CHAPTER ONE

1. INTRODUCTION

1.1 Background of the study

Working capital management is an important part of financial management .It is considered as the life blood and controlling center for business organization. The management of working capital is not simple one, with the minor mistakes on decision making about the adequacy of the working capital, in a concern may put company into liquidation. The manufacturer have an adequate supply of raw materials to process or adequate cash to meet wages bill, other wise, it causes a serious problem in it's operation.

In this manner, a basic question arises about the management of working capital by Nepalese manufacturing enterprises. In this respect, the researcher selects the pharmaceutical industries with special reference of Nepal drugs limited, enterprises of Nepal government. This is an overall focus of the study.

Manufacturing public enterprises are key instruments of country's economy. What happens in economy is a part of the effects coming from that performance of public enterprises as well as their working capital management, so, researcher has reflected brief introduction over industrialization and it's development in Nepal.

Nepal is one of the least developed countries in the world the economy is totally dominated by agricultural sector. As a developing country, Nepal is striving to develop and modernize economy but the structure of economy has still in primarily agricultural with a very small industry base, so to divest and modify agro based economy, Nepal government adopted mixed economic model with implicit objective to help the state and private sector economy that complement each other in the development process from very inception of economic planning process back in 1956. Since then substantial initiative has been taken in promoting, protecting, and developing PES. Although, the role of private sector cannot be denied for the process of economic development in an under-developed country like Nepal. The main responsibility for planned economic development ultimately rests on public sector and government is the best instrument for ensuring an equitable, social, and economic system, erecting basic infrastructure for economic development and guiding the nation towards a new economic direction (CCC ISC, HMG/N-277 D.35). It is believed that in order to achieve security, stability and high standard of living the countries must be industrialized. The most important reason for embarking on a performance of industrialization is to increase the national income (Bryle 1969: 3).

Historically industrial development process began after 1936 with the establishment of Biratnagar Jute Mill. It was established under the company act 1936 which was the first joint stock company of Nepal was also incorporated in 1937. During 1936-1944 a no of industries particularly in the field of cotton, textile, sugar, match, hydropower, Rice, oil, and cigarettes were setup in the South Eastern Terai region. Due to positive impact of the Second World War, it created huge demand for Jute Products and gave excess profits to Biratnagar Jute Mill. Due to it's success, during war period, a group of another five joint stock company were established in the country. Second World War played a vital role for boosting the development of these industries. After Second World War, boom period stared in the growth of joint stock companies. As a result many joint stock companies were established. But many of them failed to operate successfully and went on liquidation, because they neglected the financial and marketing aspects of their industries.

After 1956, Nepal started planned economic development, effort to obtain rapid economic growth. Then the development of modern industries in the public sector started with planned economic development.

In our country various manufacturing companies have been established and developed through government efforts funding from NIDC to industries, under various five year development plans.

At present 10th plan is running. But due to poor performance negative return, lack of efficiency and inefficient in management government has emphasized on privatization, so that public enterprises could be competitive, efficient and profitable. By the help of private companies the government will reduce it's investment in public sector which are incurring continuously at loss. Now, most of the modern industries are established under foreign aid in the public sector during various plan periods.

This is mainly due to small size of market, lack of infrastructures high rate of return, alternative sources of investment, free and cheaper imports of it. As a result of it, growth rate of industrial sector has remained low. The new democratic government has adopted the economic liberalization. This policy has given higher priority to private sector to develop industries. The government has been launching a privatization process of public sector industries. A total of 16 public enterprises have been privatized under different modalities in three phases. More enterprises are in the pipeline for privatization as per the government policy and programs (K.C, 1999:15).

So, industrialization is universally accepted as a strategy of economic development. It is the key factor in the process of achieving economic growth; prosperity has long been recognized in economic literature. It offers prospects for expansion of employment, income and generates innovations, technological changes that bring about shifts in production frontier, thereby accelerating growth and factor productivity. Industrialization by broadening the middle class and creating a new industrial work force (Regmi 1994: 1)

1.1.1 Working Capital Practices

Working capital management practices in Nepalese manufacturing enterprises provide totally a different picture. The past trend of many manufacturing companies had given emphasis in fixed asset, so they are facing financial problem all the time, resulting lower efficiency. The government policy to concentrate more on fixed assets has overlooked the financing of working capital. So in order to create the culture of risk bearing ability through commercial prudence and professionalism, the aspect of working capital should be treated in the same way as fixed capital, while deciding the structure of the manufacturing companies, recently short term financial decision has never received much attention in the literature of finance. Because of earlier emphasis of financial management, was more long-term financial decision, which led to growth and development of many useful theories concerning these decisions as compared to short-term financial decision (Pradhan, 1986).

However in recent years it has been realized that the area of working capital intricately inter woven with cusses of failure of the such situation where shortage of funds for working capital has caused many business to fail and in less server caused has stunted their growth(Marthn,1972 :.XI-XIII).

Working capital is lifeblood of any enterprises. The inefficient management of working capital will lead to loss of profits in the short run, but it will lead to down fall of the enterprises in the long run. In this sense, the cost of inadequate planning in the use of working capital in immeasurable. A deeper understanding of the importance of working capital and its satisfactory provision can lead not only to material saving, as well as economic use of capital but can also assert in furthering the ultimate aim of business (Lesli, 1971:1)

So, maintaining the optimal level of working capital is the crux problem as it's strongly related to the trade off between risk and return. In such circumstances an utmost care should be taken in the management of such assets, because in adequate investment, not only threaten the solvency of enterprise but also affects the growth. Setting optimal level of working capital requires and exercises of determining that level of current assets, where cost, cost of liquidity and illiquidity total should be minimum. The aspect of determining appropriate proportion of working capital 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 to failure the manufacturing companies of Nepal. Most of

Nepalese manufacturing companies are operating in loss, though they are following aggressive approach of working capital management.

1.1.2 Development of Pharmaceutical Industries in Nepal and Nepal Drugs Limited

The gate for modern medicine was opened in Nepal after establishment of British Residency at Kathmandu in 1916, where a small hospital was established for the residency staff. The hospital also provided service to local people. The no. of hospitals gradually increased after the establishment of Bir Hospital in 1890. The concept of producing modern medicine in Nepal developed only after Nepal government drafted a master plan for the utilization of medicinal plants in 1955 and implement in 1961. As per the plan Royal Drugs Research Laboratory (RDRL) was established in 1964, which along with various research activities started manufacturing modern pharmaceutical dosage form in 1968. The manufacturing unit of RDRL was converted into Royal Drugs Limited (RDL) in 1972 for commercial production of modern drug formulations. The name of Royal Drugs limited has been changed to Nepal Drugs Limited in 2006 After Jana Andolan 2nd.

Simpler effort was also made to develop pharmaceutical industries in private sector. Establishment of Nepal pharmaceutical work Pvt. Ltd., at Godawari, Lalitpur was unsuccessful. However, Chemi Drug Industries, first started productions of modern Aurvedic Drugs and later engaged mainly in the production of Allopathic Drugs.

Nepal Drugs Ltd. was an inspiration for other interested persons to start drug industry, though lack of information and technical know-how has made the decade of 1970 as a decade of more failure and less success. Some of the factories started during the period are already closed. Five factories were established during late-seventies.

With the establishment of department of drug administration (DDA) in 1979 in accordance with the drug act 1978, an environment was created for drug industry.

Many industries were started in late eighties and early nineties. NDRL the principal organization of NG for scientific research testing and analyses of drugs, which was under the ministry of forest and soil conservation, was brought under minister of Health in 1993. This has a positive impact to drug Industry and better quality control of marketed drug has become possible. The laboratory is functioning under DDA with a completely new setup to function as national drug control laboratory.

Scenario of Nepalese Pharmaceutical Industries

Nepal is considered as a very good market for Pharmaceuticals Industry. The 900 corer existing market is about estimated at NRs. out of which local industries shares hereby absorbs at NRs. 3.6 corer only. (Source; DDA, 2008)

With the advent of democracy in 1990, liberalization policies of NG encouraged local entrepreneurs to venture in to the area of pharmaceuticals. Though 100 percent dependency on the imported drugs has been reduces to some extent but it is possible for indigenous industries to survive in face of stiff competition from foreign companies, non protective policies of NG and their final encounter with WTO.

At present there are around forty two local drug industries registered with DDA. They are set up in the areas of Katmandu, Bhaktapur, Morang, Rupandehi, Dharan, Bara and Parsa keeping hygiene and clean atmosphere into consideration. Raw materials for the drugs are obtained from USA, India, China, Singapore and European Countries like Switzerland Netherlands, France and Germany etc.

Pharmaceutical Companies of Nepal

Ace laboratories (Nepal) Ltd.

Milan pharmaceuticals Pvt. Ltd.

Apex pharmaceuticals Pvt. Ltd.

National Healthcare (Pvt.) Ltd.

Arya Pharma Lab Pvt. Ltd.

Nepal Pharmaceuticals Lab Pvt. Ltd.

Asian Pharmaceuticals Lab Pvt. Ltd.

Nepal Veterinary Drug Industries Pvt. Ltd.

Birat Pharma Lab (Pvt.) Ltd

Omnica Laboratories Pvt. Ltd.

Chemi Drug Industries

Pharmaceutical Company of Nepal

Concept Pharmaceutical Pvt. Ltd.

Pharmaco Industries (Pvt.) Ltd.

CTL Pharmacentials Pvt. Ltd.

Redox Pharmaceuticals

Curex Pharmaceuticals Pvt. Ltd.

Nepal Drugs Ltd.

Deurali Janata Pharmaceuticals (Pvt.) Ltd.

Shiva Pharmaceuticals Pvt. Ltd.

Everest Pharmaceuticals Pvt. Ltd.

Siddhartha Pharmaceuticals Pvt. Ltd.

Florid Laboratories Pvt. Ltd.

Simca Laboratories Pvt. Ltd.

G.D. Pharmaceuticals Pvt. Ltd.

Time Pharmaceuticals (Pvt.) Ltd.

Hukum Pharmaceuticals Pvt. Ltd.

Vijay deep Pharmaceuticals

Lomus Pharmaceuticals Pvt. Ltd.

Denim Laboratories Pvt. Ltd.

Maitri Pharma Laboratories Pvt. Ltd.

Ultra Pharmaceuticals Pvt. Ltd.

Manoj Pharmaceuticals Works

Glory Pharmaceuticals Distributors.

Unique Pharmaceuticals Pvt. Ltd.

Quest Pharmaceuticals Pvt. Ltd.

M tech med Pharmaceuticals Pvt.Ltd

Dingla Pharmaceuticals Pvt.Ltd.

S.R.Drugs Pvt.Ltd.

Alliance Pharmaceuticals Pvt Ltd
Mark Formulation Pvt Ltd
Alive pharmaceuticals pvt.Ltd
Source: (DDA, 2008)

1.1.3 Brief Introduction of NDL

Nepal Drugs limited was established in 2029 (1972 A.D.) in the public sector as an undertaking of Nepal government. The company in beginning formulated a program for the production and marketing of some medicines by NDRL within the department of medical plants, minister of forest. Later a separate production unit under the same laboratory was created with the help of technical assistance of the British Government in the form of expertise and equipment. After a successful trail period of four years in manufacturing and marketing of pharmaceutical products the production unit was converted into a company in accordance with a company act.

Aims & Objectives

1. To produce & distribute safe and quality medicine.
2. To sale the medicine in a reasonable fair prices to the general public.
3. To make the country self sufficient in essential drugs.
4. To produce the varieties of medicine according to different climate zone.
5. To replace old varieties by new varieties of medicine as per market demand.
6. To deliver medicine in time.
7. To help the other social industries by using their products in productions & packaging areas.

Nepal drugs limited produces and markets 31 clinical groups of medicines that consist of 80 preparations in 134 varieties in the form of tables, capsules, powders, liquids, ointments and inject able fields.

The health scene in Nepal is quite complicated where we have to combat with both old and new diseases. Health is a common concern of the government and health care team including the pharmaceutical industry. So, pharmaceutical industry plays key role in total health care. Hence need for a fair degree of integration of all technical functions, namely research and development, quality control is imperative. Nepal drugs limited produce high quality medicines. It has it's own quality control laboratory with all necessary facilities required for testing product manufactured, raw materials, packing materials and every batch of products are tested according to pharmaceuticals standards before they are released for distribution by highly skilled personals trained at home and aboard.

The medicines of Nepal Drugs Ltd. are consistently gaining popularity. It produces safe, officious, and quality medicines under GMP condition of international standards and markets them at reasonably fair prices. NDL are marketed through 60 stockiest appointed by company. It also supplies medicines directly to various hospitals, institutions and foreign agencies.

NDL is enthusiastic to encourage assist home industries. It provides priority to home products indigenous resources and services whenever required. At the period of establishment authorized Capital was 15 million, paid up capital 6.3 million is now increased 15 million of authorized capital and paid up capital of 75.5 million. In which, NIDC absorbs the share of 0.7 million and rest of all share belongs to ownership of government. NDL has also invested as share to Nepal herbs production and processing company of amount 1.3 million. It has risen up its assets to 75 million rupees and contributes a substantial amount to the government in the form of custom, duties, import licenses, income tax etc. Hundreds of people allover Nepal benefited from it directly in the form of distributors, retailers and as associates, apart employing about 295 persons.((source : NDL adm. Depart.)

NDL aims to meet the national demand of small volume injections. It has the entire infrastructure for the preparation of these products. It will try to arrange the financial assistance from donor agencies. Apart from these it has a plan of producing MCH drugs and also for cardio vascular drugs in near future.

Though NDL has played vital role for the development of pharmaceutical industries in Nepal. Due to increasing no. of private industries in pharmaceutical sector, as well as third country's pharmaceutical industries make the market competitive and challengeable. NDL has played pioneer role for successful pharmaceutical industry by manufacturing allopathic medicines. It has opened the eyes for the rest, who came into the picture later on. It has served the country for 36 years as a best as it could under different situations.

1.2 Statement of the Problem

Working capital management becomes difficult in many organizations. In most enterprise the management of working capital has been misunderstood as the management of money and the managers are found over conscious about the burdening of money rather then it's efficient utilization. Regarding the management of working capital sources most of public enterprise have never been thought seriously. They are usually found to depend upon HMG even for overcoming the shortages of Working Capital in spite of trying to manage Working Capital needs form their own source, some of PES have used depreciation fund and utilized surplus to overcome of working capital (Dr. Acharya, Vol 103, 1985:5). Working capital management has been the most challenging area of modern corporate finance is as much as the management always faces a trade off between liquidity and profitability of firm (Dr. Acharya 1988:4)

The deficiency in working capital practices, administrative negligence in day to day operation, serious liquidity problem lower turnover of assets, negative rate of return and inappropriate financing policy are major problem of PES of Nepal. Moreover various factors have been affected for low financial performance. So under such circumstance improvement in the financial performance of Nepalese manufacturing PES can hardly be imagined. The same problem is faced also by NDL. Apart from these problems, it has been observed that working capital of management is not satisfactory and encouraging. Very high levels of current assets are maintained. Though it shows the good liquidity position but badly affect the profitability position of the Ltd. in the long run. It is nothing, due to poor working capital management. The financial statements also shows, that level of current assets are not only increasing but also fluctuating widely during the study period. Of the current asset, inventory holds higher percentage than other current assets. Cash and bank balance has been increasing and decreasing trend in the study period. Similarly volume of receivable is also fluctuating widely. The huge volume of idle cash balance of the company contributes for lower profitability. The turnover of receivable is also fluctuating. The balance sheet of the factory clearly shows that, factory is running at loss, in most of the study period. It is nothing due to poor working capital management and adopting conservative approach of working capital policy.

Following are the research issues of this study.

i. Finding the relation of current Asset to Total Asset & current liabilities.
ii. Measuring the ratios (Profitability, Liquidity, leverage & Turnover) with standard form.
iii. Findings of Proper investment in each type of working capital.
iv. Comparing the sound liquidity position of NDL during nine years.
v. Following appropriate working capital with reference to risk return trade off.
vi. Measuring the overall profitability of firm satisfactory.
vii. Showing the appropriateness of inventory conversion, receivable conversion and ultimately cash conversion cycle.
viii. Comparing the statistical extract.

So the researcher attempts to have an inside over the problem of Working Capital Management of NDL.

1.3 Objective of the study

The main objective of this study is to examine the overall working capital management of Nepal Drugs Ltd. To achieve this basic objective, the following specific objective has also been considered in the study.

i. To examine the working capital management of NDL.
ii. To analyze the current assets and current liabilities policy of NDL.
iii. To study the impact of working capital on profitability.
iv. To examine the relationship between WC variables of NDL.
v. To suggest and recommend for the improvement of NDL on the basis of findings.

1.4 Need of the Study

Working Capital is a firm's investment in short-term assets. It involves a large portion of the firm's total assets as more than half the typical firm's total investment is in current assets.

Need of the study is important for these reasons.

i. A large proportion of the financial manager's time is allocated to working capital management.
ii. More than half of the total assets are typically invested in current assets.
iii. The relation between sales growth the need to invest in current assets is close direct.
iv. Investment is fixed assets may be reduced by resting or leasing, but in inventories and receivable is usually unavoidable.

Working capital is the most crucial area in enterprise management because many instances have shown that regardless of excellent products, efficient marketing, efficient production, wide fixed assets management may a management has lost the control of its firm because liquidity crises resulted in takeover by creditors forced merger or bankruptcy(Burton,1983). So inquire into the efficient of current assets management and it's association with their financial performance of manufacturing enterprises in Nepal. In the present contest, the study is timely relevant.

Hence, this study wills diagnosis the relationship of working capital management to the efficiency of the NDL enterprise as a whole. It will also be helpful for new management to the efficiency as well as profitability with proper management of working capital and it's components.

