# CHAPTER-I

## 1.1    Background

Nepal is sand switched between two bigger & most popular contries of the world china in the north and India in the east, west & south. The country is thus is land locked. Nepal is land locked country besides this it is the country of Himalayas, beautiful temples, culture and festivals and equally, exotic people really make Nepal the more beautiful nation of the world. Ironically the country is under the vicious circle of poverty. Nepal stands at the bottom range of even among the least developed countries of the world. At present more than 32% of the population lies between the poverty line with basic items like food, clothing and shelter unfulfilled. The economic opportunities are not accessible to them because of low quality of skill and the sub-standard education with respect to human development index. Therefore Nepalese are in the search for prospects of the new business sectors to upgrade the national level.

Effective mobilization of the agriculture resources is very necessary for the economic development of the country. In order to mobilize the resources from traditional livestock industry of the country, the establishment of dairy industry was essential the first five years plan stressed upon the need of developing a modern diary industry in public sector. As a result and during third year plan DDC has been established in first shrawan 2026 B.S. (1669 A.D.) under the corporation act of 2021 B.S.

Dairy development corporation (DDC) supplies processed milk and products as reasonable price on a regular basis on the one hand and on the other provides the supplies of whole milk with safe market for milk. In

other words DDC was established with the objectives of providing incentives to the farmers by collecting and preserving milk, and providing hygienic milk to the customers. Milk is that type of foods which containts protein, carbohydrate, minerals and vitamins. For this reason milk and milk products are realized very important forever.

The DDC is totally owned by the government. It is financially also supported by the foreign grants and loans at a subsidized rate of interest. Though it was established about four decades ago, the DDC is still at the stage of infancy with respect to its financial standing because of its continuous failure to generate surplus of many years. It has depended always on the government financial subsidy for its survival. Consequently the DDC has been a financial burden of the government.

The DDC is totally depended upon agriculture. Agro-based corporation has great significant in the field of economic development of Nepal because more than 70% people have been employed in agriculture sector where the agriculture contribution to the GDP is nearly 66%. Agro-based corporation is highly labour intensive have employed generating potential, can be under taken with modest capital and skill and mostly located in rural areas where there are other activities other than agriculture. It is an element of growth strategy in Nepal because they have contributed great potential to uplift economic and social status of the people of agriculture sector.

## 1.2    An introduction of Dairy Development Corporation (DDC)

Nepal is an agriculture-based country. More than 80% of people of Nepal are engaged in this sector which contributes only the share of 40.80% GDP, the rest 59.2% through non-agricultural sector 42% of people are under absolute poverty line. Most of the people of agriculture

sector engaged not with interest because not getting other opportunity. Foreign loan is based nearly Rs. 10,000 as it is because of improper utilization of loan.

The study will examine the application of profit planning. For these purposes, DDC engaged in production of hygiene pasteurized milk and other milky product has been taken as the good representation of Nepalese government owned enterprises for study the profit planning & control mechanism is Nepalese manufacturing enterprises.

At study, the demands of milk &milk product have been increasing day by day and then dairy plant becomes necessary due to the inadequacy of supply of milk day by day. The dairy plant becomes necessary due to the inadequacy of space this centre was shifted to lainchour in the year 2013 B.S. The dairy development commission was constituted to guide by the dairy development section. At that time dairy export were provided by swill association for technical assistance.

DDC is one of the manufacturing public enterprises owned by the government entity situated at lainchour of Kathmandu district. The head office and production unit is located at Lainchour. The DDC has been converted into Dairy Development Board in 2019 B.S. The DDC was in corporate in the year 2026 under the corporation cut 2021.

The company was established under the full control of Nepal government. DDC is manufacturing enterprises but its main objectives are to provide service to urban people by supply hygienic milk and dairy products. The New zealand and Paris government have contributed towards the establishment a milk, processing plant.

The dairy development activities in Nepal started n Tural VDC of Kavre district in 2009 B.S. on the experimental basis with a small scale

milk processing plant under the department of agriculture. It is the year of 2010/2011 B.S. at the initiative of Dairy Development Board, the central Dairy plant was established and it started milk collection processing and marketing activities from the year 2014 B.S. The DDC has expanded its branches office in different parts of the country such as Kathmandu, Biratnagar, Hetauda, Pokhara, Lumbani and so on.

The objectives of the expended branches office and projects are to provided suitable price milk to milk project at the people of rural area also make them easier to sell milk. Nepal has been trying to development economic condition for the poverty elimination as well as general upliftment of the living standard of mesh of people. For this rapid development of developing country like Nepal it is essential to develop the industrial sectors.

## 1.3 Historical Background of Dairy Development Corporation (DDC)

The DDC is trying to connect rural areas to collect milk and easily supply it in the urban areas which can be the attempts to make milk occupation attractive in the country. The DDC has expanded more milk supply scheme gradually to meet the growing demand for the processed milk and milk products. Dairy industries such as Biratnagar milk supply scheme, Kathmandu milk supply scheme, Pokhara milk supply scheme, Lumbani milk supply scheme, Mid-western milk supply scheme are all one milk product scheme.

DDC was established in 1969 AD under the corporate act 2021 B.S. and has been providing its services all over the country. However the service provided by DDC could nt fulfill the actual supply of the demand of dairy product in the market. A few investors feel there is need of

similar type of organization in the private sectors, which helps to fulfill the need of dairy product. The main objective of DDC is to provide guaranteed market and fair price to the rural milk producer and supply hygienic Pasteurized milk and other dairy product to urban consumer. Due to public enterprise, its main objective is to fulfill the social responsibility and benefits rather than earning profit.

Prior to the establishment of the corporation a separate dairy development board was constituted to carry out the task of dairy development in wider scale. The dairy development activities in Nepal started in Tusal village of Kavre district in B.S. 2009 (1952) and experimental basis with a small scale milk processing plants under the department of agriculture. In the years B.s. 2010/2011 at the initiative of dairy development board, the central dairy plant was established and starts milk collection processing and marketing activities from the year 2014 (1957).

DDC is one of the manufacturing public enterprises owned by the government entity situated at Lainchour of Kathmandu district. The head office and production unit is located at lainchour. The DDC has been converted into Dairy Development Board in 2019 B.S. The DDC was in corporate in the year 2026 under the corporation act 2021.

The objective of extended branch offices and projects is to provide suitable price of milk produces of the people of rural areas and also make the easier to sell milk. There should be co-ordination between milk due t backward economy. Because of continues efforts of DDC has easier to bring increase in milk production in rural.

## 1.4 Focus of study

Any business organization (industries) working capital management is essential mainly four reasons, first business firm determine the adequacy of investment in current assets, secondly, they must be select the types if current assets suitable for investment so as to raise their operational efficiency. Thirdly they are required to ascertain the turnover the current assets that determine the profitability of the private enterprises and lastly, they must find out the appropriate sources of fund to finance current assets.

Working capital is a firm investment in short term assets cash, short securities, current receivable and inventories. Gross working capital is the firms total current assets minus. Current liabilities, Working capital management encompasses all aspects of administration of both current assets and current liabilities based two main functions.

i)   To adjust to change in the firms level of sales activities caused by seasonal, cyclical & random factors.

ii)  To continue to maximizing the value of the corporate current assets holidays.

The working capital management plays the vital role. Answer the following questions is reality to efficiency of working capital.

i)    Is the working capital being efficiency utilized?

ii)   Is the working capital position improving or becoming worse day by day?

iii)  Is the amount of working capital sufficient or in adequate keeping in view the day to day operation of the firm?

The study focuses on how DDC utilized the available fund very well. This study also focuses on the relationship between current assets and current liabilities and relationship of other variables, which effort the working capital management. This study deals with efficiency of working capital management of DDC. This study only focuses the working capital management and it's significant during past 5 years upto 2065/066.

## 1.5    Statement of Problem

The successful operation of business largely depends upon what is the real condition of working capital and how the business operation is managed. No organizations are problem less so the some major problems relating to working capital management of DDC are listed as follows.

1) What is the significance of current assets management?
2) What is the variability in the size of investment in current assets?
3) Is there any need to control our investment in current assets?
4) Has there been change in the variability in investment in the current assets over a period of time?
5) How difficulties are current assets of DDC to manage?
6) Which of the current assets are more problematic?
7) Is overall profitability of DDC is satisfactory?

## 1.6    Importance of Study

Day to day smooth operation of organization in the short run as well as long run. Sound financial performance is prerequisite factors. So working capital is very essentials elements for the organization.

Without proper handle of working capital firm cannot be able to earn profit as well as unable to provide service.

The study is useful for:-

i)      BOD and decision making of DDC for making suitable decision about working capital.

ii)      Further researcher and the business enterprises of same kind as well.

iii)      Prospective investors.

## 1.7    Objectives of the study

The main objectives of study are point out as follows.

i)      To analyze the components of working assets in DDC.

      a. Cash

      b. Inventory

      c. Receivable etc.

ii)      To analyze of working capital management of DDC.

iii)      To find out and identify the basic reasons for losses.

iv)      To study the impact of working capital on profitability.

v)      To analyze the current assets and current liability of DDC.

vi)      To study the relationship between sales and different variables of working capital.

vii)      To complete the partial fulfillment of the requirement for the degree of masters of business studies (MBS)

## 1.8    Research Questions

This study is devoted to the following issues.

i)      Is there positive balance between current assets and current liabilities.

ii)      Whether the working capital position of dairy development corporation is well defined?

iii) What is the relationship between sales and different variables of working capital?

iv) What is the effect of working capital on profitability of the DDC?

v) What is the situation of working capital management in the corporation with respect to cash, receivable & inventory?

## 1.9 Assumptions & Limitations of the study

a) Only 5 years trend and data are analyzed.

b) The study is limited to working capital of DDC.

c) This study is only done for the perspective study of working capital management of DDC.

d) The time in hand is also short.

e) The data available in published account have been assumed correct & true.

f) Working days of the corporation is assumed 360 days per year.

## 1.10 Organization of study

The study of working capital management of DDC has been divided into five major chapters.

## Chapter I : Introduction

This chapter describes the general background, profile of the corporation, focus of the study, statement of the problem, importance of the study, objectives of the study, Researcher Questions.

**Chapter II: Review of literature**

This chapter contains the theoretical analysis and brief review of related literature available. It also includes a discussion on the conceptual reviews as well as review of major studies in general.

**Chapter III: Researcher Methodology**

This chapter deals with the research methodology, which consists of research design, sources of data and information along with different analytical as well as statistical tools and techniques.

**Chapter IV: Presentation & Analysis of Data**

This chapter deals with data collection, procedure, presentation and analysis of data by using different financial and statistical tools and techniques.

**Chapter V: Summary conclusion & Recommendation**

This chapter mainly includes the summary of this study, major finding, conclusion and lastly recommendation are given on the basis of the study.

The bibliography & appendices are incorporated at the end of the study.

# CHAPTER-II

# REVIEW OF LITERATURE

Review of literature means receiving research studies or other relevant prepositions in the related areas of the study. In this chapter the focus has been made the review of literature relevant to the investment portfolio of the joint venture banks. It mainly covers two parts. The first section of this chapter includes theoretical framework where as second part is confirmed to review of those studies which are done by previous researcher.

The following sources are used for the study.

- Journals
- Annual reports
- Research works
- Websites
- Books
- Articles

## 2.1 Conceptual Framework of the study

## 2.1.1 A brief Description of Dairy Development Corporation

A first five-year plan, stressed upon the need of developing modern dairy industry in public sector. The dairy development commission was formed in 1955 A.D. the dairy development section was established in the year 2010/011. As the demand of milk and milk products were gradually increasing. It was left necessary improvement of dairy development dairy development center. As a result of dairy development center was at Bhotahity on the same year 2010/011. This

center started to distribute the collected milk and milk product has been increasing day by day. The dairy plat becomes necessary. Due to the inadequacy of space the center was shifted to Lainchour in the space this center dairy development was commission was constituted to guide the dairy development commission was constituted to guide the dairy development section. At that time dairy export were provided by Swiss association for technical assistance. The dairy development commission had been converted into dairy development board in 2009. Ultimately in act. 2021.

The main objectives of the corporation are to provide guaranteed marked and fair price to the rural milk produces and to supply hygienic pasteurized milk and three standard dairy products to the urban consumer prior to the establishment of the corporation a separate dairy development board was constituted to carry out the task of dairy development in wider scale. The dairy development activities in Nepal started in usual village Kavre district in B.S. 2009(1952) on experimental basis with a small-scale milk processing plant under the department of agriculture. In the year B.S. 2010/2011 at the initiative of dairy development board. The central dairy plant was established and starts milk collection processing and marketing activities from the year B.S. 2014(1957). The third year plan to provide potential market to the farmer. Who are for distance and remote areas to supply the homogenized and pasteurized milk and other milk products to the consumer of urban area and to ensure the improvement of life style of former?

DDC is totally owned by government. It is also financing supported by the foreign grants and loans at a rate of interest. World Food Program (WFP) has been supporting DDC since 2030/31(1973/74). The New Zealand ad Danish government had contributed towards the

establishment or milk processing plants; at present USAID and Danish government are the major donors.

Dairy Development Corporation provides qualitative milk a milk product to the consumer at national level. The demand of milk is increasing day by day because of high quality and hygiene. DDC buys milk at a reasonable price. Regular basis and supplier milk with safe market for their milk. Before established dairy development corporation, there is no potential market to the farmer. To provide reasonable price to the milk producers of rural side an also availability of pasteurized milk the consumers to fulfill these objectivities the DDC has been working from it's setup. The condition of farmers will improve if the gate adequate price of milk at one side of the DDC will continue its efforts to supply increasing demand of milk to the consumers of urban area. The demand of milk to the consumers of urban area. The demand of milk is increasing order because of rapid increase in population. The DDC is trying to collect milk occupation attractive the DDC has expended it's branch officers indifferent pasts of the DDC country such as Kathmandu, Hetauda, Pokhara, Lumbini, and so on.

