \bar{x})^2}{n}} = \sqrt{\frac{2648.04}{5}} = 23.01$

$$\pm y = \sqrt{\frac{\sum (y - \bar{y})^2}{n}} = \sqrt{\frac{8040.05}{5}} = 40.01$$

Correlation coefficient (r) = $\frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}} = \frac{2168.21}{\sqrt{2648.04 \times 8040.05}} = 0.46$

Now, PE(r) = $\frac{0.6745(1 - r^2)}{\sqrt{n}} = \frac{0.6745(1 - 40^2)}{\sqrt{5}} = 0.24$

6PE(r) = 1.42

Again regression equation of x on y is

$$(x - \bar{x}) = r \frac{\pm x}{\pm y} = (y - \bar{y})$$

or, $x - 264.46 = 0.46 \times \frac{23.01}{40.01}(y - 512.05)$

or, $x - 264.46 = 026y - 135.46$

$x = 129 + 026y$

ANNEX–15

Relationship between receivable and sales

Year	CAs (x)	CLs (y)	$x = \left(x - \bar{x}\right)$	$y = \left(y - \bar{y}\right)$	x^2	y^2	xy
2064/065	59.94	453.85	-18.8	-58.18	353.44	3384.91	1093.78
2065/066	76.19	488.73	-2.55	-23.3	6.50	542.89	59.41
2066/067	77.36	506.17	-1.38	-5.86	1.90	34.34	8.09
2067/068	83.84	544.60	5.1	32.55	26.01	1059.50	166.01
2068/069	96.42	567.63	17.68	54.98	312.58	3018.40	972.05
n = 5	$\bar{x} = 78.74$	$\bar{y} = 512.05$			$\sum x^2 =$ 700.44	$\sum y^2 =$ 8040.05	2299.34

Now, $\pm\, x = \sqrt{\frac{\sum\left(x - \bar{x}\right)^2}{n}} = \sqrt{\frac{700.44}{5}} = 11.84$

$$\pm\, y = \sqrt{\frac{\sum\left(y - \bar{y}\right)^2}{n}} = \sqrt{\frac{8040.5}{5}} = 40.1$$

Correlation coefficient (r) = $\frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}} = \frac{2299.34}{\sqrt{700.44 \times 8040.05}} = 0.96$

Now, PE(r) = $\frac{0.6745\left(1 - r^2\right)}{\sqrt{n}} = \frac{0.6745\left[1 - (0.96)^2\right]}{\sqrt{5}} = 0.0236$

6PE(r) = 0.142

Again, regression equation of x on y is

$$\left(x - \bar{x}\right) = r\frac{\pm\, x}{\pm\, y} = \left(y - \bar{y}\right)$$

or, $x - 78.74 = 0.96 \times \frac{11.04}{40.1}\left(y - 512.05\right)$

or, $x - 78.74 = 0.28y - 145.4$

or, $x = 0.28y + 65.97$

$x = -66.40 + 10.28y$

ANNEX–16

Relationship between inventory and sales

Year	CAs (x)	CLs (y)	$x = (x - \bar{x})$	$y = (y - \bar{y})$	x^2	y^2	xy
2064/065	89.04	453.85	8.68	-58.18	75.34	3384.91	-505.00
2065/066	72.87	488.73	-7.49	-23.3	56.10	542.89	174.51
2066/067	40.68	506.17	-39.68	-5.86	1574.50	34.34	232.52
2067/068	94.89	544.60	14.53	32.55	211.12	1059.50	472.95
2068/069	104.50	567.63	24.14	54.98	582.74	3018.40	1327.22
n = 5	$\bar{x} = 80.36$	$\bar{y} = 512.05$			$\sum x^2 = 2499.80$	$\sum y^2 = 8040.05$	1702.21

Now, $\pm x = \sqrt{\frac{\sum (x - \bar{x})^2}{n}} = \sqrt{\frac{2499.80}{5}} = 22.36$

$$\pm y = \sqrt{\frac{\sum (y - \bar{y})^2}{n}} = \sqrt{\frac{8040.5}{5}} = 40.1$$

Correlation coefficient (r) = $\frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}} = \frac{1702.21}{\sqrt{2499.80 \times 8040.05}} = 0.38$

Now, PE(r) = $\frac{0.6745(1 - r^2)}{\sqrt{n}} = \frac{0.6745[1 - (0.38)^2]}{\sqrt{5}} = 0.043$