1.5 Limitation of the Study

Data collection of related field is very difficult in Nepal. In order to make a study on such topic a more fruitful, It is essential to collect data in frequent time intervals. Here, again such type of monthly, quarterly and half yearly data could not be obtained. Due to this, study has been forced to use annual data, which are available in financial statements i.e. profit and loss account, balance sheet.

The study is:

i. Limited to working capital management of NDL.

ii. Basically that of financial statement provided by the NDL are used analysis, hence they are secondary in nature. Some how the researcher has tired to analysis the primary data as receive from questionnaire, interview have with related personal of NDL.

iii. The study period is limited only to Six fiscal year from 2057/2058 to 2062/2063

iv. Mainly financial tools are embodied for analyzing the working capital, management of NDL.

v. Above, all there is time constraint, as it only a study to fulfill, partial requirement of confining MBS degree.

This study is conducted on the basis of secondary data. The data is analyzed with the help of both financial and statistical tools. Before presenting the analysis and interpretation of data, it is necessary that research methodology be described first.

In the absence of methodology, it is likely that the conclusion drawn may be misunderstood. “Research methodology is a way to systematically solve the research problem"(Kothari 1990:10). This study is basically a descriptive research.

Population and Sample (Random Sampling)
Statistical tools
Arithmetic mean (X)
The coefficient of variation (CV)
Standard deviation (sd)
Linear trend analysis
Financial tools
Liquidity ratio
Activity ratio
Profitability ratio
Leverage ratio

1.6 Organization of the study

The study will be organized in five chapters. The titles of each chapter are as follows.
Chapter One: - Introduction
Chapter Two: - Review of Literature
Chapter Three: - Research Methodology
Chapter Four: - Presentation and analysis of data
Chapter Five: - Summary, Conclusion and Recommendations.

Chapter One, contains: Introductory matters, which describes the general background, objectives of the study, statement of the problem, need of study, hypothesis formulation, and limitation of study and organization of overall study.
Chapter Two, deals with review of literature relating to working capital management. It has organized into three sections one contains the review of books related to working capital, section 2 contains, the review previous related research

studies, International studies, and lastly the review of local studies and dissertations.

Chapter Three, contains methodology employed in the study. In includes the introduction, research design, nature, source of data, and tools of analysis and definition of key terms.

Chapter Four, contains the presentation and analysis of data through the way of designed methodology from analysis interpretation, major findings have been deduced.

Chapter Five, lastly, summary, conclusions, and recommendations of the study have been presented.

A bibliography has also been included in the last part of the study.

CHAPTER TWO

2. REVIEW OF LITERATURE

2.1 CONCEPTUAL FRAMEWORK

The working capital management is an important part of financial management. It refers to the proper management of firm's current assets and current liabilities. It is concerned with all decisions and acts that influence the determination of the appropriate level of current assets and their efficient use as well as the choice of the methods of financing them, keeping in a view of liquidity. It is needed to run the organizations, day to day in an efficient manner. Thus working capital and total current assets are synonymous. It is also called circulating capital, since it keeps on circulation, the course of business operation. Business starts with cash, which is converted into inventory after sometime. Inventory may be of raw materials, semi-finished goods, and finished goods. The inventory is converted into receivables and receivables into cash-again. Thus the cycle becomes complete. This kind of cycle keeps on operating the organizations. The length of cycle would different, defending upon the nature of business. Generally cycle would be short for non-manufacturing company.

Working capital is controlling centre of business organizations. The terms working capital often is used to refer the firm's current assets (Primarily cash, marketable securities, account receivable, and inventories). Working capital refers to the fact that most of it's components very closely related with the label of production and sales working capital referred to as short term finance. Gross working capital refers to firm's total current assets. Net working capital means the difference between current assets and current liabilities. Funds employed for short-term are mainly for working capital or operational business. Towards the day-to-day operation, a firm will have to provide money towards; the purchase of raw materials, payments of wages and salaries, to extend credit to buyers of goods as well as to meet other day to operations. Working capital management is concerned with the problems that arise in attempting manage the current assets, current liabilities and inter relationships that exist between them. The current assets refers to those asset which in the ordinary course of value and without disrupting the operation of the firm. The major current liabilities are those liabilities, which are intended at their inception to be paid in the ordinary course of business within a year, out of current assets or earnings of the concern. The basic current liabilities are; bills payable, capital overdraft and outstanding expenses. The goal of working capital management is to manage the firm's current assets and current liabilities in such a way that the satisfactory level of working capital is maintained.

2.2 Concepts of Working Capital

There are two concepts of working capital i.e. gross and net.

The term "gross working capital" refers to firms' investment in current assets i.e. cash marketable securities, investing and account receivable. Similarly, "net working capital" can be defined in two ways: (i) the most common definition of net working capital is the difference between current assets and current liabilities; (ii) and alternative definition of net working capital is that portion of a firm's current assets which is financed with long term funds (Gitman 1988:473).

According to the net concept working capital refers to the difference between current assets and current liabilities. In other words, it is that part of current assets financed with long term fund. It focuses on the liquidity position of the firm and suggests extending which working capital need to be financial by permanent sources of funds. It is not very useful to compare the performance of different firms as a measure of liquidity, but it is quite useful for internal control. This concept helps to compare the liquidity of the same firm over a time (Khan & Jain, 1999: 604).

According to the gross concept, working capital refers to the capital invested in current assets of a firm. It focuses only the optimum investment on current assets and financing of current assets. It includes cash short term securities, inventory and account receivable (Pradhan: 1986).

Proper management of working capital must ensure adequate amount of working capital as per need of business firm. It should be in good health and efficiently circulated, to have adequate, healthy and efficient circulation of working capital, it is necessary that working capital be properly determined and allocated to its various segments effectively controlled and regularly reviewed.

According to the well known Indian professor I .M. Pandey, there are specially two concepts of working capital, Gross concept and net concept. The 'Gross working capital' simply called as working capital refers to the firms' investment in current assets. Current assets are those assets, which can be converted in to cash within an accounting year and includes cash, short term securities, debtors, bills receivable, inventories and prepaid expenses.

The term 'Net working capital' refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year, and includes; creditors bills payables, bank overdraft and outstanding expenses or accrued income. Net working capital can be positive or negative. A positive net working capital will arise when current assets exceed current liabilities. A negative working capital will occur when current liabilities are in excess of current assets (Pandey 1994:665).

2.2.1 Determinants of Working Capital

Manufacturing enterprises need higher volume of working capital as compared to public utility enterprises. The working capital determinants basically, are same for all manufacturing enterprises. There are many factors of working capital need and all carry equally important on it. These factors also changes for a firm over time. The main influencing factors are as follows:

i) Manufacturing cycle: - It has a great impact on the working capital needs because the shorter the manufacturing periods and efficiency in production, the lesser the need of working capital to finance in working capital and vice versa.

ii) Business fluctuation: - The situation whether an enterprise is operating in the bloom or recession and depression period also determines the working capital needs of the enterprise.

iii) Production Policy: - The policy whether to follow uniform and level production plan or varying production plan determines the working capital needs of the individual enterprise. Naturally, a firm following uniform production policy requires higher amount of working capital and vice versa.

iv) Credit policy and availability of credit: - It funds are readily available from banks or credit facilities or it follows conservative sales policy then such firm needs lesser amount of working capital and vice versa.

v) Growth and expansion activities: - The volumes of assets or sales as well as expansion activities of the enterprises have direct bearing upon the needs of working capital. The higher the volume and expansion activities, the higher the needs of working capital and vice versa.

vi) Turnover of circulating capital: - How frequently and rapidly the working assets are converted into cash also determines the need of working capital. And such turnover is determined by demand and sales policy of the particular enterprise.

vii) Competitive conditions: - An enterprise dominating in the market without having keen competition may be in a favorable situation for keeping less amount of working capital.

viii) Price levels change: - Generally rising price levels will required a firm to maintain higher amount of working capital. Same levels of CAs will need increased investment when price increase.

ix) Nature and size of the business: - The working capital requirement of a firm is basically related to size and nature of business. If the size of the firm is bigger, it requires more working capital then smaller firms. Trading and financial firms require large amount of working capital.

x) Level of taxes: - The level of taxes also influences working capital requirement of a firm. The amount of tax to be paid in advances is determined by the prevailing tax regulations. But the firms profit is not term liquidity is payable in cash. Therefore, the provision of tax amount is one of the important aspects of working capital planning .If tax liability increases, it needs to increase the working capital and vice versa.

xi) Operating Efficiency: - Higher the operating efficiency lower will be WC and vice versa.

xii) Others: - Factors such as coordination between production and distribution activities, conservative dividend policy as well as liberal depreciation policy strengthen the WC position of the enterprise.

John J. Hampton has suggested that a firm's working capital requirements are affected by four factors, which are as follows (Hamption 1986: 22)

Source of Changes in WC Needs

Source of change	Working Capital Affected	Reason
Sales Volume	Permanent	Different level of cash receivable and inventory need at new sales level.
Seasonal and cyclic factors	Variable	Receivable and inventory must be available on temporary basis.
Technology	Permanent	Level of inventory must support the new production capability.
Policies of firm	Permanent and variable	Some policies tie up working capital others free it.

2.2.2 Sources of Working Capital

Depending upon the timely needs of working capital two different sources can be used to finance the working capital needs of any enterprise.

a) For regular or permanent working capital: - The issue of shares and debentures.

b) For variable or Seasonal working capital:- Depending upon the volatile nature of the enterprise activities the following sources can be used a finance such working capital indigenous bankers, commercial banks, public deposits, retained earning or ploughing back of profits and special finance corporations.

2.2.3 Working Capital Policy

Working capital management involves deciding upon the amount and composition current assets and how to finance these assets. The components of working capital constitute the current assets and they're way financing i.e. current liabilities. The term current assets refers to those assets which is the ordinary course of business can be or will be turned into cash within one year without undergoing a diminution in value and without disrupting the operations of the firm (Khan & Jain 1993:604).

The working capital management is concerned with the problems that arise in attempting to manage the current assets, the current liabilities and the interrelationships that exist between them (Smith 1974:5) But working capital polices concerned with two sets of relation among balance sheet item (Weston & Brigham:284). The first policy concerned the relationships among type of assets and the way these assets are financed. The second policy questions deals with the determination of the level of total Cash to be hold.

The crux of the problem whole formulating working capital policy is to maintain optimality on (i) the level of investment is cash and (ii) The financing of current assets. There should be optimum investment in the level of current assets because excessive or idle investment in current assets earns nothing to the enterprise and consequently affects the profitability. On the other hand, inadequate level of investment in current assets threatens the solvency of the enterprise if it fails to meet obligation when they become due. So, working capital policy should be designed to overcome such imbalance when they arise.

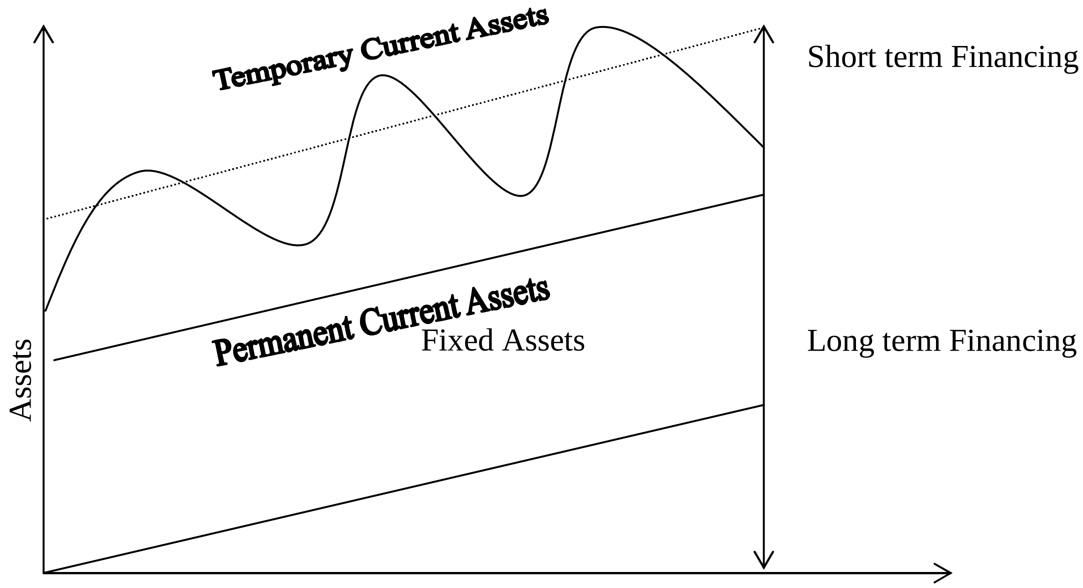
In the same way the financing aspects of current assets should not be over looked in its management because whether to use long term or short-term funds to finance current assets have significant impact on an enterprises risk or return, liquidity and profitability.

As it is well known fact that the funds either long term or short term- involve cost and the cost of financing is a deciding factor in the use of type of funds in any enterprise.

Generally short-term funds have lower cost of financing and are preferred to be used in currents. But it may hold good always. Because depending upon the nature of management towards risk, liquidity and profitability, the enterprise can adopt one of the varieties of approaches to fit its particular working capital financing requirements. The following are the main approaches of financing the working capital need of the enterprise (Mathur 1979).

a) Aggressive Approach

In the approach variable as well as a portion of permanent current assets is financed through short-term borrowing. Some aggressive firms may even finance a part of their fixed assets with short financing (Pandey, I.M. op. cit,: 684). Hence, this sort of mix financing increases the profitability and exposes towards risk by financing relatively larger portion of its assets through lower cost short term borrowing. Fig;3 shows that short -term financing finances 50% of the permanent current assets. In general interest rate increases with time i.e. shorter the time lowers the interest rate. It is because lenders and risk adders and risk generally increase with the length of lending period. On the other side if the firms finances its permanent current assets by short-term financing then it runs the risk of renewing the borrowing again and again .This continued financing exposes the firm to certain risk. It is because, in future the retest expenses will fluctuate widely and also, it may be difficult for the firm to raise the funds during the stringent credit periods.

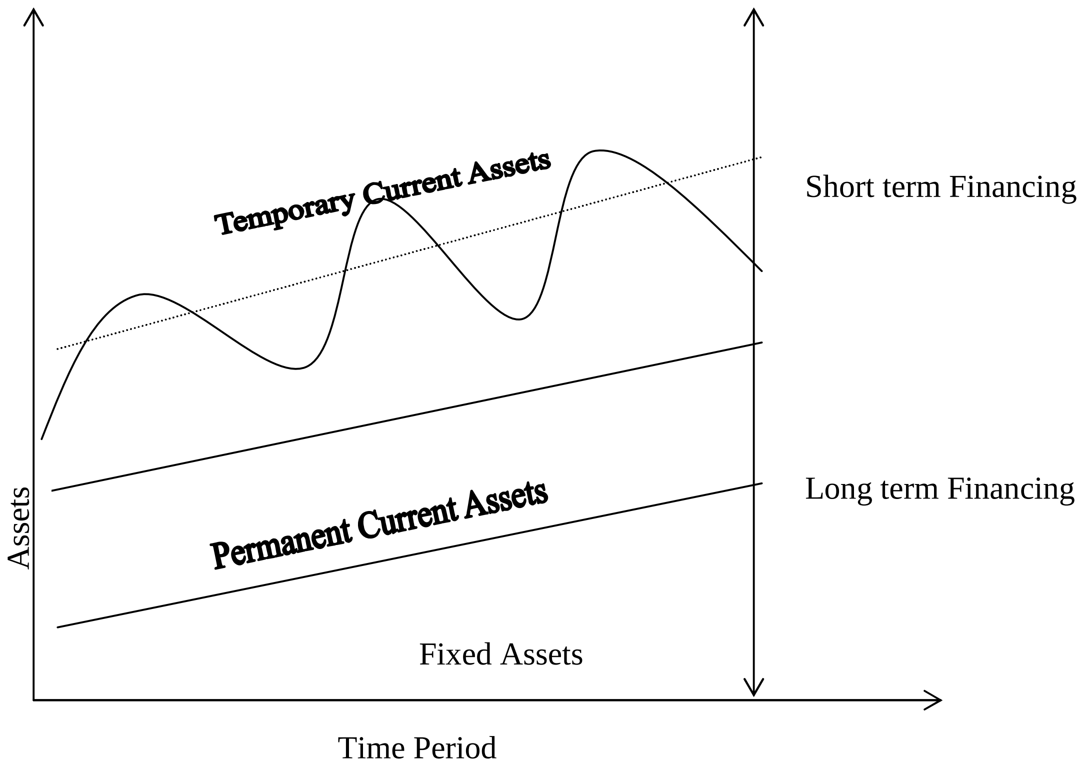


Time

Aggressive Financing

(Fig; 1)

b) Conservative Approach The financing policy of the firm is said to be conservation when it depends more on long-term funds for financing needs. Under a conservative plan, the firm finances its permanent assets and a part of temporary current assets with long term financing. Thus, in periods when the firm has no temporary current assets, it stores liquidity by investing surplus funds into marketable securities. The conservative plan relies heavily on ling term financing and therefore, is less risky. The conservative financing policy is shown in Fig.2. Note that when the firm has no temporary current asset e.g. at (a) and (b) the long-term funds released can be invested in marketable securities to build up the liquidity position of the firm (Pandey, I.M.Op. Ci,t: 384) . It is less risk approach resulting lower returns.