The objectives of extended branch officers and projects are to provide suitable price of milk producers of the people or rural area and also make then easier to sell milk. There should be co-ordination between milk production and the demand to milk due to backward economy. Because of the continue efforts of DDC has easier to bring increase in milk production in rural.

## 2.2 Working Capital Theories

### 2.2.1 Nature of working capital

Working capital is needed for day-to-day operation, of the business so it can be considered as the life-blood for any business. "The management of working capital has a definitive effect on the profitability and the contributed existence of the business great importance has been attached to management of fixed assets but w/c management has not been given the much importance as it deserves inadequate planning of w/c requirements can more speedily effectively bring as otherwise be paid to the management w/c. Efficiently and optimum utilization of even the fixed assets to which a great importance is given depends upon the availability of adequate w/c. Now a day the efficiency management of w/c has required a greater in view of the tight credit policy followed by the reserve banks of India is as a result of the acceptance of recommendation made by the Tandon and Chore Committees" *(Jain & Narang:1991:171)*

Thus working capital deals with the nature of the current assets and current liabilities. The conversion process of current assets that include cash, inventories & current receivables etc. must be possible to get readily available cash within one year to meet current obligation. In a manager the current liabilities comprising trade creditors, account payable, short-term bank loan, outstanding expenses etc. must be paid within one year as they become due.

In the concern of w/c the well known professor K.U. smith has given the nature of w/c as "w/c management is concerned with the problems that arise attempting to manage the current assets, the current

liabilities and the interrelationship that exist between them." *(K.U. Smit: 1974:5)*

Working capital has a volatile nature. This nature presents some problems and constraints in financing working capital need. The volatile nature of working capital refers to the change in total current asset." *(Ibid: 48)*

Working capital is essentially circulating in nature. It can be compared with a river, in which water level is constantly changing. Thus, the nature of w/c is not fixed; it is changeable at different times on the basis of transaction of goods.

Professor W. Brigham has given some theoretical insights in working capital management after their various research studies on it. They explain in the beginning the importance of w/c, concept of w/c management, financing of w/c management, the use of short term versus long term debt, relationship of current assets to fixed assets.

## 2.2.2  Management of working capital

"Each of the current assets must be managed efficiently in order to maintain to liquidity of the firm by not keeping too high level of any one of them. The interaction between current assets and current liabilities is therefore, the main theme of the theory of the theory of working capital management." *(Khan & Jain: 1998:13)*

Working capital concerned with the management of current assets and current liabilities. W/C management is an important aspect of financial management. Assets of the essentially short-term nature are known as current assets. It is short-term investment. Current assets are expected to be converted into cash within a year. The major current assets

are cash, marketable securities, sundry debtor's bills receivables and inventory.

Current liabilities are the part converting with working capital management. Those liabilities, which are expected to have been paid within one year, is known as current liabilities. The examples of current liabilities are bank overdraft, sundry creditors and bills payable and outstanding expenses or accrued due. The objective of w/c management is to manage the current assets and current liabilities of a firm can't maintain satisfactory levels of working capital, it is likely to become insolvent. For a good management a working capital current asset should be more than current liabilities." *(R.M. Dangol: 2050:217)*

Mostly there are two schools of thoughts regarding the working capital is mean for the current assets only. It is concerned nothing the liabilities sides. According to second school of thought, working capital is the excess of current assets over current liabilities. The former concept, which can be termed as gross concept, is important to newly established companies where liabilities have not been aquired immediately but the later on, which can be termed as net concept is important for both newly established company and operating concerned where some amount of current liabilities been maintained for payment of different creditors, income taxes, bills payable, secured and unsecured loans etc."

### 2.2.3 Concept of working capital

Our study focuses the concept of working capital, but to know the concept of working capital, firstly we have to know the concept of capial only. Capital is the amount of money in terms of cash or kind invested in a business.

"Capital is the main & important sources of fund capital are the form of commodities. The article of which capital is composed is produced specially for the market and must be transferred into money, hence go through the process."

That is way capital may be factors of production in the firm of building equipments machinery, raw materials, semi-finished goods for further process and soon.

Long term funds are required to create production facilities through purchase of fixed assets such as plant, machinery, land and building, furniture etc. investment in these assets represent that part of firms, capital is permanent or fixed assets are called as fixed capital." *(Sharma & Gupta: 1992: 537)*

In fact, there are two concepts of working capital. They are as

i.      Gross Concept of w/c
ii.     Net concept of w/c

**i.      Gross Concept of Working Capital**

Gross concept of working capital means sum of current assets only. Current assets are those assets, which can be converted into cash with in short period of normally accounting cycles. Current assets include cash, marketable securities, sundry debtors, bill receivables, inventory etc.

The supports of gross concepts of w/c are in favour of the given statements:-

Gross working capital is the administration one of the firm's current assets and the financing needed to support current assets.

From the view of I.M. Pandey, gross working capital refers to the firm's investment in current assets. Current assets are the assets which can be converted into cash within on accounting year and include cash, debtors, stock short-term securities and bill receivables.

In a simple term, gross concept of working capital means investment in current assets. In other word, gross concept of w/c are the total amount of word, gross concept of w/c are the total amount of available for financing of current assets. Thus the gross concept of w/c is the capital invested in total current asset of the enterprises.

If all the expenses needed to run the day to day. Operating of business such as amount to invest in the form of cash, finished goods, receivable etc. are put together it is called working capital. This w/c and total current assets are synonymous.

"The goods of the merchant yield him to no revenue in profit till he sells them for money and the money yield him a little till, it is again exchanged for goods. His capital is continuously going from him in one shape and returning him in another and its only by means of such circulations or successive exchange that can yield him any profit. Such capital therefore, may properly be called circulating capital."

C.W. Gutenberg said, "Circulating capital means current assets of a company that are changed in the ordinary course of business, firm one from to another, as for example, from cash to inventories, to cash."

In other words, "the term cash cycle refers to the length of time necessary to complete the following cycle of events."

i.    Conversion of cash into inventories.
ii.   Conversion of inventories into receivables.

iii. Conversion of receivables into cash.

The operating cycle, which is a continuous process, is as showing figure 1.
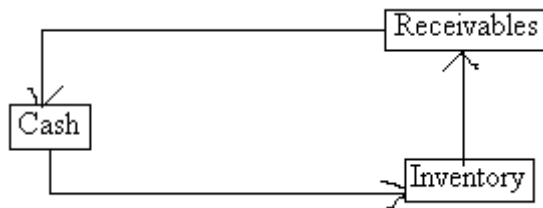


Figure: 2.1 Operating Cycle

The operating cycle consist of the three phases. In phase 1, cash gets converted into inventory. This would include purchase of raw materials, conversion of raw materials into workin-progress, finished goods and terminate in the transfer of goods to stock at the end of the manufacturing process. In phase 2, the inventory is converted into receivables as credit sales are made to customers. Firms which do not sells on credit will obviously not have phase 2 of the operating cycle. In phase complete operating cycle. Thus, the firm has moved from cash to inventory, to receivable and to cash again."

Current assets includes:-

A. Cash in hand & Bank Balance
B. Bills Receivables
C. Sundry debtors
D. Short-term loan & advance
E. Inventories stock

Raw materials, work-in-progress stores and spares finished stock.

F. Prepaid expenses

G. Accrued income

H. Marketable securities etc.

ii.   Net concept of Working Capital:-

Net working capital is commonly defined as the difference between current assets and current liabilities or in the other words, net working capital is the current asset minus current liabilities.

As expressed by American Institute of Certified Public Accounts USA, _ "Working capital sometimes called net working capital, is represented by the excess of current assets over current liabilities and identifies the relatively liquid position of total enterprise capital, which constitutes a margin of buffer for maturing obligation within the ordinary operation cycle of the business."

The term 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 and (ii) Alternative definition of net working capital is the portion of firms' current assets, which is financed with long-term fund." (L.G. Gitman: 1996:150)

Net working capital can be negative or positive. A positive net working capital will arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets. Current assets should be sufficiently in excess of current liabilities to constitute a margin of buffer of maturing obligation within the ordinary of eating cycle of b business. In order to protect their business, short–term creditors always like a company to maintain current assets at a higher level than current liabilities. It is a conventional rule to maintain the level of current assets twice of the level of current liabilities. A weak liquidity position possesses threat to the solvency of the company

and makes it unsafe and unsound .and may prove to be harmful from the company excessive liquidity is also bad. It may be due to miss-management of current assets. Therefore, prompt and timely action should be taken by management to improve and correct the imbalance in the liquidity position of the firm.

We have already discussed about the current assets in gross concepts of w/c. So here we discuss only about current liabilities, those liabilities which are intended to be paid in ordinaries course of business within a short period of normally once accounting year.

Current liabilities includes:-

a. Bills payables
b. Sundry creditors or account payable
c. Outstanding expenses
d. Short-term loan
e. Dividend payable
f. Bank overdraft
g. Provision for taxation

## 2.2.4  Needs and objectives of working capital

Each and every firm needs sufficient volume of working capital in order to run the business smoothly. We will hardly find a business firm which does not require any amount of w/c. Indeed, firms differ in their requirement of the w/c.

Working capital is used for day to day business operation of a business firm, thus it is required to run the business of firm regularly. Every business firm keeps their objectives either maximum their wealth or shareholders return on higher profit. To maximize their target goals

they have to invest their capital in different profits to minimize risk and to maximize return, so that working capital is required to be studied. Thus, "w/c is fluctuation. It is needed to run the day to day business. The need for w/c arises due to the time gap between production and realization of cash from sales. W/c is needed for the following purchases." *(Sharma & Gupta:545)*

- To maintain day to day expenses and overhead cost such as fuels, power and office expenses.
- For the purpose of raw material, component & spares.
- To pay wages and salary.
- To provide credit facilities to the customers.
- To keep the business in solvency position.
- To pay the short-term debt & bank, loan in the time.
- To maintain the inventory of raw material, work in progress, stores, spares & finished stock etc.
- To meet the selling expenses as packing, advertising etc.
- To pay wages and salaries.
- To face for the economic depression and emergencies.
- To get regular return and to make the shareholders intention towards the organization.

### 2.2.5 Classification of working capital

Working capital can be classified in two ways:

a. On the basis of concept.
b. On the basis of time.

a. On the basis of concept :

This classification is concerned with gross working capital and net working capital discussed earlier. This classification is important since it categories the various area of financial responsibilities.

b.     On the basis of Time :

This classification can be divided into two parts.

    i.     Permanent or fixed working capital

    ii.     Variable or temporary or fluctuating w/c

i.     Permanent or Fixed Working Capital:-

Permanent working capital is that king of working capital which is required to maintain as current assets for the successful operating of the business activities. It is the amount of fund required for production of goods & services to satisfy the demand. Permanent working capital is the portion of working capital, which remains in the same level of the business for ever.

"A firm's permanent working capital is an amount of current assets which is continuously required by the firm to meet long term minimum need." *(Van Horne & Watchowicz:204)*

"Permanent working capital is also known as 'Hard-Core' working capital, Hard core working capital is the minimum working capital throughout the year to support the normal operation of the business."

The permanent working capital further is classified as regular working capital and reserve W/C. Regular capital is the minimum amount of working capital required to ensure circulation of current assets from cash to inventory from inventory to receivable from receivable to cash and so on. Reserve working capital is the excess amount over the

requirement of regular working capital which may be advises at unstated periods such as strikes rise in price, depression. Etc.

B. Variable or Temporary or Fluctuation working capital:-

Any amount of working capital , which is over and above the permanent level of working capital is variable working capital.

Working capital which is convertible as per sales volumes of business is termed as temporary working capital. Variable working capital represents the certain amount of fluctuation in current assets, within a short period.

"Variable working capital represents the additional assets required at different time during the operation year. Added inventory must be maintain to support the speak period. It needed to meet fluctuation in demand consequent upon changed in one level of sales and operating expenses, policy changes and change in technology, variable working capital is required for short period to meet some special existence and some seasonal demand. It represents the certain amount of fluctuation in current assets within the short period. Variable working capital changes it from cash to inventory, inventory to receivable and then to cash, business which one of seasonal nature required more temporary W/C. This will increase the turnover of investment resulting in efficient use of capital,"

The extra working capital needed to support the changing production and sales activities is called fluctuating or variable or temporary is necessary for fluctuating production and sales through the operation cycle. But temporary w/c is created by the firm to meet liquidity requirement that will last only temporarily.

Working capital can be divided as seasonal and special w/c. Seasonal w/c need seasonal demand of enterprises and special working capital need to meet the special existence i.e. conducting research for existence for extensive, marketing campaigns. Thus, two types of working capital are needed to meet the demand of enterprise.

"Temporary & Permanent W/C look like this"

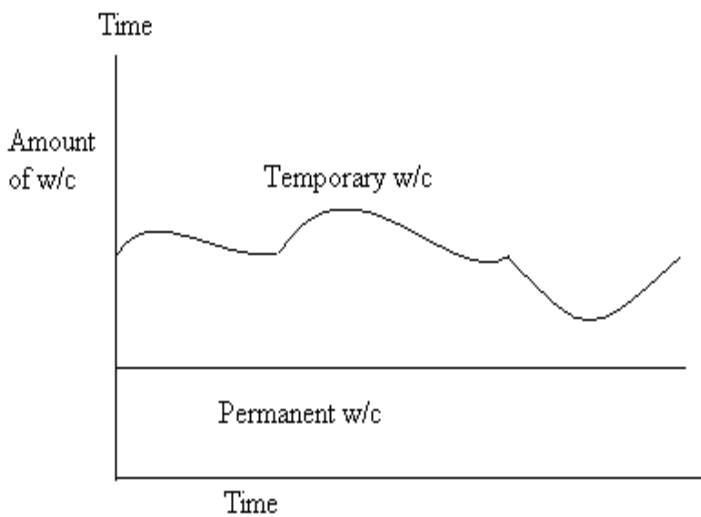Figure: 2                                   Figure: 3
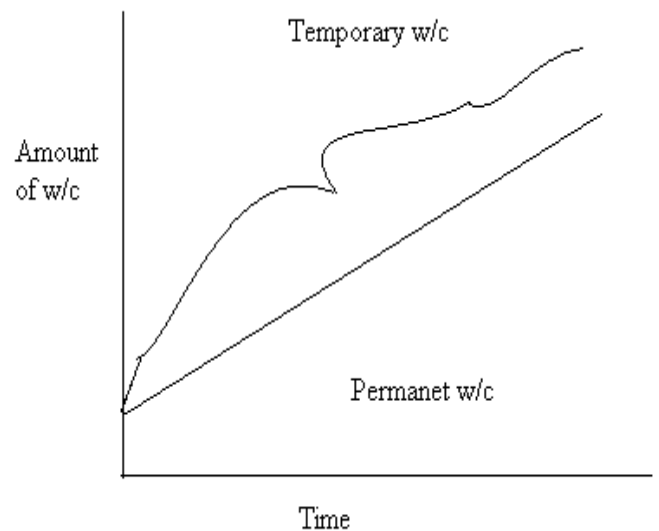


Permanent w/c is the fairly constant; while constant, while temporary w/c fluctuating. Sometimes, it is increasing and sometimes it is decreasing in accounting with seasonal demand. It may not be horizontal line, this is because the demand. It may not be horizontal line, this is because the demand for permanent current assets might be increasing or decreasing to support arising and facing level of activities.