6PE(r) = 0.261

Again, regression equation of x on y is

$$(x - \bar{x}) = r \frac{\pm x}{\pm y} = (y - \bar{y})$$

or, $x - 80.36 = 0.38 \times \frac{22.36}{40.1}(y - 512.05)$

or, $x - 80.36 = 0.22y - 108.50$

or, $x = 28.14 + 0.22y$

$x = -28.14 + 0.22y$

ANNEX–17

Relationship between net working capital and sales

Year	CAs (x)	CLs (y)	$x = \left(x - \bar{x}\right)$	$y = \left(y - \bar{y}\right)$	x^2	y^2	xy
2064/065	148.88	453.85	-5.16	-58.18	26.63	3384.91	300.21
2065/066	155.97	488.73	1.93	-23.3	3.72	542.89	-44.67
2066/067	145.14	506.17	-8.09	-5.86	79.21	34.34	47.41
2067/068	152.86	544.60	-1.18	32.55	1.39	1059.50	-38.41
2068/069	167.38	567.63	13.34	54.98	177.96	3018.40	733.43
n = 5	$\bar{x} = 154.04$	$\bar{y} = 512.05$			$\sum x^2 =$ 288.92	$\sum y^2 =$ 8040.05	997.67

Now, $\pm x = \sqrt{\frac{\sum \left(x - \bar{x}\right)^2}{n}} = \sqrt{\frac{288.91}{5}} = 7.60$

$$\pm y = \sqrt{\frac{\sum \left(y - \bar{y}\right)^2}{n}} = \sqrt{\frac{8040.5}{5}} = 40.1$$

Correlation coefficient (r) = $\frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}} = \frac{997.67}{\sqrt{288.91 \times 8040.05}} = 0.65$

Now, PE(r) = $\frac{0.6745\left(1 - r^2\right)}{\sqrt{n}} = \frac{0.6745\left[1 - (0.65)^2\right]}{\sqrt{5}} = 0.174$

6PE(r) = 1.04

Again, regression equation of x on y is

$$\left(x - \bar{x}\right) = r\frac{\pm x}{\pm y} = \left(y - \bar{y}\right)$$

or, $x - 154.04 = 0.65 \times \frac{7.60}{40.1}\left(y - 512.05\right)$

or, $x - 154.04 = 0.12y - 63.08$

or, $x = 154 - .4 - 63.08 + 0.12y$

$x = 90.96 + 0.12y$

ANNEX–18

Relationship between net profit and net working capital

Year	CAs (x)	CLs (y)	$x = \left(x - \bar{x}\right)$	$y = \left(y - \bar{y}\right)$	x^2	y^2	xy
2064/065	16.44	148.88	-5.69	-5.16	32.37	26.63	29.36
2065/066	21.4	155.97	-0.73	1.93	0.53	3.72	-1.41
2066/067	22.23	145.14	0.1	-8.09	0.01	79.21	-0.81
2067/068	24.54	152.86	2.41	-1.18	5.81	1.39	-2.84
2068/069	26.05	167.38	3.92	13.34	15.36	177.96	52.29
n = 5	$\bar{x} = 22.13$	$\bar{y} = 154.04$			$\sum x^2 =$ 54.08	$\sum y^2 =$ 2088.91	76.59

Now, $\pm\, x = \sqrt{\frac{\sum\left(x - \bar{x}\right)^2}{n}} = \sqrt{\frac{54.08}{5}} = 3.29$

$$\pm\, y = \sqrt{\frac{\sum\left(y - \bar{y}\right)^2}{n}} = \sqrt{\frac{288.91}{5}} = 7.60$$

Correlation coefficient (r) = $\frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}} = \frac{76.59}{\sqrt{54.08 \times 288.91}} = 0.61$

Now, PE(r) = $\frac{0.6745\left(1 - r^2\right)}{\sqrt{n}} = \frac{0.6745\left[1 - (0.61)^2\right]}{\sqrt{5}} = 0.189$

6PE(r) = 1.136

Again regression equation of x on y is

$$\left(x - \bar{x}\right) = r\frac{\pm\, x}{\pm\, y} = \left(y - \bar{y}\right)$$

or, $x - 22.13 = 0.61 \times \frac{3.29}{7.60}\left(y - 154.04\right)$

or, $x - 22.13 = 026y - 40.68$

or, $x = 264.46 - 135.46 + 026y$

$x = 0.26y - 18.55$

ESTIONNAIRE

Name of industry:

Interview date:

Name of respondent:

Position:

1. How may years have you been working in the industry ?
2. Is Nepalgunj industrial Estate providing the facilities to the industries in there ?
3. Do you know about working capital management?
4. The performance role of working capital management in your company?
5. Sound and smooth fixed capital and working capital management play and significant role in the business. Which of these two do you feel difficult?
6. In which source do you prefer to investment in current assets ?
7. In which working capital policy is adopted in your industry?
8. Do the inventory and receivable conversation period affect the cash inflow in time?
9. What is the motive for holding cash in yoyr company speculative
10. In which working capital investment policy has adopted to your industry ?
11. Does working capital policy have impact in profitability?
12. In your opinion, who is the responsible of the management the working capital ?
13. Level of current assets and current liability in your industry should be appropriate?

    Which three factors, which are affect in working capital management?