Conservative Financing

(Fig; 2)

c) Hedging or Matching Approach (Moderate policy)

The firm can adopt a financial plan, which involves the matching of the expected life of assets with the expected life of the source of funds raised to finance assets. Thus, a ten-year loan may be raised to finance a plan with an expected life of ten years; stock of goods to be sold in thirty days may be financed with a thirty- day bank loan and so on. The justification for the exact matching is that, since the purpose of financing is to pay for assets, the financing should be relinquished when the assets is expected to be relinquished using long term financing for short-term assets is expensive as funds will but be utilized for the full period. Similarly financing long-term assets with short-term financing is costly as well as inconvenient as arrangement for the new short-term financing will have to be made on a continuing basis (Pandey, I.M. oP.Cit,:683). This approach of WC management entails moderate risk with moderate returns.

Conclusion

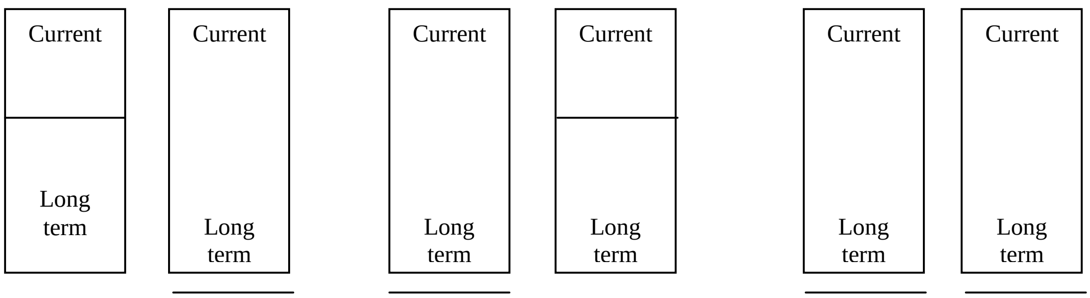
Conservative or loose WC policy refers to that policy under which a firm keeps high level of investment in working capital variables like high level of receivable through liberal policy, high inventory and cash/bank balance. While aggressive or tight working capital policy follows the minimum way between aforementioned two extreme working capital policies.

Putting it all together

a) Aggressive
Assets Liabilities
and Equity

b) Conservative
assets liabilities
and Equity

c) Matched
assets liabilities
and Equity



Source: - (George E. Pinches: Essential of Financing Management)
Alternative working capital policies

2.2.4 The Cost Trade-off

WC management involves decision upon the amount and composition of current assets and how the finance these assets. The relative proportion of liquid assets the lesser the risk of running out of cash of all other things are equal. Profitability, unfortunately, also will be less. The longer the composite maturity schedule of securities used to finance the firm the less the risk of cash insolvency, all other things being equal. Again the profits of the firm are likely to be less. Resolution of the trade off between risk and profitability with respect to these decisions depend upon the risk preference of management.

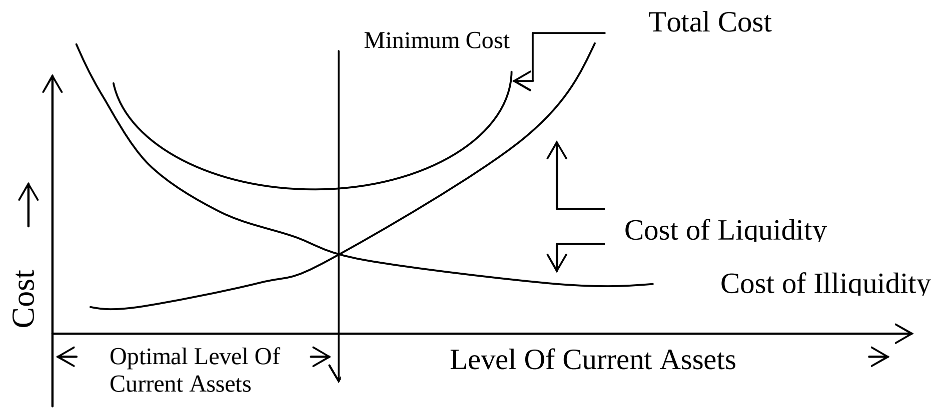


Fig-3: the cost Trade-off

2.3 Permanent and Variable Working Capital

The need or current assets arise because of the operating cycle. The operating cycle is a continuous process and, therefore, the need for current assets if felt constantly. But the magnitude of current assets needed is not always same, it increase and decrease over time. However, there is always a minimum level of current assets, which is continuously required by the firm to carry on its business operations. This minimum level of current assets is referred to as permanent, or fixed, working capital. It is permanent in the same way as the firm's fixed assets are. Depending upon changer in production and sales, the need for working capital, over and above permanent working production and sales, the need for working capital, over and above permanent working capital, will fluctuate. For example, extra inventory of finished goods will have to be maintained to support the peak periods of the sale and investment in receivables may also increase during such periods. On the other hand, investment in raw material, work in process and finished goods will fall if the marker is slack.

The extra working capital, needed to support the changing production and sales activities, is called fluctuating, or variables or temporary, working capital. Both kinds or working capital-permanent and temporary- are necessary to facilitate production and sale through the operating cycle, but temporary-working capital is created by the firm to meet liquidity requirements that will last only, temporarily. Figure illustrates difference between permanent and temporary working capital. It is shown in Figure that a permanent working capital is stable over time, while temporary working capital is fluctuating- sometimes increasing and sometimes decreasing. However, the permanent working capital line need not be horizontal if the firm's requirement for permanent capital is increasing (or decreasing) over period. For a growing firm, the difference between permanent and temporary working capital can be depicted through Figure a.

2.4 Adequacy of Working Capital

The firm should maintain a sound working capital position. It should have adequate working capital to run its business operations. Both excessive as well as inadequate working capital positions are dangerous from the firm's point of view. Excessive working capital means idle funds which earn no profits for the firm. Paucity of working capital not only impairs firm's profitability but also results in production interruptions and inefficiencies.
The dangers of excessive working capital are as follows:

* It results in unnecessary accumulation in inventories. Thus, chances of inventory
mishandling, waste, theft and losses increase.

* It is and indication of defective credit policy and slack collection period. Consequently, higher incidence of bad debts results, which adversely affects profits.

* Tendencies of accumulating inventions to make speculative profits grow. This way tend to make dividend policy liberal and difficult to cope with in future when the firm is unable to make speculative profits.

Inadequate working capital is also bad and has the following dangers;

* It stagnates growth, it becomes difficult for the firm to undertake profitable projects for non-availability of working capital funds.

* It becomes difficult to implement operating plans and achieve the firm's profit target.

* Operating inefficiencies creep in when it becomes difficult even to meet day-to-day commitments.

* Fixed assets are not efficiently utilized for the lack of working capital funds. Thus, the firm's profitability would deteriorate.

* Paucity of working capital funds renders the firm unable to avail attractive credit opportunities etc.

* The firm loses its reputation when it is not in position to honor it short-term obligations. As a result, the firm faces tight credit terms.

An enlightened management should, therefore, maintain a right amount of working capital on a continuous basis. Only then a proper functioning of the business operations will be ensured. Sound financial and statistical techniques, supported by judgment, should be used to predict the quantum of working capital needed at different time periods.

A firm's net working capital in not only important as an index of liquidity but it is also used as a measure of the firm's risk. Risk in this regard means chances of the firm being unable to meet its obligations on due date. Lender considers a positive net working as a measure of safety. Lenders such as commercial banks insist that the firm should maintain a minimum net working capital position.

2.5 Dimensions of Working Capital Management

It has emphasized that the firm should maintain a sound working capital position, and that there should be optimum investment in working capital. Thus, there is an unavoidable need to manage working capital well. Working capital management refers to the administration of all aspects of current assets, namely cash, marketable securities, debtors and stock (inventories) and current liabilities. The financial manager must determine levels and composition of current assets. He must see that right sources are tapped to finance current assets, and the current liabilities are paid in time.

There are many aspects of working capital management, which make it an important function of the financial manager (Waston&Brigham: 123-124).

* Working capital management requires much of the financial manager's time.
* Working capital represents a large portion of the total investment in assets.

* Working capital management has greater significance for small firms.

* The need for working capital is directly related to sales growth.

Empirical observations show that the financial managers have to spend much of their time to the daily internal operations, relating to current assets and current liabilities of the firms. As the largest portion of the financial manager's valuable time is devoted to working capital problems, it is necessary to manage working capital in the best possible way to get maximum benefit.

Investment in current assets represents very significant potion of the total investment in assets. This clearly indicates that the financial manager should pay special attention to the management of current assets on a continuing basis. Actions should be taken to curtail unnecessary investment in current assets.

It is particularly very important for small firms to manage their current assets, but it has to invest in current assets. Small firms in India face a severe problem of collecting their book debts (receivables). Further, the role of current liabilities in financing current assets if far more significant in case of small firms, as, unlike large firms, they face difficulties in raising long-term finances.

There is a direct relationship between sales and working capital needs. As sales grow, the firm needs to invest more in inventories and debts. These needs become very frequent and fast when sales grow continuously. The financial manager should be aware of such needs and finance them quickly. Continuous growth in sales may also require additional investment in fixed assets, but they do not indicate same urgency as displayed by current assets.

2.6 Estimating Working Capital Needs

A number of methods, in addition to the operating cycle concept, may be used to determine working capital needs in practice. Here three approaches which have been successfully applied in practice:

* Current assets holding period: The working capital requirements on the basis of average holding period of current assets and relating them to costs based on the company's experience in the previous years.

* Ratio of Sales: To estimate working capital requirements as a ratio of sales on the assumption that current assets change with sales.

* Ratio of fixed investment: To estimate working capital requirements as percentage of fixed investment.

2.7 Need for Working Capital

The need for working capital to run the day-to-day business activities cannot be overemphasized. It is known that aim at maximizing the wealth of shareholders. In its endeavor to maximize shareholders' wealth, a firm should earn sufficient return from its operations. Earning a steady amount of profit requires successful sales activity. The firm has to invest enough funds in current assets for the success of sales activity. Current assets are needed because sales do not convert into cash instantaneously. There is always an operating cycle involved in the conversion of sales into cash.

Operating Cycle

There is difference between current and fixed assets in terms of their liquidity. A firm requires many years to recover the initial investment in fixed assets such as plant and machinery or land and buildings. On the contrary, investment in current assets such as inventories and book debts (accounts receivables) is realized during the firm's operating cycle, which is usually less than a year (Moyer R.C 1984: 562).

Operating cycle is the time duration required to convert sales, after the conversion of resources into inventories, into cash. The operating cycle of a manufacturing company involves three phases:

- Acquisition of resources such as raw material, labor, power and fuel etc.
- Manufacture of the product which includes conversion of raw material into work-in-progress into finished goods.
- Sales of the product either fir cash or on credit. Credit sales create book debts for collection.

These phases affect cash flows, which most of the time, are neither synchronized nor certain. They are not synchronized because cash outflows usually occur before cash inflows. They are not certain because sales and collections, which give rise to cash inflows, are difficult to forecast accurately. Cash outflows, on the other hand, are relatively certain. The firm is therefore required to invest in current assets for a smooth, uninterrupted functioning. It needs to maintain liquidity to purchase raw materials and pay expenses such as wages and salaries, other manufacturing, administrative and selling expenses and taxes as there is hardly a matching between cash inflows and outflows. Cash is also held to meet any future exigencies. Stocks of raw material and work-in-process are kept to ensure smooth production and to guard against non-availability of raw material and other components. The firm holds stock of finished goods to meet the demands of customers on continuous basis and sudden demand from some customers. Book debts are created because goods are sold on credit for marketing and competitive reasons. Thus a firm makes adequate investment in inventories and book debts for a smooth and uninterrupted production and sale.

The length of the operating cycle of a manufacturing firm is the sum of: (i) inventory conversion period (ICP) and (ii) book debts conversion period (BDCP). The inventory conversion period is the total time needed for producing and selling the product. Typically, it includes: (a) raw material conversion period (RMCP), (b) work-in-process conversion period (WIPCP). And (c) furnished goods conversion period (FGCP). The book debts conversion period is the time required to collect outstanding amount from customers. The total of inventory conversion period and book debts conversion period is sometimes referred to as gross operating cycle (GOC).

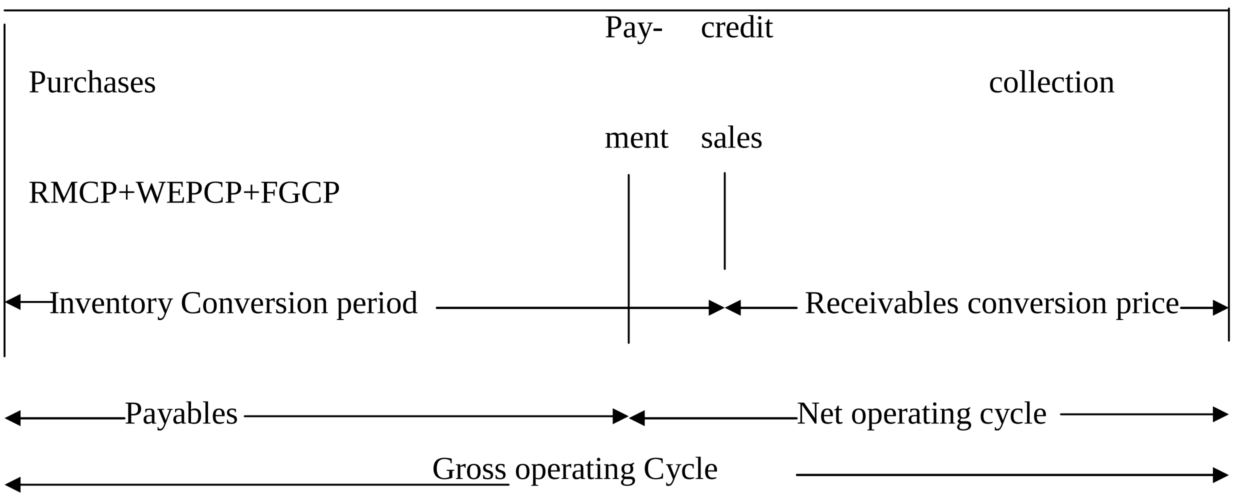


Fig. 4.: Operating Cycle a Manufacturing Firm

In practice, a firm may acquire resource on credit and temporarily postpone payment of certain expenses. Payables that the firm can defer are spontaneous sources of capital to finance; investment the length of time the firm is able to defer payment on various resource purchases. The difference between (gross) operating cycle and payables deferral period is net operating cycle (NOC). It depreciation is excluded from expenses in the computation operating cycle; the net operating cycle also represents cash conversion cycle. It is net time interval between cash collections from sale of the product and cash payments for resources acquired by the firm. It also represents time interval over which additional funds, called working capital, should be obtained in order to carry out the firm's operations. The firm has to negotiate working capital from sources such as commercial bank. The negotiated sources of working capital financing are called non-spontaneous sources. If net operating cycle of a firm increases, it means further need for negotiated working capital

2.8 Review of Books, journals and related thesis

So far as the management of working capital in Nepalese manufacturing enterprises is concerned, different management experts and student of MBS/MBA, deriving the working capital management of various enterprises, have undertaken a number of studies. Now, in this chapter the main focus will be on review of literature. Moreover in order to make this study more comprehensive it is important to go through relevant literature.

The purpose of this chapter is to provide an insight into working capital management and give a bird eye view of different experts thought regarding the theory of working capital and it's implications. Whole doing review of related literature of working capital management the researcher has gone through the different financial books bulletins, documents, reports and journals. Thus this chapter aimed at reviewing an available literature of working capital management in the context of Nepalese manufacturing companies.

They are organized as follows.

2.8.1 Review of books and journals
2.8.2 Review of Dissertations

2.8.1 Review of books and journals

2.8.1.1. :Stephen H. Archer, G.M. Ghoate, And George Rocette

In this book of' Financial Management' their view of working capital management is as follows:

"Working capital management is the process of planning and controlling the level and mix of the current assets of the firm as well as financing the assets. Specially, working capital management requires financial managers to decide what quantities of cash, other assets, account receivables and inventories of the firm will hold at any points in time"(Stephen 1983:601).

In this definition, the management for working capital is the main task for financial manager and she/he has to be come in the composition and activities of current assets. That is, in short, it requires planning and controlling the level and mix of these assets

2.8.1.2 :Richard J. Tarsine:

Richard J. Tarsine Defined 'Working capital management ' by breaking this phrase down in to its component parts

Net: This means we look at cash ties up in to short term operation assets such as account receivable and inventory, offset by non interest bearing current liabilities such as account payable.

Working: This means that we want to focus on cash tied up in short term operating assets. Thus, working capital excludes long term capital required for, say, investment in plant, property and equipment.

Capital: This means that we want to calculate the amount of cash that a company has to tie up in working capital in order to run its business. More specifically, for industrial companies, "Net working capital: equals cash tied up by a company's short term operating assets, netted against short term operating liabilities."

For any year, then, we add and subtract the following to calculate a company's net working capital:

i) Required cash: We usually assume that a company needs to have some cash on hand to run its business. We can estimate that sum as a fixed amount of cash, or an amount as a percentage of sales. Thus, we add required cash to calculate working capital.

ii) Account Receivable: Account receivable equals money owed to a company for goods or services purchased on credit. As account receivable grows, then, a company needs to tie up cash in its business as it effectively lends this money out. Thus, we add account receivables to calculate working capital.

iii) Inventory: Any company selling a physical product has to tie up cash in raw materials, work in progress and finished goods inventory. Thus we add inventory to calculate working capital.

iv) Other current assets: A company may have to tie up cash in other current assets, such as insurance pre payments. Thus we add other current assets to calculate working capital.

v) Account Payable: Account equal bills form supplies for goods or services purchase on credit. A company benefits from accounts payable just like consumes benefits form a charge card. One enjoys the merchandise now and pay later. Thus we subtract account payable to calculate working capital.

vi) Deferred or unearned Revenue: Some company gets paid in cash by their customers before those companies deliver a promised product or service. As an example, one may have purchased a warranty for a product, whereby one gave a company has the obligation to provide this service to one, so it must recognize this cash received as liability. Thus, we subtract different revenue to calculate working capital.

vii) Other non-interest bearing current liabilities: Various companies may have assorted non-interest bearing current liabilities such as accrued wages, accrued expenses, accrued royalties, or "other accrued liabilities". These not interest bearing current liabilities generate cash as they increase. Thus we subtract other non- interest bearing current liabilities to calculate working capital.