## 2.2.6 Importance of Working Capital:-

To operate all types of business in a management manner business firms always have to maintain adequate amount of working capital

together with fixed capital so that purpose of raw materials and management of various day to day expenses can easily be managed if needed. An adequate flow of working capital is essential to sound health of the business.

Business sector is very & competitive these days marketing sector of business is also very complex. In this condition working capital also very complex. In this conduct w/c vital role of sustainable developed of business sector. It is life blood of the business organization. Just as calculation of blood is essential in the human body for maintain life likewise. Working capital is very essential to maintain the smooth running of a business. No business can run successful without on adequate amount of working capital. It is an important aspect of financial management. It is important" *(Sharma: 2001: 211)*

- Adequate of working capital creates a feeling of securities & confidence.
- Adequacy of w/c is a must for maintain solvency and continuing production.
- Creation of sound good will.
- Utilization of opportunities.
- General rise in management moral.
- Easy availability of cash discount.
- Easy loan from bank.
- Quick & steady return to the investor.
- Facility of off-season purchasing

"From the view of P.K. Kulmany about the important of working capital, working capital may be regarded as the life-blood of a business. Its effective position can do much to ensure the success of business while

its efficient management can lead not only loss or profit but also ultimate do full of what otherwise might be considered as a promising concern much has been rightly made of the long term planning of capital project. Out of the cost of includes try due to in educate planning in the use working of capital is immeasurable." *(Kumany: 1983: 385)*

## 2.2.7  Principles of working capital

"The following are the general principles of sound working capital management policy." *(Ibid: 551)*

- Principle of risk variation
- Principle of cost of capital
- Principle of equity position
- Principle of maturity position

The first principle refers to the risk associated with the amount of working capital employed. The second principle is concerned with the problems of determining the ideal level of working capital. The third principle type capital used for financing working capital requirements and debt equity ratio, and the fourth principle is concerned with maturity dates relatively more importance for risk is insolvency.

## 2.2.8  Determining of working capital:-

Working capital plays vital role for sustainable development of business organization. The requirement of working capital must be sufficient so as to yield maximum profit. That means capital must be in proper quantum. So many elements affect different organization differently in different time period.

There are also set of formulates the working capital, requirements of the firms. A large number of factor influence the working capital needs

of the firms. All factors are different importance. The importance of the factors changes for a firm overtime. So, an analysis of the relevant factors should be made in order to determine the total investment in working capital. However, following are the factors which generally influence the working capital requirement of the firm." *(Pandey: 814)*

| | |
|---|---|
| Size of business | Nature and characteristics of business |
| Production cycle & policy | Business fluctuation |
| Credit Policy | Business policy |
| Working capacity cycle | Growth and expansion activities |
| Price level changes | Credit market situation |
| Dividend policy | Operating efficiency |
| Earning capacity | |

The quantum of w/c is also determined by the management attitude towards risk. If the management perceives risk, current assets are not sufficiently maintained to match current liabilities during maturity and chance the desired level of sales; the greater the management adheves to risk the lesser becomes the need for holding large size of working capital. Thus for the effective, management of w/c, finance manager should pay particular attention to major determining factors as stated above.

### 2.2.9 Dimension of working capital management

We know that every business firm should maintain a working capital position and that there should be optimum investment in working capital. Working capital management refers to the administration of all aspects of current assets, namely cash marketable securities, debtors,

stock (inventories) and current liabilities. The financial manager must determining level and compulsion of current assets.

There are many aspects for working capital management, which makes it an important functions if the financial manager.

a) Working capital management require if the financial manager time.

b) Working capital represents a large portion of the total investment in assets.

c) Working capital management has greater significance for small firm.

d) The need for working capital is directly related to sales growth investment of current assets and financing of current assets are two major problems of business firm, so that a financial managers, time will be spend to manage it. Investment in current assets represents a very significance portion of total investment in assets for example, of the total investment in assets for example, in the case of the large and medium public limited companies in India. Current assets contribute about 60% of the total assets or total capital employed.

To decide the level of working capital as:-

a. Ratio of current assets fo fixed assets.

b. Liquidity versus profitability: Risk return tangle.

c. The cost trade off.

a)    Ratio of current assets to fixed assets (CATOFA):

The financial manager should determine the optimum level of current assets, so that the wealth of shareholder be maximized a firm needs fixed assets and current assets to support a particular level of

output. However, to support the same level of output the firm can have different level of current assets. As the firm output and sales increase the need for current assets increases.

The level of current assets can be measured relating current assets to fixed assets. A higher level of current assets policy and lower current assets to fixed asset ratio means an aggressive current assets policy assuming other factors constant. A conservative policy implies great liquidity and lower risk and poor liquidity. If current assets to fixed assets ratio equal to 1, then it is called on average policy of current assets." This can be shown with the help of figure.

Figure No:- 4
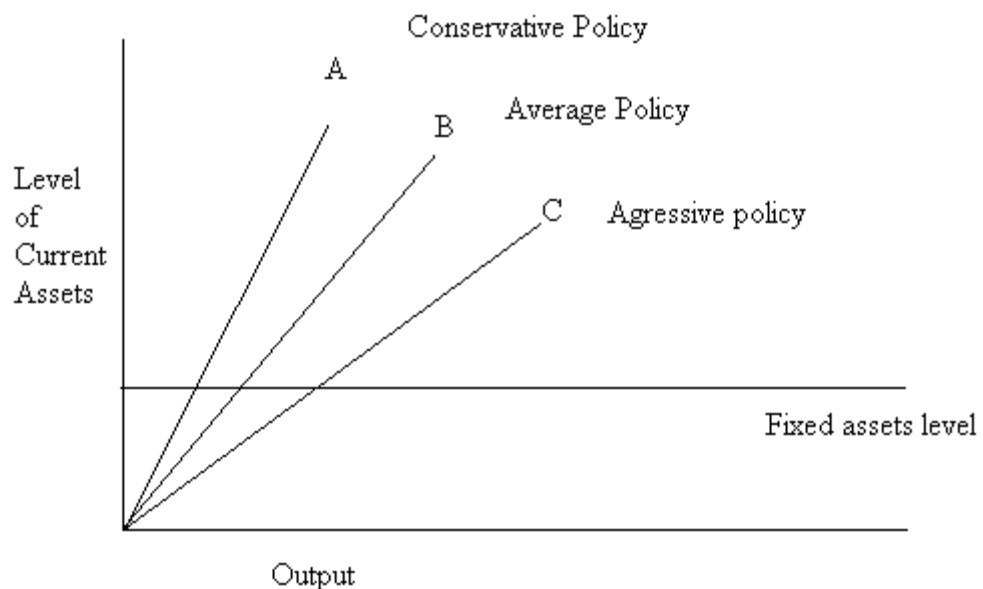


b.      Liquidity Vs profitability: Risk Return Tangle *(Pandey: 316)*

A large investment in current assets under certainty would means a low rate of a return on investment for the firm, as excess investment in current assets will not earn enough return. Thus every firm has to be

decided about investment in current assets, it is depended upon the working capital policy. A conservative policy means lower return and but an aggressive policy produces higher return and risk.

There are two very important aspects of working capital management as: Profitability and solvency. Solvency used in the technical sense, refers to the firms' continuous ability to meet maturing obligation. To ensure solvency, the firm should be very liquid, it means high volume of current assets holdings. Thus a liquid firm has less risk of insolvency. That means it has hard expense about cash storage or stock out."

To have higher profitability, the firm any sacrifice solvency and maintains a relatively low level of current assets. When the firm does so, its profitability will improve as less funds are tied up in idle current asset, but its solvency would be threatened and would be to greater risk of cash shortage and stock outs."

The risk of working capital management future can be illustrated with the help of an example taken from the books of Weston and Brigham.

Suppose a firm has the followings data for same future year.

Sales (100,000 units)                                 Rs. 1500,000

Earning before interest & Tax (EBIT)      Rs. 150,000

Fixed assets                                               Rs. 500,000

The three possible current assets holding of the firm are Rs. 500,000, Rs. 400,000 and Rs. 300,000 it is assumed that fixed assets level is constant an profit do not very with current assets level. The effect of

the three alternative current assets policies are shown in table 2 indicates that alternative 'A' the most conservative policy provides greater liquidity to the firm but also the lowest return on total asset. On the other hand, alternative 'C' the most aggressive policy yield highest return but provided lowest liquidity and thus, is very risky to the firm. Thus we can clear the following thesis illustration is simple example of risk return trade off.

Effective of Alternative working capital policies

| Particular | A (Rs.) | B (Rs.) | C (Rs.) |
|---|---|---|---|
| Sales | 150,000 | 150,000 | 150,000 |
| Earning before interest & tax (BBIT) | 150,000 | 150,000 | 150,000 |
| Current assets | 500,000 | 400,000 | 300,000 |
| Fixed assets | 500,000 | 500,000 | 500,000 |
| Total assets | 1000,000 | 900,000 | 800,000 |
| Return on total assets (EBIT/Total assets) | 15% | 16.67% | 18.75% |
| Current assets to fixed assets (CA/FA) | 1.00 | 0.80 | 0.60 |

The Cost of trade off:-

There are different way of looking into risk return trades off is in terms of current assets. There are trade off is in terms of current assets. There are mainly two types of cost exist in the firm about current assets. There are as follows.

a. Cost of liquidity
b. Cost of liquidity

If the level of current assets is very high, it has excessive liquidity, it was tied up in the idle cash and stocks, earn nothing and high level of debtors

reduce profitability, thus the cost of liquidity increase with the level of the current assets. It is clear the help of the following given diagrams:-

Figure: 5
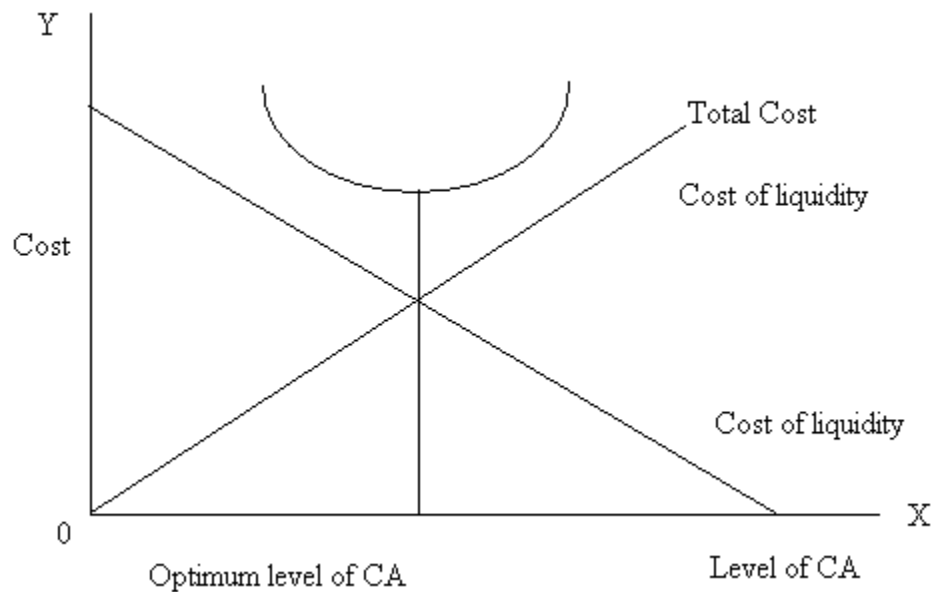


The cost of liquidity is the cost of holding insufficient current assets it may tree the firm into insolvency to borrow at high rate of interest. Due to the causes of it, the firms may go to insolvency. On the other hand if stocks are low when the customers may go to other competition."

According to Lawrency J Giftman, their basic assumptions must be made for profitability risk trade off, those are as follows:-

**2.2.10 Effects of current assets on profitability risk trade off**

The effect current of current assets on profitability can be shown by current ratio. The current ratio is a relationship between current assets and total assets. Changes in the ratio with reflect a change in the ratio with reflect a change in the amount of current assets.

**Effects of an increase:-**

The increasing ratio shows that the risk to the firm is decreasing and side-by –side. The profitability will also be decreased. Current assets are less profitable than fixed assets by increasing the investment on current assets, the investment on fixed assets decrease. As a result the profits also decrease.

**Effects of decrease:-**

If the ratio decreases, the risk increase and side- by-side investments on fixed assets increase. The returns on fixed assets investments will be more than currents assets. So the profitability of the firm increases. The effects of an increase or decrease current assets on profitability risk trade off is shown below table-4.

| Condition | Working capital | Ratio | Profit of risk |
|---|---|---|---|
| If current assets decrease<br><br>If current assets increase | Decreases<br><br>Increase | Decreases<br><br>Increases | Increases<br><br>Decreases |

**2.2.11 operating cycle**

There is a difference between current assets and fixed assets. In terms of their liquidity a firm requires many years to cover the initial investment in fixed assets, such as plant and machinery or land and building, on the contrary investment in current assets in turned over many times a year, investment in currents assets such as inventories and book debts is realized during the firms operating cycle which is usually less than a year.