2.8.1.3 :R.C. Kuchhal:

R. C. Kuchhal conducted a study ' A journal of financial management during the year 1980. According to his study, working capital management involves deciding up on the amount and composition of current assets and how to take the decision upon finance on these assets. The financing decision involves trade-off between risk and profitability (Kuchhal, R.C., 1980:180). Under his opinion, the working capital management is taken in broad way involving the trade-off between risk and profitability, which is how the good management on working capital reduces risk and earn more profit. There is proportionate relationship between the high risks earns more profit where as low risk taker earns less profit.

2.8.1.4: Prof. Dr. Manohar Krishna Shrestha in his study entitled "Working capital management in this public enterprises" states that manager often lacks basic knowledge of working capital and it's overall impact on the operative efficiency and financial viability of public enterprises. The study has been based on sample of ten public enterprises i.e. Birgunj sugar Factory, Janakpur Cigarette factory, Raghupati jute mills, Development corporation, national Trading Ltd., Nepal drugs Ltd. National construction company of Nepal, Harisiddhi Brick and Tile factory Nepal, cheery Ghee industry Ltd. and chandesowori textile factory Ltd. The study has pointed at certain policy flows such as deficient financial planning, neglect of working capital management deviation between liquidity and turnover etc. He has suggested some measure for their effective funds, determination of management information system, and determination of sound combination of short term and long-term source to finance working capital requirements.

2.8.1.5 : Prof. Dr. Manohar Krishna Shrestha in his study on selected PEs of Nepal (Shrestha,Dr.M.K. 1987**:**73-78**)** found that receivable turnover calculated varied, from lowest record of 0.09 times 1 to the highest level of 25.7

times and was less than favorable in selected PEs of Nepal. And those revealing favorable turnover have still faced problem of managing account receivables. He pointed that PEs did not record a cautions policy to improve collection that would have helped a lot in raising the receivable turnover. The average collection period recorded a variation from a minimum 14 says to the maximum of 4027 days. In the same way the aging schedule of PEs has uniform patterns and the outstanding receivable in many instances were very old even exceeding ten years or so forth. It was groped under above three years old receivable. In the selected enterprises the ration of receivable CAs varied from a minimum of 0.15 times 1 to maximum 0.9 timed 1. He also found that most of the PEs has larger share of receivable to CAs. In most of them extension of additional relaxed credit was a usual phenomenon and they did not have larger amount of receivable outstanding. They had not taken seriously the task to speed up the collection of long outstanding receivable by devising suitable credit monitoring policy. The study, thus, concluded that determining the desired investment in account receivable was least considered in most of the PEs,

2.8.1.6: Dr. K. Acharya conducted a comparative study of "problems in management of WC in Nepalese enterprise" states that of Nepalese enterprises the management of money and managers are found over conscious abut receiving of money rather than it's efficient utilization. Thus the existing problems in the finance are mostly directed towards the management of WC rather than in any area. In his number of studies it has been repeatedly found that the gross inefficiency exist in the operation of public enterprises. He has stressed on high cost of production, which have left these PEs in less secured position. Thus he further added the cost reduction is the only possible measure for smooth operation and long-term existence of the public enterprises in Nepal. The cost reduction program is highly associated with the optimization of working capital. He has focused some operational and organizational problems of Nepalese PEs not following traditional norm 2; 1 between their CAs and CLs, low rate of inventory turnover, change in WC in relation to fixed capital has very low impacts over the profitability not following conventional of debt equity as 1:1; then transmutation of capital employed into sales management information, ineffective use of performance evaluation tools and techniques and WC management has never been considered a managerial job.

Similarly, he has suggested that PEs finance staff must be acquainted with the modern scientific tools used for the presentation and analysis of data. He further suggests avoiding the system of crisis decision, which prevailed frequently in their operation. They have to follow system and method for decision-making. Lastly he has given emphasis to optimize its level of investment at a point of time. Neither over nor under investment in WCs desired by the management of enterprises. Both of these situations will erode the efficiency of the concern.

This study is descriptive in nature. He has hot used any data and research tools. The study has covered Nepalese PEs (but not mentioned the name of PEs.) Each selected enterprise does not represent the entire industry in which it fails.

2.8.1.7: Dr R.S. Pradhan (Management of working capital, 1986): His study aims at examining the various aspects of management of WC is selected manufacturing PEs of Nepal. The specific objectives undertaken in his study are:-

1.5.1 To conduct risk return analyzes of liquidity of working capital position.
1.5.2 To assess the short-term financial liquidity position of the enterprises.
1.5.3 To asses the structure and utilization of WC and
1.5.4 To estimate the transactions demand function of working capital and it's various.

His study has mentioned the following findings.

1. It has found that most of the selected enterprises have been activating a trade off between risks and return there by following neither an aggressive nor a conservative approach.
2. It has showed a poor liquidity of most of the enterprises. This poor liquidity position has been noticed as the enterprises have either negative cash

flows or negative earnings before tax or they have excessive net current debts which cannot be paid with in a year.

3. The Nepalese manufacturing PEs have on a average half of their total assets in the form of CAs, of all the different components of CAs the share of inventories in total assets, on an average, is largest followed by receivable and cash in most of the selected enterprises.

4. The economics of scale have been highest for inventories followed by cash and gross WC, receivable and net WC.

5. The regression results also shows that the level of WC and its components and enterprises desire to hold not depend on a sales but on holding costs also.

His study is the concerned with interrelationships that exist between managing CAs and CLs. The study manages to focus on net working capital concept. The study has employed ratio analysis discriminate analysis and econometric models for its analysis.

This study does not cover all the PEs in manufacturing sector. Each selected enterprises does not represent the entire industry in which it falls. The manufacturing PEs selected for the study differs in its working and nature. The study period covers ten years period form 1973 to 1982. He has mentioned only findings and conclusion in his study but not recommended any suggestions to solve the finding problems.

These studies show that WC management is the weakest or neglected part of financial management in most of the PEs in Nepal. It seems that Nepalese firms are following conservative approach in financing as well as investing working capital.

2.8.2 Review of Dissertations

Besides review of available books and research studies a number of studies have been made by students of MBS & MBA relating to working capital management in different PEs as well as private organizations of Nepal. This section, hence will review some of those dissertations.

Basudev Shrestha in his thesis entitled" A study of Working capital management of dairy development corporation"(Shrestha, Basudev: 2001) has included the span of five years data up to 2056/57 B.S. The objectives of his study were to present overall picture of Diary Development Corporation, to analyze the current assets and current liabilities of Diary Development Corporation of their impact and relationship to each other. During his study, he had basically used the secondary data and mainly financial tools are used for analyzing the working capital management .The study has indicated the following conclusions;

i) The working capital of the firm has been increasing and the corporation followed the conservative working capital policy with respect to current asset management.

ii) The average investment in current asset is lower with respect to net fixed assets during the study period and the Corporation has no clear vision about the investment in current assets to fixed assets position.

iii) The major components of current assets i.e. inventories and receivable are in fluctuation trend. The company does not follow the credit sales policy.

iv) Cash and bank balance holds the second largest position of the current assets.

v) The company has been able to maintain its current ratio in an average 1.7:1 during the study period which is regarded as a satisfactory level

vi) The gross and net profit margin of the Corporation shows that it is suffering from heavy loss during the study period.

vii) The overall return position of the corporation is negative, not in favorable condition .it is because of inefficient utilization of current assets, total assets and shareholders wealth.

Yam Prasad Sharma had carried out a study of "working capital management of manufacturing companies of Nepal (Listed on Nepal stock exchange Ltd.)".(Sharma Yam Prasad: 1999) has tried to analyze the management of working capital of manufacturing industries. The objective of the study were to study the working capital management and policies adopted by these manufacturing industries by analyzing empirical testing of variables affecting working capital management, such as current assets, sales, current liabilities, net profit , total assets , cost of good sold and operation ratio. The major findings of this study are as follows:

i) On the basis of this study he has analyzed, turnover position liquidity, profitability.

ii) It also aim to evaluate the relationship between variables, for this, researcher has set proper research methodology, use of quantitative method, statistical method and qualitative method, from this he has found that, overall profitability of listed PEs is negative.

iii) He has analyzed that Nepalese PEs is suffering from sickness and they must determine the appropriate financing mix. These manufacturing companies undertake measures like, identification of needed funds, regular checks, development of marketing information system, the attitude towards risk and profit determination right combination of short term and long term sources of funds to finance working capital needs.

iv) He has further recommended that appropriate combination of investment in CA, minimizing operating cost, preparing effective sales plan, specific working capital policy improving liquidity position speedy cash conversion period by improving financial performance are the measure ways to make healthy efficient management of working capital of manufacturing PEs of Nepal.

Aryal Bishwas Raj in his thesis entitled "A study of working capital management of Nepal Battery Company Ltd."(Aryal, Bishwas Raj: 2003). His main objectives are to present overall picture of working capital management of Nepal Battery Company Ltd. He derived the following conclusions from his studies:

i) He recommended for the proper management of inventory and receivables.

ii) The non-moving and obsolete items should be discarded to avoid unnecessary blockage up.

iii) Inventory and management should be integrated with credit policy. He has suggested employing effective inventory control techniques.

iv) It is better to adopt appropriate working capital policy rather than conservative working capital policy, so that it can improve it's profitability in short run as well as long run.

v) Company should be liberal in it's credit policy.

A resent study conducted by Sabita wagle, entitled "A comparative study of working capital management in manufacturing companies in Nepal (with special reference to Dairy development corporation & Nepal lever limited)"(Wagle, Sabita: 2007). She conducted study on the basis of five years data from 2000-2005. The objective of this study was to study the working capital position of NL Ltd &DDC. She has used ratio analysis, correlation analysis, regression analysis etc.

The findings of the study were as follows:

i) The proportion of all components of current assets is fluctuating in both companies.

ii) The liquidity position of NL Ltd is found to be better than that of DDC than NL Ltd

iii) All turnover ratio except the total assets turnover are higher in DDC than NL Ltd

iv) The average percentage of cash and Bank balance are higher in DDC in comparison to NL Ltd .The average percentage of inventory, debtors and misc. current assets are higher in N L Ltd than that of DDC

v) NL Ltd has better profitability position than DDC

vi) The major component of current liabilities in NL Ltd and DDC are loan and advance, sundry creditors, provision for taxation and misc. current liabilities .During the study period sundry creditors holds the highest and loan and advance holds the lowest position to total current liabilities in NL ltd whereas misc.current liabilities holds the highest in DDC but loan and advance is nil.

vii) NL ltd and DDC both are facing the problem of high operation expense ratio. The unskilled manpower, overstaffing, unsystematic purchase of raw materials, unnecessary expenses, heavy expenses on overhead etc. may be cause for high operating expenses .So she has recommended to pay attention to these aspects.

viii) There is no significant difference in the composition of current assets and current liabilities between manufacturing company and corporation .Some difference were found regarding the financing policy, correlation analysis, factor affecting working capital management and also regarding the most problematic current assets and liabilities to manage.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1 Introduction

Industrial development is a fundamental base for the national development, and the manufacturing public enterprises are the back bone of industrial development. The above-mentioned objectives will be fulfilled by well-settled research methodology. The study about Nepal drugs limited, has been already streamline to some extent in earlier chapter regarding their growth, objectives statement of problem and working capital practice in general. At the same time relevant literature of working capital management has been reviewed in chapter two to have useful feed back and information as an input in this study on working capital management of NDL. But however the proper analysis of this study can be meaningful only on the right choice of research tools that help to come in meaningful conclusion. The main objective of this study is to analyze the working capital management of NDL. Therefore in this chapter focus has been made on research design, nature and source of data, tools used for analysis and definition of key terms.

3.2 Research Design

A well set research design is necessary to conduct any type of research and realize the research objective. It includes definite procedures and evaluating the study. This study attempts to make composition and establish the relationship between two or more variables, this study be termed as analytical informative, descriptive challenging and feed back study. For the study of working capital management of NDL, financial tools, as will as statistical tools as a secondary data and primary data as qualitative analysis of NDL are employed to achieve prescribed result.

3.3 Nature and Sources of Data

The study is basically depends upon secondary in nature, but to make research more informative challenging and qualitative, primary information of NDL's executives are also analyzed. The secondary data have been collected financial statements of various years, unpublished official records of company provided by financial and account and other departments of NDL. To pick of hidden information of company, proforma of questionnaire are prepared and distributed to various related executive chief. All the collected data and information have been properly arranged tabulated and calculated to arrive at the realistic analytical framework.

3.4 Methods of Data Analysis

Collected data are analyzed by various financial tools statistical tools and qualitative method which area as follows:-

3.4.1 Financial Tools

3.4.2 Statistical Tools

3.4.3 Qualitative Method (Opinion Survey)

3.4.1 Financial Tools

A. Ratio analysis

Ratio is important tools of the financial analysis it helps to measure the financial strength and weakness of any manufacturing company. The ratio is calculated by dividing one component to another to show their corresponding relationship with each other liquidity, activity, leverage and profitability are the main ratio.

i. Current assets total assets (CATA)

The ratio of current assets to total assets indicates what percentage of the company's total assets is invested in the form of current assets. It is calculated as:

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

As the ratio increases, the risk and profitability of the company would decrease. The low ratio indicates the small amount of working capital.

ii. Current assets to fixed assets (CAFA)

This ratio shows the relationship between the current assets and fixed assets and can be calculated as:

$$CAFA = \frac{\text{Current Assets}}{\text{Fixed Assets}} \times 100$$

If the ratio is large, it indicates the sound working capital.

iii. Ratio of cash and Bank balance to current assent (CBCA)

It is calculated as:

$$CBCA = \frac{\text{Cash \& Bank Balance}}{\text{Current Assets}} \times 100$$

The small ratio indicates the sound management and large ratio vice-versa. The working capital is directly affected by it.

iv. Cash & Bank balance to total assets (CBTA)

This ratio is calculated as under and indicates what percentage of total assets is invested in cash and Bank balance.

$$\text{CBTA} = \frac{\text{Cash \& Bank Balance}}{\text{Total Assets}} \times 100$$

As the ratio increases the risk and profitability would decrease and if the ratio is greater the working capital would be greater.

v. Inventories to Total assets (ITA)

This ratio can be calculated as:

$$\text{ITA} = \frac{\text{Inventory}}{\text{Total Assets}} \times 100$$

This ratio indicates the percentage of total assets invested in form of invested in the form of inventories. Inventory is a part of working capital so, if the percentage increased the working capital automatically increased. The increase in the also indicates liberal inventory policy or blocking of materials in stock.

vi. Ratio of Inventory to current assets (ICA)

This ratio implies the percentage of current assets in form of inventory and derived as:

$$\text{ICA} = \frac{\text{Inventory}}{\text{Current Assets}} \times 100$$

The increase in the ratio is an indication of liberal inventory policy followed by company. If the ratio increases or percentage increases means greater part is occupied by inventory. On the other hand, a current asset is termed as working capital, if the ratio is the firm will hand greater volume of working capital.

vii. Ratio of receivable to Total assets (RTA)

This ratio can be calculated as:

$$RTA = \frac{\text{Receivable}}{\text{Total Assets}} \times 100$$

This ratio indicates the percentage of total assets invested in the form of receivable. The increase in the ratio indicates the liberal credit policy followed by the company. The working capital is affected by the ratio because receivables are also a part of working capital, if the ratio increases the working capital also increases.

viii. Ratio of Receivable to Current assets (RCA)

This ratio indicates the share of receivable on current assets and is derived as:

$$RCA = \frac{\text{Receivable}}{\text{Current Assets}} \times 100$$

The low percentage indicates the greater working capital and vice-versa. If the percentage is greater the factory is unable to collect receivables promptly.

B) Turnover position

By analyzing the various turnover ratios the factory's turnover position can be know. The following ratios have been calculated

i. Current assets turnover (CAT)

This ratio indicates the number of times the current assets are turned over during the year. It is computed by dividing sales by current assets, i.e. Gross working capital

$$CAT = \frac{\text{Sales}}{\text{Current Assets}} \times 100$$

As the ratio increases, it is utilization of current assets. If the ratio is low, a greater volume of working capital is there. Low ratio indicates greater working capital and high ratio indicates lower working capital.

ii. Net working capital turnover (NWCT)

It is computed by dividing sales by net working capital, i.e., different of current assets and current liabilities,

$$NWCT = \frac{\text{Sales}}{\text{Current Assets}}$$

More ratio shows the utilization of net working capital and less ratio vice-versa.

iii. Cash turnover (CT)

This ratio is computed by dividing sales by cash balance and it measure the speed with cash move through an enterprise's operation.

$$CT = \frac{\text{Sales}}{\text{Cash Balance}}$$

This ratio shows the number of the average cash balance is turned over during the year.

Iv .Receivables turnover

$$RT = \frac{\text{Sales}}{\text{Receivable}}$$

It indicates the number of times the receivables are turned over during the year. It give the general measure of the productivity of the receivable investment. The higher ratio indication the higher amount of working capital and lower ratio vice-versa.

For the complimentary of this ratio, there is a ratio called average collection period (ACP), which indicates the number of days, it takes on an average to collect amount receivables. It is computed by dividing days in a year by receivables turnover.

$$ACP = \frac{\text{Days in a year}}{\text{Receivable turnover}}$$

V. Inventory turnover (IT)

It is computed by dividing sales by inventory.

$$IT = \frac{\text{Sales}}{\text{Inventory}}$$

This ratio shows the number of time inventory is replaced during the year. Higher inventory turnover indicates the good inventory management and lower turnover suggests the management should manage its inventory properly.

C) Liquidity Position Liquidity is the most important part for the company. It shows the ability of the company to pay its current obligations. The liquidity positions of NDL are computed by analyzing current ratio and quick ratio.

i. Current ratio (CR)

This ratio is computed by dividing current assets by current liabilities.

$$CR = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The hither ratio indicates the position of the company is in liquid and able o pay its bills. Generally the current ratio of 2:1 is considered to be satisfactory. More ratios indicated the greater amount working capital and less ratio vice-versa.

ii. Quick ratio or Acid-test ratio (QR or ATR)

It is computed by dividing the quick assets by current liabilities.

$$\text{QR or ATR} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

As the quick asset doesn't include the amount invested in the inventory it is reliable to measure the company's liquidity. Generally the quick ratio of 1:1 of company is considered to be sound.

D) Profitability position

The main objective of the company is to earn maximum profit. The position of the profitability of the company is analyzed with the help following ratio.

i. Gross profit ratio (GPM)

It is computed by driving gross profit is obtained by deduction cost of goods sold from net sales.

$$\text{GPM} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

The gross profit margin ratio reflects the efficiency with which company produces each unit of product. The higher percentage indicates the better efficiency of the company.

ii.Net profit margin ratio (NPM)

Net profit is obtained after deducting operating expenses and income tax form gross profit. It is computed by dividing net profit by sales.

$$\text{NPM} = \frac{\text{Net Profit after Tax}}{\text{Sales}} \times 100$$

This ratio is the overall measurement of the company's ability to earn net profit.

iii. Operating ratio (OR)

The operating ratio is an important ratio that explains the changes in the net profit margin ratio. This ratio is computed by dividing all operating expenses by sales.

$$\text{OR} = \frac{\text{Cost of good sold + operating expenses}}{\text{Sales}} \times 100$$

Higher ratio indicates the lower efficiency of the company and vice-versa. Higher operation ratio means small amount of operating income to meet interest, dividends etc.

iv. Return on total assets (ROA)

This is computed by dividing net profit after tax by total assets.

$$\text{ROA} = \frac{\text{Net Profit after Tax}}{\text{Sales Assets}} \times 100$$

The ROA is useful measure of profitability of all financial resource invested in the company's assets.

V. Retune of Net Worth (RNW)

It is computed by dividing net profit after tax by net worth

$$\text{RNW} = \frac{\text{Net Profit after Tax}}{\text{Net Worth}} \times 100$$

It indicates the return to the shareholders, how well the firm has used the resources of the owners. It judges whether the firm has earned of satisfactory return for its shareholders or not. Higher the ratio higher the returns to the shareholders and vice-versa.

Vi. Return on Working Capital (RWC)

It is computed by dividing net profit after tax by current assets working capital. It measures the profit wi th respect to current assets.

$$\text{RWC} = \frac{\text{Net Profit after Tax}}{\text{Current Assets}} \times 100$$

Higher the ratio higher the utilization of current assets to earn profit and vice-versa.

3.4.2 Statistical tools

Various financial tools are mentioned above to analyze the working capital management of NDL. Here brief introduction of statistical tools have been used this study is given below.

A) Coefficient of Correlation by Karl person's method:

In order to test the relation ship and significance of the variables, during the period of study, it is applied. So, Karl Pearson's correlation coefficient (r) is calculated as.

$$r = \frac{\Sigma dxdy - \dfrac{\Sigma dx\ \Sigma dy}{N}}{\sqrt{\left[\left\{\Sigma dxdy - \dfrac{(\Sigma dx)^2}{N}\right\} \quad \Sigma dxdy - \dfrac{(\Sigma dy)^2}{N}\right]}}$$

Where, x = the first variable

Y = the next variable

N = No of year (observations)

dx = deviation of first variable from assumed mean

dy = devition of next variable from assumed mean

this coefficient can never be more than +1 and –1. Thus + 1 and – 1 are the limit of this coefficient. If the value of coefficient is +1, it shows the perfect correlation and if it is –1, negative correlation. More over if the coefficient of correlation is zero then it means there is no existence of correlation between the variables under study.

B) Probable error (P. E) of coefficient of correlation:

P.E, of r is very useful in interpreting the value of r and is worked out as under for Karl person's coefficient of correlation.

$$P.E. = \frac{0.6745 \times (1 - r^2)}{\sqrt{N}}$$

If r <P.E, It is not all significant, no evidence of correlation between variables

If r >P.E, there is the correlation, but not significant

If r > 6 × P.E, and greater than ± 0.5, than It is considered significant at all.

3.4.3 Qualitative Method (Opinion Survey)

In this section, only quantitative method does not pick all information, so qualitative analysis or primary information and opinions about the working capital management from related chief personnel are required. A list of questions (objective) is distributed to related officers of various department of NDL. on the basis of their replies analysis has been done. The questionnaires are distributed to the officers of different departments such as, sales department, purchase department, Account department and Finance department.

3.5 Definition of Key Terms

In order to clarify the term used in this section the following key term are defined.

1. Current assets

It includes the cash and bank balance and those other assets which can be converted into cash within a year such as: inventory, debtors or receivables, advances to employees, deposits, prepaid rent & insurance, interest receivable on bonds and other misc. current assets.

2.Current liabilities

All the payment that has to be made by the company within an accounting period is included in current liabilities. It includes sundry creditors, provision for taxation, unclaimed dividend, provision for bonus, housing, income tax.

3.Working capital

The term working capital here refers to the gross working capital. It includes the total volume of current assets, which are discussed on point 1.

4.Net working capital

The net working capital refers to the difference in between the company's current Assets and current liabilities.

5.Fixed assets

It consists of the assets of the company like site development, building, plant and machinery, furniture and fixtures office appliances, computer.

6.Total assets

It includes the total of current assets, net fixed assets and misc. assets (which includes the capital expenditure in progress).

7.Cash & Bank balance

It includes the cash in hand & cash at bank.

8.Receivables

It includes the trade debtors & other debtors.

9.Inventory

It includes the raw materials at cost, scrap raw material at direct standard cost, work in progress at direct standard cost, stores and spares at cost and finished goods at direct standard cost.

10. Net worth

In includes the paid up capital, general reserve, housing reserve and other reserve of the company.

CHAPTER FOUR

4. PRESENTATON AND ANALYSIS OF DATA

4.1 Introduction

The introductory setting already describe the meaning of working capital management, brief introduction of Nepal Drugs Ltd., pharmaceutical industry in Nepal and its growth and importance. At the same time relevant literature that matter important to study is also streamlined in second chapter. Moreover research methodology consists the method of research chosen in this study has been given detail in third chapter. Now the most important sensitive part of this study consists of analysis and presentation of empirical data focus on how far the NDL is in a position to manage their working capital.

In order to manager examine the working capital mgmt of NDL; the necessary financial facts and figures as well as descriptive information are also fathered through the financial statement (annual). Questionnaire is used to obtain farther qualitative information. Only the important, Pertinent information are taken into account, The major variable are fixed assets CA, CL, Net profit, sales and statistical tools are to be employed to measure the working capital management of NDL.

4.2 compositions of Current Assets

As current assets are the main parts which are required to run day to day business activities and total of which is know as working capital as the gross concept. It's position has become needful to study. Most of business organizations require some amount of working capital and it's requirement differ according to the size of the organization.

A firm needs cash to purchase raw materials, pay expenses this is because of not perfect matching between cash inflow and outflow. Cash me also held to meet the future expenses. The stocks of raw materials are kept in order to ensure smooth productions and to protect the risk of non-availability of raw materials. To meet this obligation also cash in needed.

Any business organization aims to maximize return on shareholders investment. In order to accomplish this objective the business organization should earn sufficient return for its operations. Earning a steady amount of profit requires successful sales. So the firm has to invest enough funds to in current assets for the success of sale. As the sales do not converted into cash instantly the extra amount of working capital is needed.

The efficient management of current assets is an integral impact on maximization of owner's capital in this context. It is necessary to have proper analysis for current assets management. The proper analysis of current assets of industrial concern reflects the nature of and operation of its management. So the overall currant assets are firstly analyzed.

Table 1

Nepal Drugs Ltd.

Position of Current Assets

(In Million)

Particulars	2057/58	2058/59	2059/60	2060/61	2061/62	2062/63
Cash & Bank	3.79	4.49	2.93	3.73	44.69	4.66
Sundry debtors	19.26	19.58	20.19	19.98	16.33	16.90
Inventory	68.77	50.86	48.70	53.64	43.47	31.40
Advance deposits	18.04	19.29	20.19	22.45	17.79	21.92
Total	109.86	94.22	92.01	99.8	122.28	74.88

The above table represents current assets position of Nepal Drugs Ltd. It also represents investment pattern of NDL in current assets and their fluctuation in years. The table shows overall current assets items

4.3 Composition of Working Capital (Financial ratio) analysis

The compositions of working capital are analyzed with the following ratios.

4.3.1 Proportion of Current Assets to Total Assets (% of CA to DA)

As the necessity of current assets depend upon the nature of business. It is required to meet the working capital, which is required to run the organization day-to-day activities. The table 2 given below represents the percentage of current assets to total assets.

Table 2

Nepal Drugs Ltd.

Current Assets to Total Assets

Year	Current Assets	Total Assets	Ratio %	%Change
2057/58	109.87	148.51	73.98	-
2058/59	94.24	132.48	71.13	(2.85)
2059/60	88.65	124.57	71.16	0.03
2060/61	99.84	134.45	74.25	3.09
2061/62	122.29	155.37	78.70	4.45
2062/63	74.79	106.41	70.28	(8.42)
Total	589.68	801.79	-	(3.73)
Average	98.28	133.63	73.25	(0.746)

In table 2, the ratio represents the proportion of Current assets investment to total assets investment of NDL for the selected 6 (six) years of study period. The proportion of current assets on total assets is seems to be in fluctuating trend .The proportion of current assets on total assets decrease in fiscal years 2058/59, 2059/60 and 20062/63, whereas it is on increasing trend in 2060/61 and 2061/62.The increasing proportion of Current assets in the observed fiscal years shows that the holding of inventories and debtors are in increasing trend. In an average, there is 73.25% participation of CA on TA during the study period.

4.3.2 Proportion of Current Assets to Fixed Assets

Table 3

Nepal Drugs Ltd.

Current Assets to Net Fixed Assets

(In Million)

Year	Current Assets	Net Fixed Asset	Ratio %	% Change
2057/58	109.87	38.63	284.41	-
2058/59	94.24	38.24	246.44	(37.97)
2059/60	88.65	35.92	246.79	0.35
2060/61	99.84	34.60	288.69	41.9
2061/62	122.29	33.07	369.79	81.1
2062/63	74.90	31.50	237.77	(132.02)
Total	631.69	234.91	-	-
Average	105.28	39.15	278.98	(9.32)

The table 3 shows, the proportion of current assets to Net fixed assets during the study period of 6 years. Generally, the ratio of Current assets to Net Fixed assets is found to be in fluctuating trend. In fiscal year 2061/62, It is 369.79 percent which is highest ratio among the 6 years period which is due to increase in current assets during this year. The lowest ratio is found in year 2062/63 due to decrease in current assets as well as net fixed assets the investment in inventory is also very low in year 2062/63

The average ratio during the study period is (9.32) percent. The overall ratio shows that investment in current assets (working capital) in comparison with its fixed assets is not satisfactory.

4.3.3. Proportion of Cash and Bank Balance to Current Assets

The main reason of holding the cash is for transaction motive, precautionary motive and speculative motive. So to fulfill the daily business requirement such as payment of bills, purchase of raw materials, payment of debt, optimum cash balance or bank balance has to be maintained. The table 4 presented below shows the proportion of cash to current assets.

Table 4

Nepal Drugs Ltd.

Cash and Bank Balance to Current Assets

Year	Cash and Bank	Current assets	Ratio%	% Change
2057/58	3.79	109.87	3.45	-
2058/59	4.49	94.24	4.76	1.31
2059/60	2.93	88.65	3.30	(1.46)
2060/61	3.76	99.84	3.76	0.46
2061/62	44.69	122.29	36.54	32.78
2062/63	4.66	74.90	6.22	(30.32)
Total	64.32	589.79	-	-
Average	10.72	98.29	9.67	0.55

The above table shows that the proportion of cash to current assets is highest in the F/Y 2061/62. The cash hold by the company in this F/Y is Rs. 44.69 million and it's 36.54 percent of total current assets. Likewise the cash hold by the company in 2059/60 is Rs 2.93 million i.e. about 3.30 percent of it's current assets which is the lowest among the 6 years period. The proportion in the first F/Y 2057/58 is 3.45 percent. Which is decreased with ratio of 3.30 percent in FY 2059/60, but in fiscal year 2061/62, it increases highly and absorbs 36.54 percent of overall current assets.

As the higher ratio is indicator of inefficient management. It seems unsound during fiscal year 2061/62. The overall average ratio is 9.67 percent.

4.3.4. Proportion of Cash and Bank Balance to Total Assets

The proportion of liquid Cash in comparison to the total assets shares the investment in cash out of total assets. The more ratios decrease the risk and provide nothing the profitability would decrease. The table 5 stands below to show the percentage of Cash/Bank balance.

Table 5

Nepal Drugs Ltd.

Cash & Bank Balance to Total Assets

(In Million)

Year	Cash and Bank	Total Assets	Ratio%	% Change
2057/58	3.79	148.51	2.55	-
2058/59	4.49	132.48	3.39	0.84
2059/60	2.93	124.57	2.35	(1.04)
2060/61	3.76	134.45	2.79	0.44
2061/62	44.69	155.37	28.76	25.97
2062/63	4.66	106.41	4.38	(24.38)
Total	64.32	801.79	-	-
Average	10.72	133.63	6.98	0.36

The above table shows the investment in cash out of it's total assets in NDL during the study period of 6 years. The ratio is 2.55 percent in F/Y 2057/58 which is fall down to 2.35 percent in FY2059/60 which is lowest among the study period and increased highly on FY 2061/62 to 28.76 percent. The above table shows that, there is fluctuating ratio of cash and bank to total assets in the study period. This shows the management attitude towards risk during overall study period; average ratio percent is 6.98.

4.3.5. Proportion of Inventory to Current Assets to Total Assets

One of the important parts of current assets is inventory. In the manufacturing company, like NDL, increasing of raw materials, as will as finished goods spare parts are very important. The shortage of raw materials, creates irregular in production, high manufacturing cost, unfavorable labor variance etc. caused. In the other hand excess inventory cause unnecessary handling of capital which earn nothing. It results high cost in inventory management. Not only the inventory of raw material, there should be proper management of finished goods or outputs, so that consumer never feels to have shortage it arises the excess inventory problem nor shortage of inventory problem. The following table 6 presents proportion of inventory to it's current assets and total assets

Table 6

Nepal Drugs Ltd.

Inventory to Current Assets and Total Assets

(In Million)

Year	Inventory	Current Assets	% Ratio	Total Assets	% Ratio
2057/58	68.77	109.87	62.59	148.51	46.31
2058/59	50.86	94.24	53.96	132.48	38.39
2059/60	48.70	88.65	54.93	124.57	34.15
2060/61	53.64	99.84	53.72	134.45	39.89
2061/62	43.47	122.29	35.55	155.37	27.98
2062/63	31.40	74.90	41.92	106.41	29.51
Total	296.84	589.79	302.67	801.79	216.23
Average	49.47	98.30	50.44	133.63	36.03

The figures in the above table shows the percentage of inventory with respect to it's current assets and total assets. In F/Y 2057/58, It is 62.59 percent of current assets and total assets respectively which is highest among the study period, then it decreases in FY 2058/59 and fluctuates. The lowest ratio has been found in FY 2061/62 i.e. 35.55 percent. The average percent ratio of inventory to current assets in study periods is 50.44 percent.

Similarly, ratio percent of inventory to total assets in F/Y 2057/58 is 46.31 percent which is also decreases in F/Y 2058/59 by 38.39 percent and fluctuates. The lowest ratio has been found in FY 2061/62 i.e. 27.98 percent. The average ratio (%) of inventory to total assets is 36.0

4.3.6. Proportion of Receivables to Current Assets and Total Assets

In this era of nut throat competition situation of the market, credit sales plays a vital role in the development and expansion of market, without increasing sales volume the company can't earn profit and therefore maximize Shareholder's wealth. Hence the company should keep some provisions for credit sales. The company has to arrange some working capital for this purpose. The nature and term of credit should be determined in advance in order to avoid the company from the deficiency of working capital. Such arrangement is basically terms receivable management. The receivable should be perfect. Higher degree of receivable results unnecessary hold up of working capital, lower degree of receivable may cause negative result in sales level. The following table – 7 shows the proportion of receivable to the current assets and total assets.

Table 7

Nepal Drugs Ltd.

Receivable to Current Assets and Total Assets

(In Million)

Year	Receivable	Current Assets	% Ratio	Total Assets	% Ratio
2057/58	19.26	109.87	17.53	148.51	12.96
2058/59	19.58	94.24	20.78	132.48	14.78
2059/60	16.81	88.65	18.96	124.57	13.49
2060/61	19.98	99.84	20.01	134.45	14.86
2061/62	16.33	122.29	13.35	155.37	10.51
2062/63	16.90	74.90	22.56	106.41	15.88
Total	108.86	589.79	113.19	801.79	82.48
Average	18.14	98.30	18.86	133.63	13.75

The table shows that the receivable to current asset ratio is lowest in FY 2061/62 and highest in FY 2062/63. The tendency of receivables of study period shows alternative increase decrease phenomenon with respect to current assets and total assets. It indicates the liberal credit policy of the company.