Operating cycle is the firm duration required to coverts after the conversion of resources into inventory 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 materials into work in progress into finished goods.
- Sales of the products either for cash or on credit sales creates book for collection.

Thus, operating cycle is the heart of working capital. The continuing flow form cash to supplier to inventory to account receivable and back into cash called operating cycle, which can be presented by help of following diagrams:

Phase: 2



Figure: 6

The length of operating cycle of a manufacturing firm is the sum of inventory conversion period (ICP) and book debts conversion. (BDCP). The inventory conversion period is the total time needed for production and sell of the product. It generally includes:

a. Raw material conversion period(RMCP)
b. Work in progress period (WCPC)

c. Finished goods conversion period (EYCP)

The book debts conversion period is the times required to collects outstanding amount from customers. Thus the total of ICP and BDCP is called gross operating cycle (GOC). The difference between gross operating cycle and payable deferred period (PDP) is called net operating cycle (NOC). While depreciation is excluded from the expenses of computing operating cycle is called conversion cycle (CCC). Cash conversion cycle is net time interval between cash collection for sales of the product and cash payment for resources and acquired by the firm. The cash conversion period can be calculated by using.

$$CC\ C = ICP + RCP - PDP$$

Where,

ICP, RCP and PDP can be computed using,

ICP= 360 / ITR

$$RCP= \frac{Receivable}{Sales\ per\ day} \qquad ITR= Inventory\ Turnover\ Ratio$$

$$PDP = \frac{Payable}{Daily\ Purchase}$$

Payable deferred period is the average length of times between the purchase of raw materials, lab our and payment of cash for them.

Sum of above, we can say that CCC should be small to mobilized optimum working capital. Beside it ICP should be less because it measures it conversion of inventory into sales. RCP should be less because it measures the conversion of credit sales into cash and at last, PDP should be higher break it measures averages time of higher because

it measure average time of payment. It payments days are large them amount of funds are mobilized within business firm for a long period.

## 2.2.12 Financing of working capital

Currents assets can be financed by raising the funds from currents liabilities of long-term debt. What proportion of current assets shall be financed by current liabilities and what proportion should be by long-term debt is determined by working capital financing policy. "Them firm can adopt difference financing policies. These types of financing policies by distinguished as long term financing, short term financing and spontaneous financing. The importance sources of long-term financing are shares, debentures, preferences shares, retrained earning and debt from form financial institutions. Short- term financings refers to those sources include short-term bank loans. Commercial papers, factoring receivables and public deposit.

Spontaneous financing refers to the automatic sources of short-term funds. The major sources of such financing are trade credit i. e. creditors; bills payables and outstanding expenses, spontaneous sources of finances are the cost free. So, a firm would like to finances its currents assets with spontaneous sources as much as possible. Every firm is expected to utilize spontaneous to the fullest extent. Thus, the real choice of financing currents is in between short term and long-term sources. We shall, therefore, concentrate our attention on the short term versus long-term financing."

There are three basic approaches for determining an appropriate working capital financing mix that are as follow:

a) Matching or hedging approach
b) Conservative approach

c) Aggressive approach

A.    Matching or heading approach

For risk reducing investment strategy the term 'Hedging' is often used. According to assets this approach the emphasis is given on matching the period of assets to be financiered with the period of sources of funds to be used in simple words. The firm finance its short term needs with short term funds and long –term needs with long –term funds."

Hedging approach is a method of financing where each assets would be off set with a financing instrument of the same appropriate maturity." *(Dongol, op.cit.p.-244)*

According to hedging approach we should finance, variables or short-term founds and long funds should be used to finance fixed proportion of current assets.

Heading approach classifies the financing requirement of a business firm into three categories as:-

a) Variable working capital: the requirement of funds for seasonally needed. Which should be financed with from short-term sources.

b) Permanent working capital

The requirement of funds regularly needed, current assets or permanent working capital that should be financed with funds from long-term sources;

B.    Conservative approach:

A firm may adopt a conservative approach in financing its current assets and fixed assets the financing policy of the firm is said to be conservative when it depends more on long –term fund 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 period, when the firm has no temporary current assets, it stories liquidity by investing surplus fund into marketable securities. The conservative plan relies heavily on long-term financing and therefore is less risk." *(Pandey: 1979: 823)*

According to R.M Dongol, under the conservative approach, the total funds requirements are financed by long-term fund. The short-term funds in suing only in the situation of emergency. The risk is minimized under this approach. The liquidity position of the firm will be relatively greater than in heading approach. The cost of financing under conservative approach. The cost of financing increase because conservative approach uses long-term sources for current assets. *(Dangol: 2050: 226)*

C. Aggressive approach

The aggressive approach is in between of hedging approach and conservative approach. Hedging approach mix is riskier than conservative financing mix. High profit, high risk is the policy of hedging approach but low profit. Low risk is the policy of conservative a approach. Aggressive approaches suggest. That the financing mix should be in between of two approaches. A major part of the total current assets should be financed short- term sources and a part of the long- term investment also should be financed by short- term sources"

According to Van Horne, "the greater portion of the permanent assets need financed with short- term sources or, debt: the more aggressive the financing is said to be."

Under and aggressive approach the firm finance a part of its permanent current assets with short- term financing. Some extremely,

aggressive firms may even finance a part of their fixed assets with short-term financing.

In aggressive policy. The liquidity position will be low and risk will be high, therefore, when the used more short- term financing, it is assumed to follow aggressive policy.

It is clear that off between comparisons of three approaches of the following

| Approach | Cost | Working Capital | Degree of Risk | Profitability |
|----------|------|-----------------|----------------|---------------|
| Hedging | Intermediate | Nil | High | High |
| Conservative | High | High | Low | Low |
| Aggressive | Low | Intermediate | Intermediate | Intermediate |

According to Lawrence J. Gift man, three basic assumptions must be made for profitability risk off. Those are as follows

  i. The kind of firm that we are dealing be manufacturing company.
 ii. Firm can earn more can fixed assets than on current assets. The fixed assets investing is more profitability than current assets investing.
iii. Short- term funds are cheaper than long- term funds.

These three approaches are important factors for determining an appropriate working capital financing mix. In hedging approach high profit, high risk, in conservative approach low profit low risk and the aggressive approach is low the between o hedging and conservative approach. These approaches suggest that the financing mix should be in between of two approaches.

Business, firm can adopt anyone policy of current assets financing according to its mature, size, structure, and position of the business, firm however it requires,

## 2.3 Review of journals/ articles

This part is mainly focused on the review of journals/ articles published by different management. Experts, working capital management, is by Professor Dr. Khagendra acharya, he has described two major problems, operational problems, and organizational. Problems regarding the working capital management in Nepalese public enterprise. The operational problems. He found are listed in the first parts which are increase of current liabilities than current assets, not allowing the current ratio 2:1and slow turnover of inventory. Similarly, change in working capital in relation to fixed, thin transpiration of capital employed to sales absent of apathetic management information system, break even analysis, funds flow analysis and ratio analysis, where either undone or ineffective for performance evaluation, he states that is most of enterprises the management has been misunderstanding as the management money rather than its efficient utilization thus existing problems in the finance are mostly directed towards the management of working rather than in any area.

Finally, monitoring of the proper function of working capital management has never been considered a management job.

In the second part, he was listed the organization problems, in the public enterprises, in most of the public enterprises, there is lake of regular internal and external audit system as well as evaluation of financial result. Similarly very few public enterprises have been able to present their capital requirement, functioning of finance development is not

satisfactory and some public enterprises, are been facing the under utilization of capacity. To make and efficient use of funds for minimizing the risk of loss to attain profit objective.

He has suggested that manufacturing concern finance staff must be acquainted with the modern scientific tools used for the presentation and the analysis of data the public enterprises should avoid the system of crisis decision which prevailed frequently in their operation. Avoid finite hedge of the assets, and lastly, he was suggested optimizing its level of investment at a pointy time either over or under investment in working capital is desired by the management of an enterprises because both of these situation will erode the efficiency of the concern (*Acharya:l3*)

This study is descriptive in nature. He has not used nay data and research tools. This study has cleared Nepalese public enterprises. But not national the name of public enterprises. Each selected enterprises does not represents the enter industry in which its falls.

Pradahn surendra. In his views at examining the aspects of management of working capital is selected manufacturing public enterprises of neapl. The objective undertaken in his study are

- ❖ To assets the short- term financial liquidity position of the manufacturing concern.
- ❖ To conduct risk return analysis of liquidity of working capital position.
- ❖ To assets the structure and utilization of working capital.
- ❖ To estimate the transaction demand function of working capital and its various components.

His study has mentioned the following findings,

1) It is found that of the selected enterprise have been activating or tradeoff between risk and return and there by following neither an aggressive or conservative approaches.

2) The economics of scale have been highest for inventories flowed by cash and grow working capital, receivable and net working capital.

3) It has showed a poor liquidity position of most of the enterprises. This poor liquidity position has been noticed as the enterprises have either negative cash flows or negative EBIT or they have excessive net current debts, which can be paid with in the year.

4) The regression result also shows that the level of working capital and its component enterprises desires to hold depend not only a sales but a holding cost also.

5) The Nepalese manufacturing public enterprises have and average, half of their total assets in the firm of current assets of all the different component of current assets, on the average is larges followed by receivable and cash in most of the selected enterprises.

His study is concerned with interrelationships that exit between managing current liabilities. This study to focus not working capital focuses concepts. The study has employed ratio analysis, discriminate analysis and economic models for its analysis.

Above mentioned studies do not cover all the enterprises as well as private industry In the many factoring sectors. The manufacturing concerns selected for the study differs in working and nature is not similar to all the public and private enterprises. That is way it is necessary to study working capital management. Consequently keeping in view of fact that, there is not attempt to study of working capital management

particularly in private sectors, which is the ground base of industrialization and our country is looking forward to list up by economic development in reality it is only success when a study will find out and give special emprise investment in industry. By this true reasons arced has been faced to study the overall financial position and components of private sectors and study of working capital management *(Pradhan: 1988: 4)*

Dr. manohadr k. shrestha has conducted and empirical observation of twelve- selected P E s. in these articles he has described the conceptual ingredients concerning the working capital, such as conceptual setting sources of working capital, such as conceptual setting sources of working capital and type of working capital. From analysis he found that the liquidity poison of the selected PEs showed wide deviation based in the sales, volume four out of seven P E s that normal inventory turnover. There was also above normal test ratio. Other three that not been satisfactorily mentioned and some of them inventory had exceeded sales.

The collection period relating to the selected PEs exhibited marked difference varying 32 days to 755 days. The profitability position was analyzed thoughts return on net working capital. The return on net working capital was positive for eight PEs. Negative for two PEs and the rest two had not any return since they were in establishment phase.

"During the analysis, he observed some problems like the lake of farsighted liquidity adjustment strategy In most of the PEs no. guiding criteria to ascertain the satisfactory maintenances of acid test ratio and working capital needs. Large booking of capital in inventories and low capacity utilization. All these were due to inefficient management of working capital in that PEs".

Another articles relating of working capital study is by Dr. Khagendra archarya, which is based on the finding and conclusion of his PhD. Thesis in the study, he has focused his study on the working capital management of Nepal tea development corporation (NTDC) eight years from 1975/76 to 1982/836 A.D. he has also made the comparison of the findings with the other five selected PEs. In the study, he found that the net working capital of NTDC has negative due to increase in current liabilities of the current assets, inventory hold the largest portion and it was accumulating in the accumulating in the corporation. It had inventory had the largest period and it was accumulating in the corporation, it has inventories twenty- six months sales. The size of aggregate receivables of NTDC had also been increasing and its exceeded by 16 times during the study period. Cash balance held by the corporation was insufficient to meet the routing work of the corporation. At the same time, the liquidity position of the NTDC was very poor since current assets where less than the current liabilities. While comparing to other selected PEs, he fund that the turnover of inventory, receivable and current assets in NTDC were below the average thereby relating and current assets in NTDC were below the average thereby relating high investment in each of them irrespective of the sales achieve, the break even analysis relievable that the NTDC had been selling mostly below the breakeven and had incurred variable cost sometimes even higher than sales price the suggestion he made on his articles is proper planning of production and sales, new credit policy, action against the deliquent dealers issues of shares and debentures and obtaining loans for any individual or financial institution.

## 2.4    Review of Related Dissertations

Besides review of available books journal and articles a number of studies have been made relating to working capital in different Pes of Nepal. Some of the reviews the same are focused in this section.

a) Dipendra Raj Sharma on his study on working capital management of Nepal Battery Company limited (NBCL), he used secondary data of balance sheet and profit and loss account of the company from 1994 to 1998.

Ratio analysis and correlation analysis between variables were used as major tools for the study from the analysis he found high investment in current assets less utilization ratio good liquidity position and unnecessary tie-up of working capital. There was significant relationship between inventory and cash but significant positive correlation between gross profit and sales and between net profit and sales. He has pointed out sound inventory management policy of working capital and has suggested introducing effective inventory control techniques. He recommended that huge amount of inventory should be reduced or level should be adjusted to sales and production level. He also recommended liberal credit policy and avoids unnecessary increase in volume of receivable. *(Sharma: 77-88)*

b)    Arjun Lal Joshi, in this study seeks to have true sight into the working capital management in Biratnagar jue mills. The study concerned with management of current assets and covers five years period (2036/37 to 2040/41). The study has embodied varies financial ratios for measuring Biratnagar jute mills financial variability. The study is based on secondary data with option survery method and limited to gross concept of working capital. The study has indicated mismanagement of inventory

proper policy of cash held and heayy dependence on short term bank credit. He has recommended for effective working capital management of mill by planning realistic turnover target specimen designing effective inventory management programme, following productive investments approach preparing effective sales plan and exhaustive market research programme using short term bank credit up to certain reasonable limit, maintaining optimum cash balance and proper utilization of accumulated collection debts. Mr. Joshi has used ratio analysis to study and not used correlation efficient to verify the significance and relation in between working capital components." *(Joshi: 2000: 83)*

c) Shailesh man shrestha perfomed another study on working capital management on Dairy Development Corporation (DDC). He considered the financial statement of DDC for the period of 1985 to 1989. He used ratio analysis as financial tools and tests of hypothesis rest the significant relationship between variables as major statistical tool for the study. He found high level of investment in current assets, where inventory held major proportion. There seems to be high liquidiy position and low level of working capital turnover. The total assets depend upon neither current asset not the current assets on cash and receivable. Working capital, receivable and inventory were not affected by sales volume. There was proper relation between current assets and inventory. The researchers have suggested the DDC management as follows:-

- DDC should determine certain the rate of return on its investment.
- Huge amount of inventory should be reduced.
- Regular checks to identify both excess and shortage of current assets.
- The management should integrate marketing policy with credit policy and should give attention to man poor planning.