4.4 Turnover Position

By analyzing the current assets, net working capital cash, receivable, and inventory turnover ratios. The researcher can reflect the turnover position in terms of sale.

4.4.1 Current Assets Turnover or (gross working capital turnover)

For the manufacturing company like NDL, sales are the most important activity, the survival and growth of the company depends on the sales of the product. The company showed makes their sales policy as per the resource availability and market demand. The sales policy directly effects the production. Policy and in the same way the production policy effect the financial policy. i.e. the requirement of total assets and working capital by the company of run or it as per plan. Here three should always be co-ordination in between there three units of the company. Each and every information should smoothly pass through these units. Increase in sales certainly causes increase in production which requires more units. Keep stock of material there showed be adequate amount of working capital. The amount of working capital is also affected by sales policy of the credit sales is increased more working capital will be required to met the daily requirement. In the other hand, tight credit sales policy is applied the amount of working capital to replace the amount held by credit sales will be decreased. The climate effect will be decrease in working capital need. The table – 8 represents the current assets or gross working capital turnover during the study period.

Table 8

Nepal Drugs Ltd.

Current Assets Turnover

(In Million)

Year	Sales	Current Assets	Ratio (times)
2057/58	114.30	109.87	0.94
2058/59	81.56	94.24	0.87
2059/60	60.11	88.65	0.68
2060/61	66.21	99.84	0.66
2061/62	51.81	122.29	0.42
2062/63	50.26	74.90	0.67
Total	424.25	589.79	4.24
Average	70.71	98.30	0.71

The above table shows that the current assets turnover is 0.94 in FY 2057/58, which is again fall down by 0.87 times in next FY. In fiscal year 2061/62 the current asset turnover ratio is only 0.42 percent. It is because of increase in current assets but not corresponding increase in sales. In an average of the study period, the current assets turnover position of the company is 0.71 times; such turnover ratio is not as satisfactory as financed over current assets.

4.4.2 Net Working Capital Turnover

It is excess amount of current assets over current liabilities. Such working capital is the margin of safety maintained by the company. In case of trading and financial firms, the need of working capital will be limited. But in manufacturing company like NDL, the size of working capital depends upon production cycle and business cycle. The net working capital position maintained by the NDL is presented below in table 9.

Table 9

Nepal Drugs Ltd.

Net Working Capital Turnover

(In Million)

Year	Sales	Net Working Capital	Ratio (times)
2057/58	114.30	67.3	1.70
2058/59	81.56	51.41	1.59
2059/60	60.11	(12.8)	(4.70)
2060/61	66.21	(16.99)	(3.90)
2061/62	51.81	36.08	1.44
2062/63	50.26	(0.8)	(62.82)
Total	424.25	70.2	(66.69)
Average	70.71	11.7	(11.11)

The above table 9 presents that, Net Working Capital turnover in FY 2057/58 is 1.70 times. This has decreased in next FY 2058/59 and becomes negative in FY 2059/60, 2060/61 and 2062/63 again slightly increase in FY 2061/62 by 1.44 percent. The lowest ratio is seen in FY 2062/63 i.e. (60.84) percent. It is because the sales have decreased in FY 2062/63. The overall % ratio is negative i.e. (11.11).

These all changes occurred due to fluctuating sales activities.

4.4.3 Cash Turnover (Cash Conversion Cycle)

It is one of the main parts of current assets which have greatest value to meet the current obligations, occurred in the business. It should be just adequate to run business and excess cash has no meanings as it earns nothing. So the company always sees the risk return trade off to maintain the just adequate cash balance. The table 10 shows the cash turnover position of the NDL during the period of study.

Table 10

Nepal Drugs Ltd.

Cash Turnover

(In Million)

Year	**Sales**	**Cash balance**	**Ratio (times)**	**Cash Conversion Days**
2057/58	114.30	3.79	27.36	13
2058/59	81.56	4.49	18.16	20
2059/60	60.11	2.93	20.52	18
2060/61	66.21	3.76	17.61	20
2061/62	51.81	44.69	1.16	310
2062/63	50.26	4.66	10.78	33
Total	424.25	64.32	59.59	-
Average	70.71	10.72	15.93	69

The above table 10 shows the turnover position of the cash and bank balance maintained by the NDL during the period of study. The company has able to make 27.36 times turnover in FY 2057/58 which has again decreased to 18.16 times in FY 2058/59 then fluctuates. There has been drastic increase in cash balance in FY 2061/62.The average turnover position has found 15.93 times. It is due to the fluctuating amount of sales volume. The company has able to maintain cash conversion cycle of 69 days.

$$\text{Cash conversion day} = \frac{360}{\text{Ratio (time)}}$$

4.4.4 Receivable Turnover Position

Receivable is one of the components of working capital. In order to increase the business activities the company has to increase the sales volume. The sales volume can be increased by giving products in credit to the customers. In such case level of receivables goes up. The table 11 presented below shows the receivables turnover position of the NDL during the study period and average collection period of it's receivables.

Table11

Nepal Drugs Ltd.

Receivable Turnover

(In Million)

Year	Sales	Receivables	Ratio (times)	Avg.collection period
2057/58	114.30	19.26	5.93	62days
2058/59	81.56	19.58	4.17	88days
2059/60	60.11	16.81	3.58	102days
2060/61	66.21	19.98	3.31	110days
2061/62	51.81	16.33	2.97	115days
2062/63	50.26	16.90	2.97	123days
Total	424.25	108.86	23.56	-
Average	70.71	18.14	3.93	100days

As per table 11 presented above, the receivable turnover in FY 2057/58 is 5.93 times has found to be decreased by 4.17 times in next FY. In the FY 2061/62 and 62/63 there is lowest receivable turnover ratio i.e. only 2.97 times which is due to decrease in sales and increase in receivables during those periods. The average receivables turnover during study period is 3.93 times.

The average collection period of credit sales has found to be moderate in FY 2057/58 is only 62 days. The average collection period is seems to be in increasing trend up to FY 2062/63. During the period of observation average collection is 100 days.

$$\text{Avg, call. Period} = \frac{\text{receivables x 365}}{\text{Sales}}$$

4.4.5 Inventory Turnover Position

Inventory is also the one component of current assets which also showed be maintained effectively and efficiently. It has already been stated that working capital, production and sales are correlated in general cause. The production should be increased to meet the higher level of sales target. To produce more, more raw materials will be required. The stock level of raw materials should be properly maintained to meet the raw materials requirement for higher level of production of production. Hence to full fill this requirement, the company has to increase it's working capital the table 12 presented below show the inventory turnover position of NDL, during the period of study.

Table 12

Nepal Drugs Ltd.

Inventory Turnover

(In million)

Year	Sales	Inventory	Ratio (times)
2057/58	114.30	68.77	1.66
2058/59	81.56	50.86	1.60
2059/60	60.11	48.70	1.23
2060/61	66.21	53.64	1.23
2061/62	51.81	43.47	1.19
2062/63	50.26	31.40	1.60
Total	424.25	296.84	
Average	70.71	49.47	1.42

The ratio of average inventory turnover during the period of study has been 1.42 times which is not satisfactory. The inventory turnover position in FY 2057/58 is 1.66 times which is again in decreasing trend except FY 2062/63.

4.5 Liquidity position

Liquidity position shows the ability to pay the bills. Liquidity fulfills the current need of money. Since the study is focused on working capital management of the company. So liquidity position plays vital role to manage the working capital. Here the current ratio and acid test ratio of NDL during 9 years period of study are observed.

4.5.1Current Ratio

It is the simple relationship of current assets to current liabilities. Current assets includes, cash and bank balance, inventory, receivables and other miscellaneous current assets, where as current liabilities include creditors, cash credit taken. Provision for taxation, unclaimed dividend and other miscellaneous current liabilities. The current ratio of the NDL for the period of study is calculated in the table 13 presented below.

Table 13

Nepal Drugs Ltd.

Current Ratio

(In Million)

Year	Current Assets	Current Liabilities	Ratio
2057/58	109.87	42.57	2.58:1
2058/59	94.24	42.83	2.20:1
2059/60	88.65	101.45	0.87:1
2060/61	99.84	116.83	0.85:1
2061/62	122.29	86.21	1.42:1
2062/63	74.79	75.70	0.99:1
Total	589.79	465.59	-
Average	98.30	77.60	1.34:1

The above table shows that, company's average current ratio 1.34:1. It shows that company has less current assets to pay current obligations i.e. shortage of current assets. It is known that, perfect current ratio to overall companies is 2:1 which has not matched in any of the year. The current ratio of FY 2057/58 and 58/59 are 2.58:1 and 2.20:1 respectively shows excess current assets then that of current liabilities. Excess current assets are not beneficial to the company, because, it shows the investment in unproductive assets, and working nothing. During FY 2059/60, 2060/61 and2062/63 the ratio are0.87:1, 0.85:1 and 0.99:1 shows very alarming position of NDL.

4.5.2 Quick ratio (Acid test ratio)

Quick ratio or acid test ratio is the relationship in between quick assets and current liabilities. It is the measurement of company's ability to convert its current assets, quickly into cash in order to meet it's current liabilities. The high inventory level, can't convert quickly into cash. So the study of quick ratio is reliable. It can be computed by dividing quick assets by correct liabilities. The quick ratio of NDL, during the period of study is presented below.

Table 14

Nepal Drugs Ltd.

Quick Ratio (Times)

(In Million)

Year	Quick Assets	Current Liabilities	Ratio
2057/58	41.10	42.57	0.97:1
2058/59	43.38	42.83	1.01:1
2059/60	39.95	101.45	0.39:1
2060/61	46.20	116.83	0.40:1
2061/62	78.82	86.21	0.91:1
2062/63	43.5	75.70	0.57:1
Total	292.95	465.59	-
Average	48.82	77.60	0.71:1

(Quick asset = current assets – Inventory)

The above table presents the quick ratio of the NDL, where quick assets include of cash and bank balance, Sundry debtors, advance deposits. The quick ratio is considered as perfect when the ratio becomes 1:1. Here, study shows that, the average quick ratio is only 0.71:1 which is not favorable and satisfactory to the company. It is due to high level current liabilities and inventory absorbs high percent of current assets. The quick ratio is favorable during FY 2058/59 but, it is unfavorable in other FY of the study period.

4.6 Profitability Position

Behind the establishment of a manufacturing company, there is objective of earning profit or getting maximum return on investment. Profitability of company of is concern of all parties of the country. Effective utilization of resources to earn maximum amount profit is the basic though of company. Profitability is the measure of efficiency. To measure the profitability position of the NDL, the researcher has tried to analyze the profitability ratio, such as gross profit margin, Net Profit margin, operating ratio, return on assets and net worth, and return on working capital.

4.6.1 Gross Profit Margin

It is the profit of excluding the deduction of operating expenses and income tax. It is obtained by deducting cost of goods sold from net sales. The ratio is the relationship between gross profits to net sales which explains that percentage return of gross profit out of total assets. The ratio measures the efficiency of company and soundness of management. Higher percentage indicates the better efficiency. The table below of 15 show the gross profit earned by the company during period of study and sales made there off.

Table 15

Nepal Drugs Ltd.

Gross Profit Margin

(In million)

Year	Gross Profit (Loss)	Sales	Gross profit margin (%)
2057/58	15.76	114.30	13.78
2058/59	3.50	81.56	4.29
2059/60	(1.69)	60.11	(2.81)
2060/61	(9.95)	66.21	(15.02)
2061/62	(6.27)	51.81	(12.10)
2062/63	(5.64)	50.26	(11.22)
Average			(3.85)

The above table 15 shows the percentage ratio of gross profit margin. Almost all FY has suffered with heavy loss, so the gross profit margin (%) has seen on negative ratio. The company has higher cost of good sold that of net sales. The ratio 13.78 and 4.29 percent has seen a little bit satisfactory in FY 2057/58 and2058/59 respectively. During all period of study, except 2057/58 and 2058/59 the gross profit efficiency of company is not at all satisfactory. The average ratio of gross profit margin is found to be in negative. The company has needed better management to run the company in long run in all respects.

4.6.2 Net Profit Margin

Net profit is the profit, which comes after deducting operating expenses and income tax from gross profit. This ratio is the relationship on net profit after tax to sales. This ratio shows the ability of management to operate business with sufficient success. The ratio of net profit to sales essentially expresses the cost price effectiveness of the operation. The operating expenses mainly affect the net profit of company. The table 16 presented below shows the net profit margin of NDL, during the period of study

Table 16

Nepal Drugs Ltd.

Net Profit Margin

(In million)

Year	Net Profit after tax (loss)	Sales	% Ratio
2057/58	(23.00)	114.30	(20.12)
2058/59	(27.01)	81.56	(33.12)
2059/60	(82.22)	60.11	(136.78)
2060/61	(36.13)	66.21	(57.57)
2061/62	(60.87)	51.81	(117.49)
2062/63	(41.63)	50.26	(82.83)
Total	(270.86)	424.25	(447.91)
Average	(45.14)	70.71	(74.65)

The above table presents that the company has not success to earn profit. Company has suffered with maximum loss of ratio 136.78 percent. The company is totally suffered with loss in all FY during the period of study.

4.6.3 Operating Ratio

The operating ratio establishes the relationship between total operating expenses and sales volume. I t is an important ratio that explains the changes in the net profit margin ratio. I t also measures the efficiency of the company as regards to minimizing costs. Operating ratio is an indicator of operational efficiency. The table 17 presented below shows the operating ratio of the NDL, during the period of study.

Table 17

Nepal Drugs Ltd.

Operating Ratio

(In Million)

Year	Cost of Goods Sold + Operating Expenses	Sales	% Ratio
2057/58	131.18	114.30	114.76
2058/59	100.61	81.56	123.36
2059/60	84.24	60.11	140.14
2060/61	81.95	66.21	123.77
2061/62	101.50	51.81	96.51
2062/63	78.04	50.26	155.27
Average			125.63

The above table shows that operational efficiency of overall period of study is not satisfactory. Operating ratio of FY 2061/62 has seen a little bit satisfactory than others. Except 2061/62 the operating ratio is more than 100%. The average operating ratio of NDL is 1125.63 during the study period.

4.6.4 Return on Total Assets

I t measures the percentage of return on the overall total assets employed for every activities of the company. It gives the profit giving efficiency of the company in relation to total assets. The return on total assets employed of NDL is presented below in table 18 during the period of study.

Table 18

Nepal Drugs Ltd.

Return on Total Assets

(In Million)

Year	Net Profit After Tax (Loss)	Total Assets	% Ratio
2057/58	(23.00)	148.51	(15.48)
2058/59	(27.01)	132.48	(20.39)
2059/60	(82.22)	124.57	(66.00)
2060/61	(36.13)	134.45	(26.87)
2061/62	(60.87)	155.37	(39.17)
2062/63	(41.63)	106.41	(39.12)

The above table shows that, the return on total assets ratio has seen negative in all FY, Hence the overall return on employed assets are in unproductive situation.

4.6.5 Return on Net Worth

It gives the percentage return on the owner's capital invested. The conclusions drawn on the basis of preceding ratios may not give true result because they give profit in sales and total assets i.e. net worth is needful to study. The table 19 presented below shows the ratio of return on owner's capital employed during the period of study in NDL.

Table 19

Nepal Drugs Ltd.

Return on Net Worth

(In Million)

Year	Net Profit After Tax (Loss)	Net Worth	% Ratio
2057/58	(23.00)	75.49	(30.46)
2058/59	(27.01)	75.49	(35.78)
2059/60	(82.22)	75.49	(108.91)
2060/61	(36.13)	75.49	(47.86)
2061/62	(60.87)	75.49	(80.63)
2062/63	(41.63)	75.49	(55.14)

The above table 19 shows that relationship between net profits after tax with net worth. Since the company is running continuously in loss so, there is no way to distribute return to the shareholders. It indicates that, the company has not used the available resources of the firm.

4.6.6 Return on Current Assets (Working Capital)

This is the ratio of return on current assets or working capital employed by the company. It measures the profit with respect to it's total current assets. It gives the utilization of current assets effectiveness. The table 20 presented below shows the relationship in between NPAT and CA or Net working capital of NDL during the period of study.

Table 20

Nepal Drugs Ltd.

Return on Net Working Capital

(In Million)

Year	Net Profit After Tax (Loss)	Net Working Capital	% Ratio
2057/58	(23.00)	67.30	(34.18)
2058/59	(27.01)	51.41	(52.54)
2059/60	(82.22)	(12.80)	(642.34)
2060/61	(36.13)	(16.99)	(212.65)
2061/62	(60.87)	36.08	(168.71)
2062/63	(41.63)	(0.8)	(5203.75)

The above table presents the return on current assets employed during the period of study. From FY 2057/58 to 2062/63, the return on current assets is negative. It means, employed current assets have no efficient utilization.

4.7 Presentation and Analysis of Primary Information

To make research more reliable, analytical, informative, and challenging, qualitative analysis (primary information) plays vital role, so that for the case study of NDL, the researcher efforts to analyze the primary information as obtained from the questionnaire distributed to the related executives, personal of the company. The proforma of questionnaire attempts to analysis the important aspect of working capital management of NDL includes the identification of that asset which is more difficult to manage, major reason for the importance of current assets management, the more problematic current assets, major motive for holding cash inventory and major factor affecting the investment in A/R.

Table 21

Results of Questionnaire

Q.N. **Stems**	**1**	**2**	**3**	**4**	**5**	**6**
a	16 (67%)	18 (83%)	8 (33.3%)	22 (100%)	22 (100%)	24 (100%)
b	8 (33%)	6 (17%)	8 (33.3%)	x	x	x
c	x		8(33.3%)	x	x	x
Total Responses	24	24	24	22	22	24

Note:- Q.N. : refers Q.N. of questionnaire provided to related personals.

- Stem : indicates the choices, specialized in each question.
- The figure indicates the no. of responses, over total.
- Figure in parenthesis indicates, % over total respondents.

4.8 Statistical Analysis

In order to study the significance of the various variables, Karl Pearson's correlation coefficient is applied.

Examining the relationship between current assets and total assets, during the period of study, Karl Pearson's correlation coefficient (r) is calculated in appendix III, and result is under, r = 0.98 P.E. = 0.0109, r > 6 P.E, So correlation coefficient in between current assets and total assets during the period of study is positive and statically significant at all. Similarly in relationship between other variables, Inventory to current assets as appendix IV result is, r = 0.50, P.E. = 0.20, Receivables to current assets as appendix V result is r = 0.06, P.E. = 0.27, sales to inventory as appendix VIII, r = 0.89, P.E. = 0.057, sales to working capital as appendix VII, r = 0.70, P.E. = 0.14 current assets and current liabilities as appendix XI r = - 0.072, P.E. = 0.27, are negatively correlated between each other and r < 6 P.E., relationship is statically insignificant at all.

But examining the relationship between other variables, such as sales to receivables refer as appendix IX, result is r = 0.65, P.E. = 0.15, sales to cash as appendix X, result is r = -0.38, P.E. = 0.23, is found negatively correlated each other, but not at statically significant as other variables before.

The relationship between, cash to current assets as appendix VI, is found, r = 0.70, P.E. = 0.14 shows the no relationship and not at all significant. It shows the management of cash is not proper, does not contribute to hold current assets.

4.9 Major finding of the study

The basic objective of this study is to examine the management of working capital in NDL. To accomplish the objectives set earlier in first chapter the necessary data as from secondary and primary source are collected from financial statements of the NDL. Questionnaire, distributed to chief of various departments of NDL. The secondary data has analyzed though ratio analysis as a financial tools and correlation coefficient as statistical tools. The major ratio analysis consists of composition of working capital position, turnover position, liquidity position, and profitability position. To test relationship between the various variables of working capital, Karl Pearson's correlation coefficient (r) is calculated and analyzed.

The findings which reveals through this study are presented in the following section.

A. Financial Tools and Working Capital Policy

i) Study shows that more amounts is financed by long-term source of fund i.e. general and less amount is financed from short term sources of fund. The fixed assets, permanent current assets and some proportion temporary current assets are financed from long term fund and other remaining portion are financed from short term sources. So company is following conservative working capital policy.

ii) The major components of current assets in NDL are cash and Bank balance, receivable and inventory. During the period of study the proportion of cash and bank balance, receivables, and inventory to current assets on an average are 9.67 percent, 18.86 and 50.44 percent respectively. It is found that inventory holds the largest portion of those current assets.

iii) During the six years study period. The average ratio of current assets to total assets is 73.25 percent and the average ratio of current assets to fixed asset is 278.98 percent. It clearly shows that investment in current assets is high with respect to total assets and net fixed assets.

iv) Of the current assets, cash and bank balance holds the smallest portion in NDL. It is less than 4 percent during initial four years of study period but in FY 2061/62 it is increases to 36.54 percent then again fall down. The average cash and bank balance in the company with respect to current assets is 9.67 percent and with respect to total assets is 6.98 percent. This type of variation is due to company's policy towards the investment in Herb production and processing company as well as in National saving paper of NRB.

v) Current assets inventory holds the largest portion Of the of NDL, ranging from 35.55 percent to 62.59 percent and in fluctuating trend with on average of 50.44 percent. The inventory to total assets ratio (%) in fluctuating with 27.98 percent to 46.31 percent with in average of 36.03 percent. These fluctuating of the investment in inventory are due to fluctuating sales volume.

vi) The receivables position with respect to current assets and total assets in NDL is in alternative increasing and decreasing trend. The average ratio position of receivables with C.A. and T.A. are 18.86 percent and 13.75 percent respectively. These fluctuations in the position of receivables are affected by fluctuating sales volume of the company.

B. Turnover Position

The turnover position of NDL is mostly found in decreasing trend over the study period The gross working capital turnover in ranging from 0.42 times to 0.94 times with an average of 0.71 times. The net working capital turnover is ranging from -62.82 times to 1.70 times in an average trend of -11.11 times. The cash turnover is ranging from 1.16 times to 27.36 with an average of 15.93 times. The turnover position indicates that company is not able to efficient utilization of C.A. because it can not create sales as investment in CA.

The receivables turnover position in the company is ranging from 2.97 times to 5.93 times, with an average of 3.93 times. This ratio shows how rapidly debts are collected. The average ratio 3.93 times indicates shorter time lag between credit sale and cash collection. The average collection period ranges from 62 days to 123 days and average collection period of 100 days (more then 3 months) indicates not efficient management of receivable collection policy adopted by company. The inventory turnover position of NDL is ranging from 1.19 to 1.66 times with an average of 1.42 times. The inventory management system of NDL is not so satisfactory. But signify that inventory does not sell fast and stays on shelf or in were house for a long time.

C. Findings of Liquidity

The liquidity position of company is analyzed with current ratio and quick ratio. The current ratio is ranging in between 0.85:1 to 2.58:1. The company has able to maintain it's current ratio of 1.34:1 in an average of the study period. The overall current ratio of the company is found not satisfactory. there seems, less current assets to meet obligations of C.L. It is better to increase in investment in inventory and maintain the ratio 2:1 of CA: CL

The quick ratio of the company is also ranging in between 0.39:1 to 1.01:1 with fluctuating trend. The company has able to maintain it's current ratio of 0.71:1 in an average of the study period. The quick ratio is not favorable to the company. It is not in the ratio of 1:1. The company has not been able to convert C.A. quickly in cash in order to meet C.L.

D. Findings of Profitability

Profitability is the measure of efficiency. It is analyzed from various angles. The gross profit margin and net profit margin of the NDL shows that, NDL is continuously incurring with heavy loss in almost all period of study . The overall gross profit during the period of study is negative i.e. -3.85. Net profit margin of company indicates no return on average during the period of study. The average net profit margin ratio is also highly negative i.e. -74.65

The operating ratio ranges from 96.51 percent to 155.27 percent and the average ratio is 125.63. The negative net profit margin gross profit margin high level of operating ratio indicates the operational inefficiency in NDL. Such high operating ratio shows that only a relatively small percentage share is available for meeting financial liabilities like interest tax and dividends.

The return on total assets, employed in NDL is not satisfactory. The return on total asset ratio is negative almost all period of the study. Similarly return on net worth and employed current asset is also negative almost all period of study. So the overall return position of company is negative, not in favorable condition. It is because of inefficient utilization of currents assets, total assets and shareholders Wealth.

E. Findings of Statistical Data

Besides the major finding on financial tools, the major findings on statistical tools are presented below.

Table 22

Gist of Statistical Findings

S.N	Variables	Correlation Coefficient	Probable Error (P.E)	Remark
1	Current assets to total assets	0.98	0.0109	Statistically significant, Positively correlation between variables
2	Inventory to Current assets	0.50	0.20	Not as statistically significant, Positively correlation between variables
3	Receivables to current assets	0.06	0.27	Not statistically significant, positive correlation between variables
4.	Cash to Current Assets	0.70	0.14	Not significant, positively correlated
5	Sales to working capital	0.70	0.14	Not significant Positively correlation between variables
6	Sales to Inventory	0.89	0.075	Statistically significant, Positively correlation between variables
7	Sales to Receivable	0.65	0.15	Not significant, Positively correlation between variables
8	Sales to cash	-0.38	0.23	Statistically not significant, negative correlation between variables
9	Current Assets to current Liabilities	-0.072	0.27	Statistically insignificant, negative

				correlation between variables

F. Finding of Primary Data

One of the importance aspects of working capital management is to point out, how for working capital is different to manage as compared to fixed capital 65 percent of respondents of NDL is of the opinion that working capital is more difficult to manage than fixed capital 35 percent of respondents opine that fixed capital is more difficult to manage than working capital.

So, in NDL, from opinion, working capital is more difficult to manage than that of fixed capital then next aspect to be.

The next important aspect to be considered is the reason for the importance of current assets management; so far as the importance of current assets management, 82 percent of respondents of NDL opine that, a lot of time has taken to it as well as 18 percent respondents opine that, investment in current assets is large and volatile. Among the different types of current assets, it is found that, management of inventories cash and receivables is equally problematic in nature. The opinion of all respondents shows the equal problem in all respects of current assets. The aspect of primary analysis is major motive for holding cash. The total response from company is sufficient cash is required to provide a reserve for net outflows of cash. They do not hold cash for unexpected drain of cash in the events of fire, strikes, machine breakdown.

With respect to receivables management, the major factor affecting the larger investments in receivables is found to be liberal credit policy of NDL. The major reason for holding inventories is to facilitate smooth operation of products sales, majority of respondents of NDL preferred for it, not for to take advantage of price increases.

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter has been written to summarize the whole study and to draw the major findings of the study .It also aim to draw the conclusion of the study and forward the applicable recommendation to the companies related to this research.

5.1 Summary

The brief introduction of the study, pharmaceutical industrialization and it's role importance in Nepal, Nepal Drugs contribution toward, cheap, quality products and overall picture of NDL presented in the introductory setting. The second chapter consisted of the conceptual framework, review of related Journal/article, review studies done so far on the same topic of different organization and review of different writers and books. Research methodology is situated in chapter third. It has included the research design. It presents nature and sources of data, data collection and processing techniques and financial and statistical tools used. One of the important chapter of this research i.e. chapter fourth has been used to present, analyze and interpret the necessary data. The data presented in table, figure etc. and a comparative interpretation was made by using various financial and statistical tools .The required data were derived from the balance sheet and P/L account of NDL for the period of six years from the fiscal year 2057/58 to 2062/63. In fifth chapter, an attempt has been made to present summary of findings, conclusion and some recommendations.

5.2 Conclusion

In conclusion, it can be said safely, that the management of working capital cannot be neglected by NDL. Otherwise it can seriously erode its financial viability. Thus managers must understand the factors determining working capital needs, so that such undertaken pharmaceutical industry of Nepal is also suffering from huge losses due to poor working capital management and lack of special working capital policy.

The proportion of current assets with respect to total assets and net fixed assets in NDL shows that current asset absorbs higher percentage of those total assets. As the higher ratio indicates the greater amount of W.C. the risk and profitability would decrease. It is due to higher proportion of inventory and receivables. There is positive correlation between current assets and total assets. as well as statically significant, and there is significant difference between two variables. it could adverse effect in NDL 'S wealth maximization goal in the long run.

The company has cash balance, with respect to current assets and total assets are in increasing decreasing trend. The cash conversion cycle is of 69 days. There is a excess cash balance in FY 2061/62. Since, company has invested its cash in herbs production and processing company.

Inventory management is one of the important parts of manufacturing company. It absorbs higher percentage of total current assets, which means large funds tie-up of in it. So far as liquidity is concerned inventory is a lease liquid current asset in itself. There is the correlation in between current asset and inventory. There is unsound management of inventory. Receivable constitute an important part of assets of the company. So far as the NDL"S receivable is concerned. It also occupies larger portion of current assets and total assets, of average 18.86 percent and 73.25 percent during the study period. The average receivable collection period is too long of 100 days (more than 3months). It concludes liberal credit policy. The working capital should be arranged in such a way that it should generate maximum turnover, the proportion of working capital to sales in NDL is an average during the study period of -11.11 times which is very low. It is due to inefficiency of inventory conversion receivables, cash collection. It shows less utilization, of W.C.

Though the current ratio shows the somewhat satisfactory liquidity position of NDL, but acid test ratio, shows not a so sound management of current assets. It's because of higher percentage of inventory. There is position correlation as well as statistically significant different between variables. It shows fair liquidity position of the company.

There is the profitability position, of NDL, is not satisfactory. Except two fiscal years, the company is incurring with heavy loss. The return on worth, total assets is also negative. It concludes the financial performance of NDL is not so satisfactory. It is due to high production cost operating expenses. Most of variables are also positively correlated, with each, they are statically significant. It means, both variables are moving in same direction. There is no proper utilization of resources available to the firm. It is still followed conservative W.C. which reduces risk but hamper in profitability in long run. So, company can improve it’s policy by following appropriate W.C. policy which could maximize it's profitability.

If NDL, undertake measure like, identification of need funds, regular cheeks, development of MIS positive attitude towards risk, profit determination right combinations of short term and long term sources and funds to finance, working capital needs, appropriate combination of investment in C.A., minimizing production, operating cost, prepare effective sales plan, Improving liquidity, speedy cash conversion, Proper inventory techniques. NDL can overcome these problems and improve its financial performance as well as working capital.

5.3 Recommendations

Based on findings of the study following recommendation are forwarded for the improvement of the working capital management of NDL.

A. Effective Working Capital Management

The fluctuation in the current assets holding lead to conclude that NDL is not examines its appropriate working capital policy. And due to lack of target for current assets holding in the long run and absence of source of financing most to NDL financial situation is not so sound. So there must be compulsory formulation of appropriate working capital policy not only conservative. Besides this, there should be policy to prevent the holding of excessive and inadequate current assets in the company. In NDL, the most important current assets are cash debtors, inventory which are given below.

i. Effective Management of Cash

The function of investment in money assets is to meet operational requirements in day to day business, to provide a reserve of liquidity for major schedule out flows of cash, to exploit opportunities, to avoid unexpected drains of cash and so on. There are many ways to effective management of cash in NDL, minimization of float, better synchronization of cash flows, slowing disbursements. If cash appears more than requirement, the company showed invests such ideal found in marketable securities. Here, statistical relationship between cash and current assets are statistically insignificant. So management of cash should be proper.

ii. Effective Management of Receivable

In NDL, there is larger investment receivable so there should be neither over investment no lower investment A/R . Those policies involving receivable management involves trade off between risk and return. The main determinants of the size of investment are terms of sale, the selection of customers to give credit, efficiency in collecting receivables and so on. One way to control investment in receivable is to find out receivable as percent of sales. The other way are preparing schedule of receivable analysis credit worthiness of customers, minimizing flout and so on. It shows adopt a definite credit and collection policies. The credit purchase helps for lowering the requirements of working capital but in could also have credit sales. The credit sales increase the total sales volume and profit but it also increase collection lost, bad debt losses, administration cost, management should consider the trade off between cost and profit adopt.

iii. Effective Inventory Management

The investment in inventory with respect to C.A. made by NDL ranges from 35.55 percent to 62.59 percent. The average investment in inventory with respect to C.A. is 46.31 percent and 27.98 percent w.r.t. to total assets. Such highly fluctuated investment in inventory shows that there is no specific policy related with inventory management. Such highly varied amount in inventory shows that they are investing randomly and in adhoc way. The effective management of working capital wholly depends upon proper management of inventory, because, it absorbs higher percentage of current assets. For this company shows make effective sales plan. Which help for immediate marketability and certainly, decreases the problem of overstocking. The management must minimize the wastage, scraps, there should be good store keeping system better material handling system and timely inspection system. Moreover, the analysis is also useful. The none moving and obsolete items shows be discarded to avoid unnecessary blockage up of inventory.

B. NDL, Must Improve Turnover Position

It is found that current assets turnover, net working capital turnover is very low. Which indicates that utilization of current assets, net working capital higher level of current assets with unmanaged production and sale have contributed for lower turnover. If the company, utilize the current assets, in proper way the working capital will be lower than turnover of current assets as well as net working capital be higher. In such situation, the company will able to meet current obligation in maturity date.

The company must speed the circulating the assets to complete. It's round because it leads to lesser need of working capital. To increase turnover, utilization of inventories those lying in the store, should be marketed as soon as possible. It should adopt modern inventory system. The proportion of cash budget and monitoring the again schedule and their quick collection will result higher turnover of assets.

C. Minimize the Operating Cost

NDL is incurring continuously loss during the period of study; one of the cases is high operating cost of production. The management should give attention towards the purchasing of raw materials, unnecessary expenses, misuse of facilities, heavy expenses on overheads are the major causes for high operating cost.

To overcome such short comings management should be stick for use of facilities, not only these but also right number of workers in right place providing necessary training from time to time also contribute for lower administrative and operating cost. Further, to control, and reduced production cost and high operating expenses, NDL as far as possible shows utilize it's full capacity. And also the adoption of standard and marginal cost techniques will also be a good measure in controlling and classifying the costs as well as for identifying the responsibility centers for the losses. The curtailment of cost increases the profit margin.

D. Prepare Effective Sales Plan

Sales directly effect to need of current assets. As the sales increase the working capital level will also increases. In the absence of sales forecast, the level of current assets can not, forecasted. But for it, market, competition and production condition should be also analyzed. However, NDL has also appointed different areas of Nepal. So, there should be, proper co-operation interaction, between different sales agents, product, marketing and sales department during the planning of sales. Due to lack of this, NDL is not able to meet the target sales in previous years of study

E. Positive Attitude towards Risk

Since, the risk is the opportunity for company to make profit; that management should not consider it is dangerous. It is the ability to manage the current assets properly and efficiently. NDL is in risk, because of adoption of conservative working capital policy. It is also the one cause of incurring loss continuously. When the management properly utilizes the current assets, predicting the further return and timing of cash generation, there will be self generation of funds by which company should not depend upon permanent financing for the current assts or temporary assets. To develop the managed ability to take risk, there should be training, participation n management, conferences, foreign enterprise tours etc for the managerial level employees.