- Sales target should be set for overcome the problem of perpectual loss.

d)    Mr. Dhruba Nath Yogi on his study on "A suty on working capital management of Nepal lever Ltd. (NLL), this thesis is conducted through basically secondary data. The data had been collected from annual reports and audited financial statement of the secondary dat. The data had been collected from annual and addicted financial statement of the company submitted to Nepal Stock Exchange Company. The data have been directly extracted from the balance sheet and income statement of the company. The primary information has been collected through interview with the official of Nepal lever Ltd. Various Ratio analysis is used to analyze the data and karl Person's coefficient of correlation (r) is used to examine the relationship between liquidity position. *(Yogi: 2003:92)*

The major findings are:

- The liquidity position of the company is fluctuation years by years.
- The liquidity position of the company is fluctuating years by years.
- The significant relationship between liquidity and profit margin implies that there is not trade off between liquidity and profitability.
- The proportion of current assets is affected by the sales in other words; this sale affected the management of current assets.

e)    A next study made by Mr. Rajendra Giri on "Working capital management a cash study on Balaju Textile industries Limited." The observed five years data from 036/037 to 040/041 for the analysis of working capital he used the ratio analysis as tools for the analysis from the study he conducted that the raw utilizing of plant capacity and lack of efficient management of the corporation push it to hear loss poorly

utilized the owner's funds. He also found that there was no efficient and productive use of working capital. From these findings we recommended that the corporation should make regular checks to identify both excess and deficit current asset. There should be need to finance current assets from the appropriate combination of short term and long-term sources. It should take actions for disposing of huge inventory which tied-up working capital and involved huge carrying costs and risk of losses. The long term marketing strategies should be formulated. Lastly it should sturgeon its production capacity with the help of sound incentive schemes to workers and preferable wages incentive plan. *(Giri: 2000: 83)*

f)    A next study made by Mr. Basudev Giri working capital management in Birgunj sugar factory limited (BSFL). He used ratio analysis as tools for the purpose of analyzing working capital management in BSFL. He found that as a manufacturing PEs, BSFL has followed and approach which is neither aggressive nor conservative. The amount of current assets with respect to total assets was in fluctuation trend during the period of study from 2041/42 to 2045/046. The inventory hold the major part of current assets and indicated the inefficient management in inventory the decreasing and fluctuating trend of various turnover indicated that current assets were not properly utilized in the factory during the period of study. The nt profit in regards to total asset was not quite satisfactory. The large volume of idle cash balance is contributed for the lower return on working capital. He recommends for the use of proper inventory model. The idle cash balance should be invested in short term securities with maximize the profit." *(Giri: 2003: 89)*

g)    Jiban Nath Sapkota in the concern of Himal cement limited had carried out another study related to working capital management. He also

used ratio analysis using financial statement of the company for five years from 2044/45 to 2048/49 for the purpose of analyzing working capital management in Himal Cement limited. He found poor liquidity and profitability position of the company where working capital was unnecessarily tied up in inventory. Management of receivable seems to be far better than other aspects. He also has pointed out high production cost and in efficient management policy. As like other researchers he also has suggested determining certain rate of return on investment in each. Component of current assets and current liabilities and proper attention should be given to manpower planning *(Sapkot: 1994: 98)*

h)     Pradeep Kumar Pathak carried out another study on working capital management. The study was Nepal Lube Oil Limited (NLO). Considering five years financial statement (i.e. balance sheet, profit and loss a/c income statement etc. of NLO, he used to ratio analysis correlation coefficient and test of hypothesis as the tools for the purpose of analysis working capital management of the same. According to the conclusion of his study. The major findings are: *(Pathak: 1994: 94)*

- Cash hold of relatively small proportion of total assets inventory holds largest portion indicating unsound inventory management.
- Lesser participation of fixed assets in total assets.
- Receivable not affected by sale.
- In efficiency in collecting receivable.
- Current assets do not depend upon the value of cash and receivable, however significance relation between proportion of currrent assets and total assets, current assets and fixed assets, current liabilities and quick assets and current liability.

He has suggested the NLO management to determine certain rate of return on its investment and to set up the sales target. He has also suggested minimizing huge amount of inventory to adept proper inventory management policy to avoid unnecessary increase in the volume of receivable and give attention on man power planning too.

The above review of literature from various books journal and articles and desertions related to the working capital management. Shows that the one of the major problem in Nepalese corporations behind unhealthy and unsound situation in improper management of working capital. Since the success and failure of any enterprises is heartily depend upon the efficient management of working capital and being a manufacturing company established in Nepal, the efficiency in the management of working capital of DDC should be analyzed. Till now no any other deep study has been made for the analysis of working capital management in Dairy Development Corporation. So this study attends to analysis the working capital management in Dairy Development Corporation by taking 5 years data for observation and the other available information with the help of methodology as described in the following chapters.

This researcher is also fruitful to those interested parties like teachers, student, scholars, businessman government for academically as well as policy perspectives.

# CHAPTER-III

# RESEARCH METHODOLOGY

Research is the systematic method of finding right solution for the problem where as research methodology refers to the various steps undertaken by the researchers to find the optimum solution. For this study the financial data of the last five years from the Yr 2061/62 to2065/2066 has been collected, examined and evaluated them to make a conclusion. Methodology helps to analyze, examine and interpret various aspect of research work. Methodologies state the method with which data have been used in interpretation of such data to fulfill the objectives. For this purpose following research method has been used in this study.

"During each research work, to accomplish the objectives effectively. Specified methods and process should be followed which is called research methodology. According to F.N. Kerliner, "Researcher methodology is vital and absolutely indispensable part of social scientific and education research, without research methodology, modern social science and educational research would still be in the Dark Age." Process, tools and techniques applied in the entire process of a scientific research. Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in views." *(Kothari: 1994:19)*

## 3.1    Research Design

Research design is the plan and strategy of investigation conceived so as to obtain answers to the research questions and to control the variance. Research design helps in the analysis of data related to research topic. It is a controlling media for the collection of data and it helps to

collect accurate information relating to the research subject. Research design is the strategy for concluding research. It describes the general framework for collecting, analyzing and evaluating data.

For this study the researcher has been used both the analytical and descriptive research design for the purpose of working capital management of dairy development corporation. Descriptive design has been used for the conceptual development and scientific and systematic framework of the research and the analytical design has been used for the systematic interpretation of the numerical data used in this study.

## 3.2   Sources of Data

There are vital role of the data in research to clear and complete research objectives. Without the data, methodology cannot be utilized to bring the conclusion. Proper and required data should be collected from needed sources.

The Secondary data has been used in this study. Basically, secondary data has been collected from the annual reports of Dairy development corporation publications, books and journals/magazines, booklets and internet etc. Thus, secondary is the main source of data and other necessary information has been obtained throughout the research form authorized staff of DDC. Some of these data were published while other was unpublished.

## 3.3   Population and Sample

There are many manufacturing companies operating their business in market are population of this study. Among the manufacturing companies, DDC is taken sample for study because it is one of the biggest

multinational Manufacturing companies operating in various part of world.

## 3.4    Data Processing procedures and Tools Used

Relevant data of this study are collected through secondary sources. Tables, charts and graphs have been used as per requirement. Accounting, mathematical and statistical tools are also used to analyze collected data.

## 3.5    Data collected Techniques

In course of preparation of the research work, after the identification of sources of data, the required data for the study have been gathered though the procedure.

First of all financial statement. (B/S and P/L A/c) of DDC was down loaded to a computer disk. Secondly, all the down loaded financial statement was transcribed into computer print out. After the collection of the data, the required data have been processed and increase in condensed forms. Thereafter, they have been tabulated and presented, using descriptive and inferential tools as per the requirement of the study.

## 3.6    Data Analysis Tools

The data obtained from different sources have been processed and recast in condensed forms. Thereafter, they have been tabulated and presented as per the requirement of the study.

In this way, there are various analytical tools and techniques have been used in this research study. Their tools and techniques used as follows:

### 3.6.1 Data Analysis

### A) Financial Tools

Financial tools are used to examine the strength and weakness of a bank. In this study financial tools like ratio analysis and financial statement analysis have been used.

### a)     Ratio Analysis

Ratio analysis is a powerful tool of financial analysis. An analysis of financial statements with the help of 'ratio' may be termed as 'ratio analysis.' It is a mathematical relationship between two related items expressed in quantitative form. So, the ratio is the measurement of quantitative relationship between two or mare items of financial statement connected with each other's. In simple language ratio is one number expressed in terms of another and can be worked out by dividing one item of the relationship with the other.

Ratio analysis is defied by many writers in the different definition like as A ratio is defined as "The indicated quotient of two mathematical expression." And as "the relationship between two or more things." *(webster's:1975:958)*

In financial analysis, "ratio is used as an index of yardstick for evaluating the financial position and financial performance of the firm." *(Pandey:1992:110)*

Now it is going to discuss about ratio analysis and its items used by various parties. There are various types of ratios which are used by different parties for their own purposes. The required ratio can be calculated from the information of financial statements. Generally, creditors, investors, shareholders, financial institution's, management etc

are interested to know the financial situation of the firm. The classification of ratios on the basic of users are.

a) Liquidity Ratio

b) Turnover Ratio/Activity Ratio

c) Capital Structure/Leverage Ratio

d) Profitability Ratio

**a)    Liquidity Ratio:**

Liquidity ratios measure the short-term solvency of the firm. Or liquidity ratios measure the ability of the firm to meet its current obligations. A firm should insure that it does not suffer from lack of liquidity, and also that it doesn't have excess liquidity this liquidity ratio should be neither low nor high. Therefore it is necessary to strike a proper balance between liquidity and lack of liquidity.

In this regards Pandey I.M. says. "in fact, analysis of liquidity needs the preparation of cash budgets and cash and fund flow statements: but liquidity ratios, by establishing a relationship between cash and other current assets to current obligations, provide a quick measure of liquidity." *(Pandey:1992:115)*

**i)    Current Ratio**

Current ratio is the test of liquidity it evaluates short-term debt paying ability of the firm. It measures the availability of current assets for meeting current liabilities. This ratio is also called working capital ratio.

It is calculated by dividing current assets by current liabilities. A ratio of 2:1 is regarded as standard. Current assets are those assets which are expected to be converted into cash or consumed in the production of

goods and services in normal course of time. Current liabilities which fall due for payment in the relatively short period of time.

$$\text{Current Ratio} = \frac{\text{current assets}}{\text{Current liabilitie s}}$$

## ii)    Quick/Liquid Ratio

Quick ratio measures the short-term liquidity of the firm but it emphasized the instant debt paying capacity of the firm. Liquidity refers to the ability of a concern to meet its current obligations as and when these become due. The current assets should be either liquid or near liquidity. It include current assets less stock and prepaid expenses. Liquid ratio is also called Acid test ratio. Liquid ratio is calculated by dividing liquid or quick assets by curent liablilities and a ratio of 1:1 is regarded as standard.

It shows the ability of the firm to pay off its current obligations with out relying on the sales and collection of inventories. It is considered that if the quick asset are equal to current liabilities, then the firm may be able to meet its short-term obligations without any financial difficulties to it. A high quick ratio indicates that the firm is liquid and has ablility to meet it current  liabilities in time and on the other hand, a low quick ratio denotes that the firm's liquidity position is not good.

$$\text{Quick Ratio} = \frac{\text{Liquid assets}}{\text{Current liabilitie s}}$$

## b)    Activity Ratio

"Activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. *(Pandey:1992:120)*

### i) Inventory Turnover Ratio

Inventory turnover ratio indicates the efficiency of the firm is selling its products or the inventory turnover ratio shows how rapidly the inventory is turning into receivable through sales. Generally, a high inventory turnover is indicating of good inventory management. A low inventory turnover implies excessive inventory levels than warreanted by production and sales activities, or a slow moving or absolute inventory. It is calculated by dividing the cost of good sold by the Average inventory i.e.

$$\text{Inventory Turnover Ratio} = \frac{\text{cost of good sold}}{\text{Average inventory}}$$

Or

$$\text{ITR} = \frac{\text{Sales}}{\text{Closing Stock}}$$

"Inventory turnover ratio, it may be recanted, indicates the number of times inventory is replaced during the year. It measures the relationship between the cost of goods sold and the inventory level. *(Khan:1992:111)*

### ii) Current assets Turnover Ratio:

It is a relationship between sales and current assets. It shows the efficiency of utilizing current assets. The ratio shows the requirement of efficiency of utilizing current assets. The ratio shows the requirement of current assets for one Rs. of sales. A high current assets as a respect of high turnover ratio may reflects adequacy of current assets as respects of high turnover of inventory or receivable where as low return over ratio shows an inadequacy of current assets turnover ratio can be calculated

$$\text{Current assets turnover Ratio} = \frac{\text{Sales}}{\text{current assets}}$$

**iii)  Receivable Turnover Ratio:**

The receivable turnover ratio is a relationship between account receivable and credit sales. It indicates the velocity of debt collection of a firm. The higher ratio shows the more efficient is the management on collecting the cash from debtors a low ratio shows that debts are not being collected rapidly. The receivable turnover can be calculated as

$$\text{Receivable Turnover Ratio} = \frac{\text{Total Sales}}{\text{Receivable}}$$

**iv)  Days Sales Outstanding (DSO) :**

Days sales outstanding is used to apprise account receivable and it is computed to find out the number of days sales died up receivable. Thus the DSO represents the average length of time that the firm must wait after making a sale before receiving cash and it is computed by dividing average daily sales into account receivable.

$$\text{Days sales outstanding} = \frac{\text{Receivable}}{\text{Average sales per day}}$$

Minimum days are preferable which shows that the firm is collectin from the debtor within short period where as maximum days are not preferable for the firm.