F. Increase the Efficiency of Personnel and Staff

Skilled and efficient manpower is the basic need of company. Since, the Nepal drugs is pharmaceutical company, efficient, trained, technical manpower are the key of the company. So, training program should be held for higher and lower level of employees. To make known the rent technology to the technical person, they should have frequent training program in home country as well as in abroad. Not only the technical personnel. Financial managers, A/C officers, inventory controller sales officer, and other general employees must give frequent training programs, organized by different association of Nepal. The skilled manpower decreases the operating cost and increases the profitability. The upper label manager, like G.M. should not be appointed from political environment.

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Appendix I

Examine the Relationship between Current Assets and Total Assets

(in Million)

Year (n)	Current Assets (x)	dx $(x-\bar{x})$	dx^2	Total Assets y	dy $(y-\bar{y})$	dy^2	dxdy
2057/58	109.87	11.57	133.86	148.51	14.88	221.41	172.16
2058/59	94.24	(4.06)	16.48	132.48	(1.15)	1.32	4.67
2059/60	88.65	(9.65)	93.12	124.57	(9.06)	82.08	87.43
2060/61	99.84	1.54	2.37	134.45	0.82	0.67	1.19
2061/62	122.29	23.99	575.52	155.37	21.74	472.63	521.54
2062/63	74.90	(23.4)	547.56	106.41	(27.22)	740.93	636.95
	$\bar{x}$ = 98.30	Σdx =- 0.01	Σdx^2 =1368.91	$\bar{y}$ =133.63	Σdy = 0.01	Σdy^2 = 1519.04	$\Sigma dxdy$ =1423.94

Now : Correlation coefficient

$$r = \frac{\Sigma dxdy - \frac{\Sigma dx.\Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \frac{(\Sigma dx)^2}{N} \times \Sigma dy^2 - \frac{(\Sigma dy)^2}{N}}}$$

$$r = \frac{1423.94 - \frac{(-0.01)\times(0.01)}{6}}{\sqrt{1368.91 - \frac{(-0.01)^2}{6} \times 1519.04 - \frac{(0.01)^2}{6}}}$$

$$r = 0.98$$

Then P.E. = $\frac{.6745(1-r^2)}{\sqrt{N}}$ $\frac{.6745\times[1-(0.98)^2]}{\sqrt{6}}$ = 0.0109

i.e. 6P.E. =6×0.0109 =0.0654

Appendix II

Examine the Relationship between Inventory and Current Assets

(in Million)

Year (n)	Current Assets (x)	dx $(x-\bar{x})$	dx^2	Inventory y	dy $(y-\bar{y})$	dy^2	dxdy
2057/58	109.87	11.57	133.86	68.77	19.3	372.49	223.30
2058/59	94.24	-4.06	16.48	50.86	1.39	1.93	-5.64
2059/60	88.65	-9.65	93.12	48.70	-0.77	0.59	7.43
2060/61	99.84	1.54	2.37	53.64	4.17	17.38	6.42
2061/62	122.29	23.99	575.52	43.47	-6	36	-143.94
2062/63	74.90	-23.4	547.56	31.40	-18.07	326.52	422.83
	$\bar{x}$ = 98.30	Σdx = - 0.01	Σdx^2 = 1368.91	$\bar{y}$ =49.47	Σdy = 0.02	Σdy^2 = 754.91	$\Sigma dxdy$ =510.4

Now : Correlation coefficient

$$r = \frac{\Sigma dxdy - \dfrac{\Sigma dx.\Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \dfrac{(\Sigma dx)^2}{N} \times \Sigma dy^2 - \dfrac{(\Sigma dy)^2}{N}}}$$

$$r = \frac{510.4 - \dfrac{(-0.01) \times (0.02)}{6}}{\sqrt{1368.91 - \dfrac{(-0.01)^2}{6} \times 754.91 - \dfrac{(0.02)^2}{6}}}$$

$$= 0.50$$

$$\text{Then P.E.} = \frac{.6745(1 - r^2)}{\sqrt{N}} = \frac{.6745\times[1 - (0.50)^2]}{\sqrt{6}} = 0.20$$

i.e., 6P.E =6×0.20 =1.2

Appendix III

Examine the Relationship between Receivables and Current Assets

(in Million)

Year (n)	**Receivables (x)**	**dx $(x-\bar{x})$**	**dx^2**	**C.A. y**	**dy $(y-\bar{y})$**	**dy^2**	**dxdy**
2057/58	19.26	1.12	1.25	109.87	11.57	134.09	12.96
2058/59	19.58	1.44	2.07	94.24	-4.06	16.40	-5.84
2059/60	16.81	-1.33	1.76	88.65	-9.65	92.92	12.83
2060/61	19.98	1.84	3.38	99.84	1.54	2.40	2.83
2061/62	16.33	-1.81	3.27	122.29	23.99	576	-43.42
2062/63	16.90	-1.24	1.53	74.90	-23.4	547.09	29.01
	$\bar{x}$ =18.14	Σdx = 0.02	Σdx^2 =13.26	$\bar{y}$ =98.30	Σdy =- 0.01	Σdy^2 =1368.9	$\Sigma dxdy$ = 8.55

Now : Correlation coefficient

$$(r) = \frac{\Sigma dxdy - \frac{\Sigma dx.\Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \frac{(\Sigma dx)^2}{N} \times \Sigma dy^2 - \frac{(\Sigma dy)^2}{N}}}$$

$$r = \frac{8.55 - \frac{0.02 \times -0.01}{6}}{\sqrt{13.26 - \frac{(0.02)^2}{6} \times 1368.9 - \frac{(-0.01)^2}{6}}}$$

= 0.06

$$\text{Then P.E.} = \frac{.6745(1-r^2)}{\sqrt{N}} = \frac{.6745\times[1-(0.06)^2]}{\sqrt{6}} = 0.27$$

i.e, 6P.E. =6×0.27 =1.62

Appendix IV

Examine the Relationship between Cash and current Assets

(in Million)

Year (n)	**Cash (x)**	**dx $(x-\bar{x})$**	**dx^2**	**C.A. y**	**dy $(y-\bar{y})$**	**dy^2**	**dxdy**
2057/58	3.79	-6.93	48.02	109.87	11.57	123.86	-80.18
2058/59	4.49	-6.23	38.81	94.24	-4.06	16.48	25.29
2059/60	2.93	-7.79	60.68	88.65	-9.65	93.12	75.17
2060/61	3.76	-6.96	48.44	99.84	1.54	2.37	-10.71
2061/62	44.69	33.97	1153.96	122.29	23.99	575.52	814.94
2062/63	4.66	-6.06	36.72	74.90	-23.4	547.56	141.80
	$\bar{x}$ =10.72	Σdx =0	Σdx^2 =1386.63	$\bar{y}$ =98.30	Σdy =-0.01	Σdy^2 =1368.91	$\Sigma dxdy$ =966.31

Now : Correlation coefficient (r) =

$$r = \frac{\Sigma dxdy - \dfrac{\Sigma dx.\Sigma dy}{N}}{\sqrt{\left(\Sigma dx^2 - \dfrac{(\Sigma dx)^2}{N}\right) \times \left(\Sigma dy^2 - \dfrac{(\Sigma dy)^2}{N}\right)}}$$

$$r = \frac{966.31 - \dfrac{0 \times (-0.01)}{6}}{\sqrt{\left(1386.63 - \dfrac{(0)^2}{6}\right) \times \left(1368.91 - \dfrac{(-0.01)^2}{6}\right)}}$$

= 0.70

$$\text{Then P.E.} = \frac{.6745(1-r^2)}{\sqrt{N}} = \frac{.6745 \times [1-(0.70)^2]}{\sqrt{6}}$$

=0.14

i.e, 6P.E. =6×0.14 =0.84

Appendix V

Examine Relationship between Working Capital and Sales

(in Million)

Year (n)	**Sales (x)**	**dx $(x-\bar{x})$**	**dx^2**	**W.C. y**	**dy $(y-\bar{y})$**	**dy^2**	**dxdy**
2057/58	114.30	43.6	1900.96	67.30	46.6	2171.56	2031.76
2058/59	81.56	10.86	117.93	51.41	30.71	943.10	333.51
2059/60	60.11	-10.59	112.14	-12.80	-33.5	1122.25	354.76
2060/61	66.21	-4.49	20.16	-16.99	-37.69	1420.53	169.22
2061/62	51.81	-18.89	356.83	36.08	15.38	236.54	-290.52
2062/63	50.26	-20.44	417.79	-0.8	-21.5	462.25	439.46
	$\bar{x}$ =70.70	Σdx = 0.05	Σdx^2 =2925.81	$\bar{y}$ =20.7	Σdy =0	Σdy^2 =6356.23	$\Sigma dxdy$ = 3038.19

Now : Correlation coefficient (r) =

$$r = \frac{\Sigma dxdy - \dfrac{\Sigma dx.\Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \dfrac{(\Sigma dx)^2}{N} \times \Sigma dy^2 - \dfrac{(\Sigma dy)^2}{N}}}$$

$$r = \frac{3038.19 - \dfrac{0.05 \times 0}{6}}{\sqrt{2925.81 - \dfrac{(0.05)^2}{6} \times 6356.23 - \dfrac{(0)^2}{6}}}$$

= 0.70

$$\text{The P.E.} = \frac{.6745(1-r^2)}{\sqrt{N}} = \frac{.6745\times[1-(0.70)^2]}{\sqrt{6}} = 0.14$$

i.e , 6P.E. =6×0.14 =0.84

Appendix VI

Examine the Relationship between Sales and Inventory

(in Million)

Year (n)	**Sales (x)**	**dx $(x - \bar{x})$**	**dx^2**	**Inventory y**	**dy $(y - \bar{y})$**	**dy^2**	**dxdy**
2057/58	114.30	43.6	1900.96	68.77	19.3	372.49	841.48
2058/59	81.56	10.86	117.93	50.86	1.39	1.93	15.09
2059/60	60.11	-10.59	112.14	48.70	-0.77	0.59	8.15
2060/61	66.21	-4.49	20.16	53.64	4.17	17.38	-18.72
2061/62	51.81	-18.89	356.83	43.47	-6	36	113.34
2062/63	50.26	-20.44	417.79	31.40	-18.07	326.52	369.35
	$\bar{x}$ =70.70	Σdx =0.05	Σdx^2 =2925.81	$\bar{y}$ =49.47	Σdy = 0.02	Σdy^2 =754.91	$\Sigma dxdy$ =1328.69

Now : Correlation coefficient

$$(r) = \frac{\Sigma dxdy - \frac{\Sigma dx.\Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \frac{(\Sigma dx)^2}{N} \times \Sigma dy^2 - \frac{(\Sigma dy)^2}{N}}}$$

$$r = \frac{1328.69 - \frac{0.05 \times (0.02)}{6}}{\sqrt{2925.81 - \frac{(0.05)^2}{6} \times 754.91 \quad \frac{(0.02)^2}{6}}}$$

$$= 0.89$$

$$\text{Then P.E.} = \frac{.6745(1 - r^2)}{\sqrt{N}} = \frac{.6745 \times [1 - (0.85)^2]}{\sqrt{6}} = 0.057$$

i.e, 6P.E. =6×0.057

=0.34

Appendix VII

Examine the Relationship between Sales and Receivables

(in Million)

Year (n)	Sales (x)	dx $(x-\bar{x})$	dx^2	Receivable y	dy $(y-\bar{y})$	dy^2	dxdy
2057/58	114.30	43.6	1900.96	19.26	1.12	1.25	48.83
2058/59	81.56	10.86	117.93	19.58	1.44	2.07	15.63
2059/60	60.11	-10.59	112.14	16.81	-1.33	1.76	14.08
2060/61	66.21	-4.49	20.16	19.98	1.84	3.38	-8.26
2061/62	51.81	-18.89	356.83	16.33	-1.81	3.27	34.19
2062/63	50.26	-20.44	417.79	16.90	-1.24	1.53	25.34
	$\bar{x}$ =70.70	Σdx =0.05	Σdx^2 =2925.81	$\bar{y}$ =18.14	Σdy = 0.02	Σdy^2 =13.26	$\Sigma dxdy$ = 129.81

Now : Correlation coefficient (r) =

$$\frac{\Sigma dxdy - \dfrac{\Sigma dx.\Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \dfrac{(\Sigma dx)^2}{N} \times \Sigma dy^2 - \dfrac{(\Sigma dy)^2}{N}}}$$

$$r = \frac{129.81 - \dfrac{0.05 \times (0.02)}{6}}{\sqrt{2925.81 - \dfrac{(0.05)^2}{6} \times 13.26 - \dfrac{(0.02)^2}{6}}}$$

= 0.65

$$\text{The P.E.} = \frac{.6745(1 - r^2)}{\sqrt{N}} = \frac{.6745\times[1 - (0.41)^2]}{\sqrt{6}} = 0.15$$

i.e, 6P.E. =6×0.15 =0.9

Appendix VIII

Examine the Relationship between Sales and Cash

(in Million)

Year (n)	Sales (x)	dx $(x-\bar{x})$	dx^2	Cash y	dy $(y-\bar{y})$	dy^2	dxdy
2057/58	114.30	43.6	1900.96	3.79	-6.93	48.02	-302.14
2058/59	81.56	10.86	117.93	4.49	-6.23	38.81	-67.65
2059/60	60.11	-10.59	112.14	2.93	-7.79	60.68	82.49
2060/61	66.21	-4.49	20.16	3.76	-6.96	48.44	31.25
2061/62	51.81	-18.89	356.83	44.69	33.97	1153.96	-641.69
2062/63	50.26	-20.44	417.79	4.66	-6.06	36.72	123.86
	$\bar{x}$=70.70	Σdx =0.05	Σdx^2 =2925.81	$\bar{y}$=10.72	Σdy =0	Σdy^2 =1386.63	$\Sigma dxdy$ = -773.88

Now : Correlation coefficient

$$(r) = \frac{\Sigma dxdy - \dfrac{\Sigma dx.\Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \dfrac{(\Sigma dx)^2}{N} \times \Sigma dy^2 - \dfrac{(\Sigma dy)^2}{N}}}$$

$$r = \frac{(-773.88) - \dfrac{0.05 \times 0}{6}}{\sqrt{2925.81 - \dfrac{(0.05)^2}{6} \times 1386.63 - \dfrac{(0)^2}{6}}}$$

= -0.38

$$\text{Then P.E.} = \frac{.6745(1-r^2)}{\sqrt{N}} = \frac{.6745\times[1-(-0.38)^2]}{\sqrt{6}} = 0.23$$

i.e., 6P.E. =6×0.23 =1.38

Appendix IX

Examine the Relation between Current Assets and Current liabilities

(in Million)

Year (n)	**Current Assets (x)**	**dx $(x-\bar{x})$**	**dx^2**	**Current Liabilities y**	**dy $(y-\bar{y})$**	**dy^2**	**dxdy**
2057/58	109.87	11.57	134.09	42.57	-35.02	1226.40	-405.18
2058/59	94.24	-4.06	16.40	42.83	-34.76	1208.25	141.12
2059/60	88.65	-9.65	92.92	101.45	23.86	569.29	-230.24
2060/61	99.84	1.54	2.40	116.83	39.24	1539.77	60.42
2061/62	122.29	23.99	576	86.21	8.62	74.30	206.79
2062/63	74.90	-23.4	547.09	75.70	-1.89	3.57	44.22
	$\bar{x}$=98.30	Σdx = - 0.01	Σdx^2 =1368.9	$\bar{y}$ =77.59	Σdy =0.05	Σdy^2 =4621.58	$\Sigma dxdy$ = - 182.87

Now : Correlation coefficie

$$(r) = \frac{(-182.87) - \dfrac{(-0.01)\times 0.05}{6}}{\sqrt{1368.9 - \dfrac{(-0.01)^2}{6} \times 4621.58 - \dfrac{(0.05)^2}{6}}}$$

$$= -0.07$$

$$\text{Then P.E.} = \frac{.6745[1-(-0.07)^2]}{\sqrt{6}} = 0.27$$

i.e, 6P.E. =6×0.27

=1.62

PROFORMA OF QUESTIONNAIR
(A STUDY OF WORKING CAPITAL MANAGEMENT)

Name of the respondent: **Position:**

Organization: Royal Drugs Limited **Department:**

1. Which of the following two statements do you agree with?
   a. Working capital is more difficult to manage than fixed capital.
   b. Fixed capital is more difficult to manage than working capital.

2. Who do you think is the reason for the importance of current assets management?
   a. A lot of time has to be devoted to it.
   b. Investment in current assets is large and volatile.
   c. It has limited access to capital markets.
   d. Others (Please specify)

3. Which of the following assets has more problems?
   a. Management of cash in hand and at bank.
   b. Management of Sundry Debtors (Receivables)
   c. Management of inventories.
   d. Others (Please specify)

4. What is the major motive for holding cash in your organization?
   a. Sufficient cash is required to provide a reserve for routine net outflows of cash.
   b. To meet scheduled major outflows of cash. e.g. tax, dividend. etc.
   c. To avoid unexpected drains of cash in the even of fire, strikes, machine breakdown, etc.
   d. Others (Please specify)

5. What is the major factor affecting the larger investment in Sundry Debtors (Receivables)?
   a. The liberal credit policy.
   b. Paying practice of customer is late.
   c. Collection of trade credit is not efficient.
   d. Others (Pleas specify)

6. Why do you hold inventories? Please tick a major one.
   a. To facilitate smooth operation of production and sales.
   b. To guard against the risk of unpredictable changes in demand for and supply of inventories.
   c. To take advantage of price increase.
   d. Others (Please specify).