**3)  Leverage Ratio:**

The leverage ratio also termed as solvency ratio or capital structure ratio. The leverage ratios are calculated to judge the long term financial position of a firm. This ratios measures the enterprise's ability to pay the interest regularly and to repay the principal on maturity.

"The leverage or capital structure ratio may be defined as financial ratio which throws light on the long-term solvency of a firm as reflected in its ability to assure the long-term creditors with regard to i) Periodic payment of interest during the period of the loan and ii) Repayment of principal on maturity or in predetermine installment at due dates."

**i)      Debt-equity Ratio**:

The relationship between long term debts and owner's equity is known as debt-equity ratio. It is a popular measure of the long-term financial solvency of a firm. It is calculated in the following way.

$$\text{Debt-equity ratio} = \frac{\text{long term debts}}{\text{Share - holder' s equity}}$$

A high ratio shows the large share of financing by the creditors as compare to that of owners it indicates the margin of safety to the owners. The creditors prefer low debt-equity ratio. A low debt-equity ratio implies large safety margin for creditors.

A high ratio is more risky than low ratio. Higher ratio shows that more of the funds invested in the business are provided by outsider. The lower ratio shows that more of the funds invested in the business are provided by the owners.

**4)      Profitability Ratio**

Maximization of profit is the main objective of each and every business concern. It is very necessary to earn maximum profit for the successful running of a business concern. According to Lord Keynes, profit is the engine drives the business enterprises. The profit is also important to preserve the existence of business as well as strengthen and expand it.

a)     This ratio expenses the  relationship between gross profit and sales. The calculation of this ratio is done on the basis of total profit and sales. Generally, it is expressed in percentage. The ascertainment of gross profit is completed by reducing cost of good sold from sales. The formula of this ratio is as follows:

$$\text{Gross Profit Margin} = \frac{\text{gross profit}}{\text{Sales}}$$

A higher ratio is a sign of efficient management, which reflects lower cost of goods sold and maximizing profit, on the other, a low ratio may reflects higher cost of good sold due to the firm's inability to purchase at favorable terms.

**b)     Net Profit Ratio**

From this ratio, the relation between sales and net profit becomes clear. The amount after subtracting the whole operating expenses, income tax, interest etc. from the gross profit is known as net profit. To ascertain this ratio, the net profit it is divided by sales. The formula for ascertainment of this ratio is as under;

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Sales}}$$

A higher ratio is an indication of the higher over all efficiency of the business and better utilization of total resources. Poor financial planning and low efficiency is the indication of lower ratio.

**c)     Return on Assets Ratio:**

This ratio establishes the relationship between net profit and total assets. This ratio is also called profit to assets ratio. It is shown in

percentage. The ascertain it, different formula can be used which are as follows:

$$\text{Return on Assets Ratio} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

This ratio measures the profitability of all financial resources invested in the firm's assets. Hence, the higher ratio implies that the available sources and tools are employed efficiently.

## B)  Statistical tools:

To evaluate the position of capital structure of a firm, statistical tools plays vital role. By the help of statistical tools, a financial manger can easily observe that the position of capital structure that what is happening? Thus, the statistical tools can be used as supporting tools of financial tolls. In this study, to analyze the capital structure of three joint venture banks, the following different statistical tools can be used. They are as follows;

## i)  Arithmetic Mean:

It is also called simply mean, which is used to measure the average value of given observations. The arithmetic mean is the most popular and commonly used statistical average.

"Arithmetic mean of a given set of observations is their sum divided by the number of observations." *(Gupta:1997:755)*

$$\overline{X} = \frac{\sum X}{N}$$

Where as,

$\overline{X}$ = Arithmetic mean/the average/simply mean

$\sum X$ = Sum of the total observation/sum of values

N= Number of observations

## ii)     Standard Deviation:

The standard deviation is the most important and widely used measure of dispersion or variability. The standard deviation is the square root of the mean squared deviations from the arithmetic mean and is denoted by S.D. or $\sigma$ (i.e. sigma). The S.D. is also called 'root-mean-squared-deviation'. *(Shrestha:2053:112)*

The standard deviation, usually denoted by the letter $\sigma$ (small sigma) of the Greek alphabet was first suggested by Karl Pearson as measure of dispersion in 1893. It is defined as the positive square root of the arithmetic mean. Thus, if $X_1, X_2, \ldots\ldots\ldots, X_n$ is a set of n observations then its standard deviation is given by:

$$\sigma = \sqrt{\frac{\sum (X - \overline{X})^2}{N}}$$

Where as, $\sigma$ = Standard deviation of observations.

X= Observed value

X= Mean of vaiance

N= Number of observation

Higher the value of s.d., higher the risk and lower the s.d., lower the risk for the company.

### iii)   Co-efficient of Variation

"The co-efficient of variation (cv) is the relative measure based on the standard deviation and is defined as the ratio of the standard deviation to the mean expressed in percent." *(Ibid:114)*

Standard deviation is only an absolute measure of dispersion, depending upon the units of measurement. The relative measure of dispersion based on standard deviation is called co-efficient of standad deviation and is given by:

Co-efficient of variation(CV)=S.D./mean

Where, the lower coefficient of variation is preferable to the company and vice-versa.

### iv)   Correlation Analysis:

The correlation analysis is a statistical tool, which is used to measure the relationship between among or more variables.

The correlation analysis is a statistical tool, which studies the relationship between two variable and correlation analysis involves various methods and techniques used for studying and measuring the extent of the relationship between the two variables.

Correlation is an analysis of the co-variance between two or more variables.

"When the relationship is of a quantitative nature, the appropriate statistical tools for discovering and measuring the relationship and expressing it in a brief formula is known as correlation. *(Ibid:511)*

Therefore, correlation is a most widely used statistical tool to measure the degree of relationship or association between among two or

more variables. It shows the relationship between dependent and independent variables.

The commonly used methods for studying the correlation between two variables are as follows;

(1) Scatter diagram method
(2) Karl Pearson's coefficient of correlation method
(3) Rank method
(4) Two-way frequency table method
(5) Concurrent deviation method

Among these above methods, the most widely used method in practice, Karl Pearson's coefficient of correlation method can be used to analyze the date (i.e. position of capital structure of three joint venture banks in this study).

A mathematical method for measuring the intensity or the magnitude of linear relationship between two variables series was suggested by Karl Pearson (1867-1936) and this method is also called covariance method. Karl pearson's also known as pearsonian measures correlation coefficient between two variables (series) x and y. Usually, denoted by r(x,y) or rxy or simply r is numerical measure of linear relationship between them and is defined as the ratio of the covarince between x and y, written as cov. (x,y) to the product of the standard deviation of x and y.

Symbolically,

$$r = \frac{Cov.(x, y)}{\sigma_x \sigma_y}$$

Where, r= correlation coefficient

X & y= Series

$\sigma_x$ = Standard deviation of x

$\sigma_y$ = Standard deviation of y

Cov. = covariance

This formula correlation coefficient can be written as;

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{\left[N\sum X^2 - (\sum X)^2\right]\left[N\sum Y^2 - (\sum Y)^2\right]}}$$

Where, n= number of pairs of observation

$$\sum = \text{summation (total)}$$

**Properties of correlation coefficient:-** The following are the important properties of correlation coefficient.

The value of correlation coefficient lies between -1 to +1. (i.e. $-1 \leq r \leq +1$)

Correlation coefficient is dimensionless (i.e. the value of r has no unit).

It's formula is symmetrical (i.e. $r_{xy}=r_{yx}$).

It is independent of the change of origin (i.e. $r_{xy}=r_{uv}$).

Where, u=X-A & v=Y-B and A&B are assumed means.

It is the geometric mean between two regression coefficients i.e. r= $\sqrt{b_{xy}b_{yx}}$

Interpretations:

If r=1, i.e. there is perfect positive relationship between the two variables.

If r=-1, i.e. there is perfect negative relationship between the two variables.

If r=0, i.e. there is no correlation at all.

The closer the value of r is to 1 or -1, the closer the relatinship between the variables and the closer r is to 0, the less close relatinship, while estimating the value of

one variable from the value of other varible, the higher the value of r, the better the estimates.

**v)      Coefficient of Determination**

Coefficient of determination between two variables series is a measure of linear relationship between them and indicates the amounts of variation of one variable, which is associated with or is accounted for by another variable. A more useful and readily comprehensible measure for this purpose is the coefficient of determination, which gives the percentage variation in the dependent variable that is accounted for by the independent variables. In other words, the coefficient of determination gives the ratio of explained variance to the total variance. The coefficient of determination is given by the square of the correlation coefficient, i.e. $r^2$. Thus; Coefficient of determination can be calculated as under.

$$\text{Coefficient of determination } (r^2) = \frac{\text{Explained Variance}}{\text{Total Variance}}$$

The coefficient of correlation is a much useful and better measure for interpreting the value of r.

**vi)      Probable Error**

Probable error correlation is an old measure testing the reliably of an observed value of correlation coefficient. It is calculated to find the extend to which correlation coefficient is dependable as it depends upon the condition of random sampling. Probable error of correlation coefficient denoted by P.E. ® is obtained as,

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

Where,

      r= calculated correlation coefficient

      n=Number of observation

# CHAPTER-IV

# PRESENTATION AND ANALYSIS OF DATA

## 4.1    Introduction

In this chapter the effort has been made to analyze the working capital management of which is the main objective of the study. This chapter will present the analyses of components of working capital of which includes size; structure and utilization of current assets, and current liabilities, relationship between current assets and fixed assets, remover position, investment in current assets are presented in tabular and graphical form and analyzed the data using various ratios along with correlation and regression as mentioned previous chapter.

## 4.2    Working capital policy

Working capital policy refers to the firm basic policies regarding the targets level for each category of current assets and current liabilities working capital management refers to the administration of all current assets and current liabilities. Working capital management refers to the administration of all current assets and current liabilities in proper way. Every firm wants to maximize wealth of its shareholders. In order to achieve the target goals it has to perform many functions. For this purpose, firms has to determine the suitable current assets investment policy maintain proper relation of current assents with fixed and total assets and finance the current assets with short term as well as long term sources. Thus the better performance of current assets is the integral part of working capital management.

### 4.2.1  Composition of Current Assets

Any firm has to maintain the appropriate level of current assets to run the business smoothly. The business firm requires the different type of current assets to run their business without current assets no business can run. The success and the failure of any business firm are depends upon the proper management of current assets. The major components of current assets are inventories, Sundry debtors, cash and bank balance etc. The firm has risk adverse management maintain the high liquidity of the firm by holding the large proposition of current assets in total working capital. So fix the current assets policy in term of the holding of more liquid assets.

Objectives of any business organization is earn maximum profit and ultimately maximize the shareholders wealth from its operations. Which depends upon the volume of sales. So, the firms has to invest enough funds in current assets in order to increase the sales if the sales cannot be converted into cash immediately the extra amount of working capital is needs. So, the effective composition of the current assets has the greater impact on the whole working capital management as well the success or failure of the organization. So we are presenting the data of current assets of dairy development corporation.

## Table No: 1

## Dairy Development Corporation

## Composition of current Assets

| F\Y | Inventories | Sundry | Cash & Bank Balance | Advance payment | Total cash |
|---|---|---|---|---|---|
| 2061/062 | 172200000 | 33840000 | 20460000 | 126220000 | 352720000 |
| 2062/063 | 13247000 | 4931000 | 99510000 | 171000000 | 452200000 |
| 2063/064 | 293930000 | 32180000 | 6270000 | 235200000 | 567580000 |
| 2064/065 | 126110000 | 64770000 | 317400000 | 81600000 | 589880000 |
| 2065/066 | 14450000 | 32160000 | 62340000 | 160190000 | 399140000 |

Sources: Calculated Data from the Balance Sheet of DDC

## Table No: 2

## Dairy Development Corporation

## Percentage Composition of Current Assets ( in percentage )

| Fiscal | Inventories | Sundry debtors | Cash & Bank Balance | Advance payment |
|---|---|---|---|---|
| 2061/062 | 48.82 | 9.60 | 5.80 | 35.78 |
| 2062/063 | 29.29 | 10.90 | 22.00 | 37.81 |
| 2063/064 | 51.79 | 5.67 | 1.10 | 41.44 |
| 2064/065 | 21.38 | 10.98 | 53.81 | 13.83 |
| 2065/066 | 36.19 | 8.06 | 15.62 | 40.13 |
| Average | 37.49 | 9.04 | 19.67 | 33.80 |

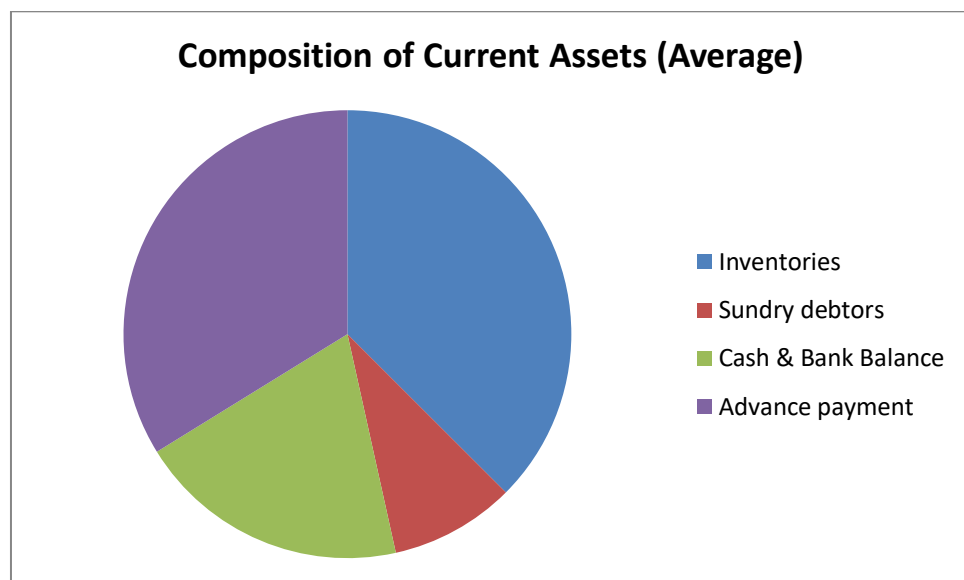Sources: calculated Data from the Balance sheet of DDC

The above table no: 1 shows the composition of current assets and table no: 2 show the proportion of individual current assets in composition of total current assets of DDC. For five fiscal years, the components of current are inventories. Sundry debtors, cash and bank and miscellaneous current assets.

The above table no: 2 shows that inventories hold the major portion of current assets, which is relatively higher in each year, During the study period, the proportion of inventories to the total current assets are 48.82 %, 29.29 %,51.79 %, 21.38 %, and 36.19 % respectively. It shows more than 45% of current assets are covered by inventories except in fiscal year 062/063, 064/065. and 065/066. proportion of inventories has been fluctuated in between 51.79 % to 31.38% during the study period the average percentage of inventories is 37.49 % company's inventories includes the raw materials. Work in progress and finished goods. The proportion of study debtors to the total current assets are 9.60 %, 10.90 %. 5.67 %, 10.98 %, 8.06 L% respectively. Proportion of sundry debtors has been fluctuated in between 10.98 % to 5.67 % during the observed fiscal years. The average percentage of sundry debtors is 9.04 % which is less than of the 061/062/063 and 064/065 but it is more than that of the 063/064 and 065/066

According to the above table no: 2 cash and bank balance has the least holding proportion among the other components of current assets. The proportions of cash and bank balance to current assets are 5.80%, 22. %. 1.1 %, 53.81 % and 15.62 % it is also fluctuating during the study period, in the fiscal year 064/05 the proportion of cash and bank balance is 19.67 % which is less than that of the fiscal year 062/063 and 065/066.

In the table miscellaneous current assets, It includes advance to employee, deposits, expense, in government bond and other etc. It is major component of current assets its proportion in total current assets are 35.78 %. 37.81 %. 41.44 %, 13.83 % and 40.13 %. Fiscal year 063/064 has highest proportion among the other fiscal year. Like other current assets its proportion are also fluctuated. Its fluctuated in between 41.44 % to 13.83 % during the whole study period. The average percentage of miscellaneous current assets 33.80 % which is less than that of the all fiscal year except 064/065. This figure clearly shows that the components of current assets are fluctuating during the study period. However company holds large portion of inventories during the study period.

**Figure: 1**



**Composition of Current Assets (Average)**

- Inventories
- Sundry debtors
- Cash & Bank Balance
- Advance payment

### 4.2.2  composition of current liabilities:-

The entire obligation which have to pay short tern, sundry creditors, provision for taxation, interest payable on loan advance from customer and other, deposit ( Retention money ), staff provident fund, unclaimed dividend, proposed dividend, outstanding expenses bills etc, firm should maintain the optimum level of liquidity in order to enable the

organization to meet the current obligation, firm has to rise from short team as well as long term sources to meet its short term obligation, short term sources funds, firm raised by deferent components of current liabilities. Components should be according to the requirement. But the proportion of different components of current liabilities depends upon the financial policy of the firm. Thus, the composition of current liabilities must be analyzed for proper management of working capital.

The Current liabilities Dairy Development Corporation contain loan and advances, sundry creditors and miscellaneous current liabilities. The table no: 3 shows the amount of different components of current liabilities holds by DDC and table no: 4 shows the percentage proportion of different components to total current liabilities.

### 4.2.2 Composition of current liabilities:-

The entire obligation which have to pay short term loan, sundry creditors, provision for taxation, interest payable on loan advance from customer and others, deposit (Retention money), staff provident fund, unclaimed dividend, proposed dividend, outstanding expenses bills etc, firm should maintain the optimum level of liquidity in order to enable the organization to meet the current obligation, firm has to rise from short term as well as long term sources to meet its short term obligation, short term sources funds, firm raised by different components of current liabilities. Components should be according to the requirement. But, the proportion of different components of current liabilities depends upon the financial policy of the firm. Thus, the composition of current liabilities must be analyzed for proper management of working capital.

The current liabilities of Dairy Development Corporation contain loan and advances, sundry creditors and miscellaneous current liabilities.

The table no:3 shows the amount of different components of current liabilities hold by DDC and table no.4 shows the percentage proportion of different components to total current liabilities.

**Table No: 3**

**Composition of Current Liabilities**

**Dairy Development Corporation**

NRS

| Fiscal Year | Short term Loan | Trade and other payable | Provisions | Total current Liabilities |
|---|---|---|---|---|
| 2061/062 | 6510000 | 142860000 | 117810000 | 267180000 |
| 2062/063 | 0 | 156180000 | 148630000 | 304810000 |
| 2063/034 | 145080000 | 129350000 | 143630000 | 418070000 |
| 2064/065 | 0 | 96590000 | 126620000 | 223210000 |
| 2065/066 | 0 | 247010000 | 179440000 | 426450000 |
| Average | 30318000 | 154400000 | 143226000 | 327944000 |

Sources: Calculated data from the balance sheet of DDC

# Table No: 4

## Dairy Development Corporation

### Percentage Composition of Current liabilities

| Fiscal Year | Short term Loan | Trade and other payable | Provisions |
|-------------|-----------------|-------------------------|------------|
| 2061/062 | 2.44% | 53.47% | 44.09% |
| 2062/063 | - | 51.24% | 48.76% |
| 2063/034 | 34.70% | 30.94% | 34.36% |
| 2064/065 | - | 43.27% | 56.73% |
| 2065/066 | - | 57.92% | 42.08% |
| Average | 7.43% | 47.37% | 45.20% |

Sources: Calculation Data from the Balance Sheet of DDC

According to above table the highest amount of loan and advances of Rs 145080000 exist in fiscal year 063/064, which is 34.70% of total current liabilities but high level of fluctuation exist in the short term loan and advance during the study period, short term loan is DDC in the fiscal year 062/063, 064/065 and 065/066. Short term loan has covered small portion of total liabilities but the provision and trade and other payable has covered large portion of total liabilities. The average proportion of short term loan is 7.43% which is greater than fiscal year 061/062 but less than 063/064 and other three years has nil.

The highest amount at trade and other payable is Rs 247010000 exist in fiscal year 065/066 which is 57.92% of total current liabilities and it is highest proportion among the fiscal year. The average proportion of trade and other payable 47.37% which is higher than fiscal year 063/064 and 064/065 but less than 061/062, 062/063 and 065/066 trade and other

payable is also fluctuating during the observed period. Trade and other payable has covered large portion of total liabilities. Generally it has amount applied than other liabilities during the study period. So, it is major component of current liabilities for DDC.

Provision is also major component of current liabilities for DDC because it has also covered large portion at total current liabilities. The highest amount of provision is 179440000 exist in fiscal year 065/066 which is 42.08% of total current liabilities but it is not highest proportion of 56.73% which is Rs. 126620000. It is also fluctuating during the study period. Its proportion ranges from 34.36% to 56.73% during the study period. It il least in the fiscal year 063/064 and highest in the fiscal year 064/065. The average percentage of provision is 45.02% which is less that of the fiscal year 062/063 and 064/065 but greater than 061/062, 063/064 and 065/066.

**Figure : 2**
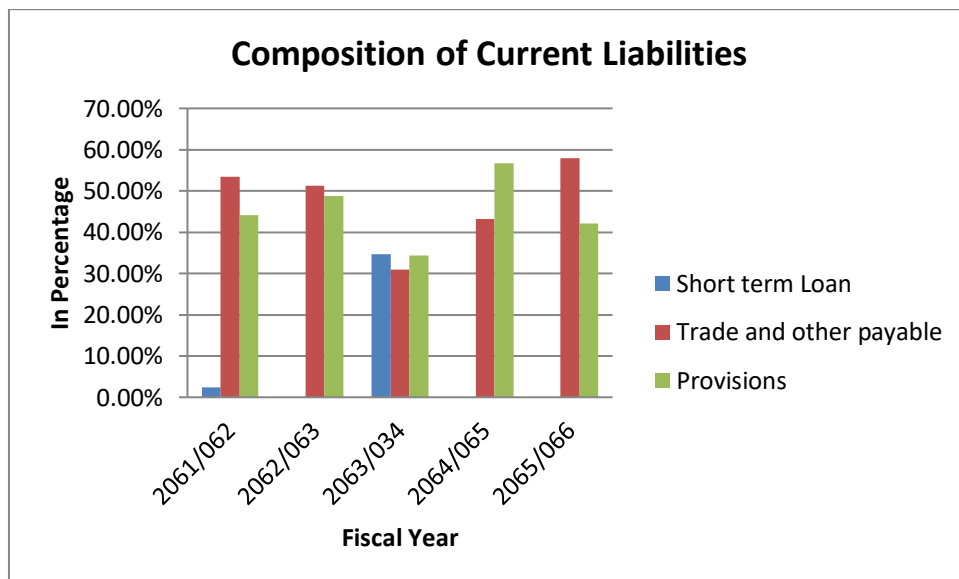
### 4.2.3 Net Working Capital

The difference between current assets and current liabilities is called net working capital. Net working capital is calculated by subtracting the current liabilities from current assets. Net working capital can be positive or negative. Positive net working capital indicates the firm has ability to pay its current obligation and the negative working capital indicates the inability to pay its current obligation.

Net working capital of DDC in the table no: 5 shows the difference amount of net working capital holds by DDC and figure no : 3 shows its trend.

**Table No: 5**

**Net Working Capital of Dairy Development Corporation**

| Fiscal Year | Current Assets | Current Liabilities | Net Working Capital |
|-------------|----------------|---------------------|---------------------|
| 2061/062 | 35272000 | 267180000 | 85540000 |
| 2062/063 | 452290000 | 304810000 | 147480000 |
| 2063/034 | 567580000 | 418070000 | 149510000 |
| 2064/065 | 589880000 | 223210000 | 366670000 |
| 2065/066 | 399140000 | 426450000 | -27310000 |

Sources : Calculated Data from the Balance Sheet of DDC

**Figure No : 3**
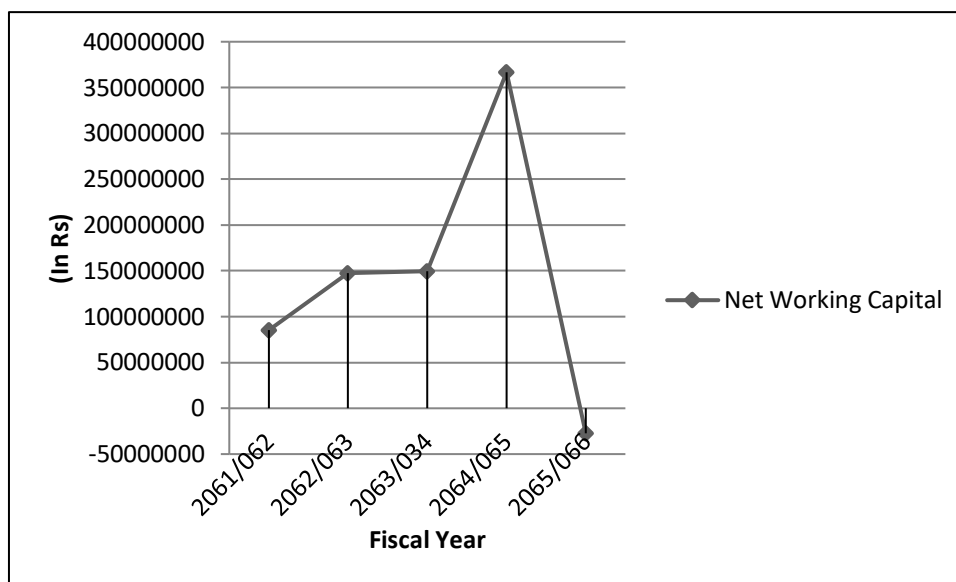


According to the table no: 5 the net working capital of DDC for the five years are Rs. 85540000, 147480000, Rs 149510000, Rs 366670000 and -27310000 respectively. In year 061/062, 062/063, 063/064 and 064/065 working capital of DDC is positive figure. It indicates that in these years the firm has more current assets than its current liabilities. In year 065/066, the net working capital of DDC is in negative figure. It indicates that in this year the firm has more obligation than its current assets. In this year the company is able to pay its current liabilities. From the year 061/062 to 064/065 the net working capital is in increasing trend.

## 4.3 Liquidity Management

Liquidity refers to the ability of a concern to meet its current obligation when they become due. The short term obligations are met by realizing amounts from current assets. The current assets should be either in liquid firm or in near liquid firm. These should be convertible into cash for paying obligation of short term nature. Comparing them with short term liabilities should assess the sufficient and insufficient of current assets. If current assets can pay current liabilities then liquidity position

will be satisfactory and vice versa. Due to the above reasons it is necessary to analyze the liquidity position of DDC. The following ratios have been calculated to evaluate the short term financial solvency position of DDC.

     i.     Current Ratio

    ii.     Quick Ratio

## 4.3.1 Current Ratio:

It is the relationship of current assets and current liabilities. Higher the current ratio better is the liquidity position lower the current ratio of a firm shows the solvency position of the firm is not good. For many types of business 2:1 is considered to be an adequate ratio. Dividing the total current assets by total of current liabilities makes the calculation. Thus

$$\text{Current Ratio} = \frac{\text{current assets}}{\text{Current liabilitie s}}$$

The current ratio of a firm measures its short term solvency i.e. its ability to meet short term obligation. As a measure of short term current financial liquidity. It indicates the rupee of current assets available for current liabilities obligation. In this study also this ratio has been used to measure the liquidity position of DDC. This ratio is calculated by dividing current assets divided by current liabilities.

**Table No: 6**

**Calculation of Current Ratio of DDC**

| Fiscal Year | Current Assets | Current Liabilities | Current Ratio |
|---|---|---|---|
| 2061/062 | 352720000 | 267180000 | 1.32:1 |
| 2062/063 | 452290000 | 304810000 | 1.48:1 |
| 2063/034 | 567580000 | 418070000 | 1.36:1 |
| 2064/065 | 589880000 | 223210000 | 2.64:1 |
| 2065/066 | 399140000 | 426450000 | 0.94:1 |

Sources: Consolidated Balance Sheet from 061/062 to 065/066 of DDC

Above table no: 6 shows the liquidity position of DDC. In this regard DDC current ratio lay between 0.94:1 to 2.64:1 during those five years; it was 0.94:1 in fiscal year 065/066. In this year a firm is not able to pay its current obligation. The ratio for the another fiscal years is greater the one. In hese years a company is able to pay its current obligations. Analysis of ratio shows that liquidity position of DDC is weak in 065/066, further the table shows that the company has sufficient liquidity position to met its short term financial obligation. Generally, the current ratio is considered as perfect when it becomes 2:1. During the period one year (064/065). It can be concluded that the company has not perfect liquidity position.

**4.3.2 Quick Ratio:**

It is the relationship of quick assets and current liablilities. The quick assets include all the current assets except inventories and prepaid amount. Higher the quick ratio better is the liquidity position and lesser current ratio shows that the solvency position of the firm is not good. As

a convention generally 1:1 is considered to be satisfactory. The quick ratio calculated in following way.

$$\text{Quick Ratio} = \frac{\text{Quick assets}}{\text{Current liabilitie s}}$$

Current ratio measures the short term solvency in gross term. It includes less liquid assets i.e. inventory. Thus it does not measure the actual liquidity position of the firm. So, quick ratio has been used to measure the liquidity position of DDC in net terms for that inventories have been excluded from total current assets.

**Table No: 7**

**Calculation of Quick Ratio**

**Dairy Development Corporation**

| Fiscal Year | Quick Assets (CA-Inventory) | Current Liabilities | Quick Ratio |
|---|---|---|---|
| 2061/062 | 180.52 | 267.18 | 0.68:1 |
| 2062/063 | 319.82 | 304.81 | 1.05:1 |
| 2063/034 | 273.65 | 418.07 | 0.65:1 |
| 2064/065 | 463.77 | 223.21 | 2.08:1 |
| 2065/066 | 254.69 | 426.45 | 0.60:1 |

Sources: Consolidated Balance Sheet of Dairy Development Corporation

The quick ratio of 1:1 of a firm is considered as good position. But the quick ratio of DDC for the many years is less than the considerable ratio. So, the company maintains low level of quick assets. But some year maintain high level of quick assets than considerable ratio. It varies from 0.60 to 2.08 times. It is 2.08 in fiscal year 064/065, which is the highest in the observed years.

The first fiscal year, third fiscal year and fifthe fiscale year, the company have weak liquidity position because in these fiscal years the company's quick ratio is less than one and remaining two fiscal years the company has maintain high level of quick assets.

## 4.4 Activity Ratio/Turn over Ratio/Assets management Ratio

The relationship between sales and assets are indicated by turnover ratios. These ratio reflect how efficient the company is managing its resources. Thus this ratios measures the degree of effectiveness in use of resources by a firm.

The assets management ratio measures how efficiently the firm is managing its assets. It reported that the level of each assets is reasonable too high or too low in view of current and projected operatiing level. If the assets are too high, the interest expenses will be too high and hence their profits be depressed and on the other hand if assets are too low, profitable sale may be cost.

### 4.4.1 Inventory Turnover Ratio:

It is also known as stock turnover ratio. The inventory turnover ratio indicates as to how fast the goods are sold. The ratio shows the efficiency of business concerning in an inventory management. A high inventory turnover is indicative of good inventory management. A low inventory turnover implies excessive inventory levels than warranted by production and sales activities. The method of calculating this ratio is as follows:

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

Or

$$\text{Inventory turnover ratio} = \frac{\text{Sales}}{\text{Closing inventory}}$$

Inventory turnover ratio shows the relationship between the sales and inventory. It also shows the efficiency of inventory management and it is also used to measure the liquidity of inventory. High inventory turnover ratio shows optimum-utilization of inventory and vice versa. In DDC, inventory includes raw material, packing material, work in progress, finished goods and store and spares parts etc. Inventory ratio can be calculated by dividing sales by inventories. The calculated inventory turnover ratio are given in table no: 8.

**Table No: 8**

**Inventory Turnover Ratio of Dairy Development Corporation**

| Fiscal Year | Sales | Inventory | Inventory turnover Ratio |
|---|---|---|---|
| 2061/062 | 1503690000 | 172200000 | 8.73 times |
| 2062/063 | 1728630000 | 132470000 | 13.05 times |
| 2063/064 | 1540990000 | 293930000 | 5.24 times |
| 2064/065 | 1236050000 | 126110000 | 9.80 times |
| 2065/066 | 1244730000 | 144450000 | 8.62 times |

Sources: Consolidated balance Sheet and income statement of DDC

The above table no: 8 shows the inventory turnover position of DDC. It is fluctuating during the study period. It is varies from 5.24 to 13.05 times. It is increasing and decreasing after each year. It is found that in year 062/063 the inventory turnover is higher. So, in this year the low inventory is kept in the firm. It indicates that the high sales by using the optimum raw materials and in the fiscal year 063/064, the inventory

turnover ratio are lowest which indicates the low sales of finished goods and low utilization of raw material.

**Figure 4**



Proportion of inventory to sales
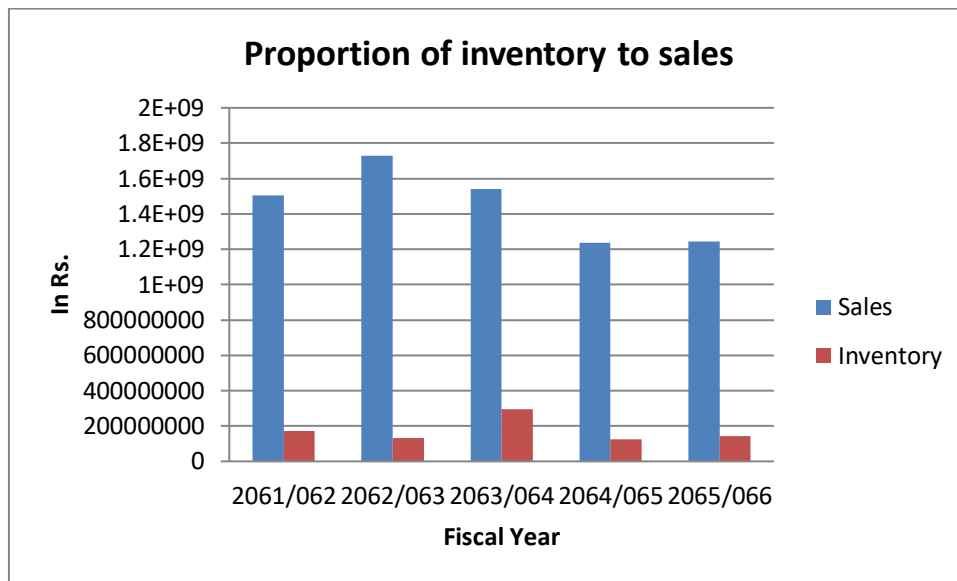
**4.4.2 Receivable Turnover Ratio**

The receivable turnover ratio is a relationship between account receivable and credit sales. It indicates the velocity of debt-collection of a firm. The higher ratio shows the more efficient is the management on collecting the receivable. It indicates that within short period, the firm is collecting the cash from debtors; a low ratio shows that debts are not being collected rapidly. The receivable turnover can be calculated as:

$$\text{Receivable turnover ratio} = \frac{\text{Sales}}{\text{Account receivable}}$$

Or

$$\text{Receivable turnover ratio} = \frac{\text{Total Sales}}{\text{Receivable}}$$

It also play vital role to determine the liquidity position of the company. It indicates the speed with which receivables are being

converted into sales. The higher turnover ratio shows the higher degree of liquidity of receivable and vice versa. The table below shows the sales to receivable ratio. This ratio helps to analyze the capacity of DDC, management in utilization of fund in current assets this company used to sell all products except the wastage of the soap and detergents on credit. So, all sales are assumed as credit sales for the purpose of the calculation of receivable turnover and average collection period (ACP). Normally, company grants the credit sales for 30 days.

**Table No: 9**

**Receivable Turnover and Average Collection Period of DDC (days in year 365)**

| Fiscal Year | Net Sales | Receivable | Receivable Turnover | $ACP=\dfrac{365}{RTR}$ |
|---|---|---|---|---|
| 2061/062 | 1503690000 | 33840000 | 44.44 times | 8 days |
| 2062/063 | 1728630000 | 49310000 | 35.06 times | 10 days |
| 2063/064 | 1540990000 | 32180000 | 47.89 times | 8 days |
| 2064/065 | 1236050000 | 64770000 | 19.08 times | 19 days |
| 2065/066 | 1244730000 | 32160000 | 38.70 times | 9 days |

Sources: Consolidated Balance Sheet of DDC

According to above table no: 9, the receivable turnover ratio and average collection period of DDC is fluctuating during the study period. It varies from 19.08 to 47.89 times with the respectively. Receivable turnover is higher in fiscal year 063/064 with the average collection period of 8 days. Standard receivable turnover of DDC is 48 times which is higher than the actual receivable turnover in each of the fiscal year during the study period.

### 4.4.3 Current Assets Turnover Ratio:

It is a relationship between sales and current assets. It shows the efficiency of utilizing current assets. The ratio shows the requirement of current assets for one Rs of sales. A high current assets turnover ratio may reflects adequacy of current assets as respects of high turnover of inventory or receivable where as low turnover ratio shows an inadequacy of current assets. The current assets turnover ratio can be calculated as:

$$\text{Current assets turnover ratio} = \frac{\text{Sales}}{\text{Current assets}}$$

The relationship between net sales and current assets in analyzed by calculating current assets turnover ratio. This turnover ratio indicates the management's efficiency in overall management of current assets. The ratio is calculated by dividing net sales by total current assets.

**Table no: 10**

**Current Assets Turnover Ratio of DDC**

| Fiscal Year | Net Sales | Current Assets | Current Assets Turnover Ratio |
|---|---|---|---|
| 2061/062 | 1503690000 | 352720000 | 4.26 days |
| 2062/063 | 1728630000 | 452290000 | 3.82 days |
| 2063/064 | 1540990000 | 567580000 | 2.72 days |
| 2064/065 | 1236050000 | 589880000 | 2.10 days |
| 2065/066 | 1244730000 | 399140000 | 3.12 days |

Sources: Consolidated Balance Sheet and P/L statement of DDC

The current assets turnover ratio indicates that current assets are used effectively to generate sales. Investment in current assets are increasing from 061/062 to 064/065 but decreasing in 065/066. During

the fiscal year 061/062 to 065/066 in DDC in 061/062 it was 4.26 times per year and 064/065, the current assets turnover ratio is 2.10 times. The assets turnover is fluctuating during the study period, it varies from 2.10 to 4.26 times. The company policy is moving towards the conservative policy because the company uses huge current assets to sales. The following chart given below can further illustrate.

**Figure 5**
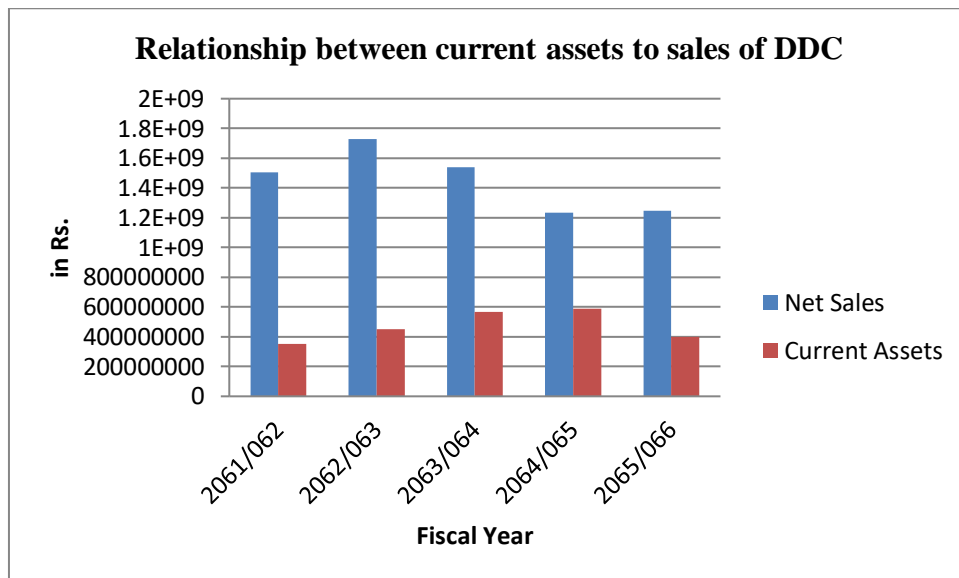


### 4.4.4 Total Assets Turnover Ratio:

It is relationship between sales and total assets. This ratio indicates how much total assets being used to generate sales. A total asset includes current assets and fixed assets. A high ratio would mean better utilization of total assets and vice versa. Total assets turnover ratio can be computed by this way:-

$$\text{Total Assets turnover ratio} = \frac{\text{Sales}}{\text{Total assets}}$$

Total assets turnover ratio indicates how much total assets being used to generate sales. Total assets include current assets and fixed assets.

The higher ratio indicates lower investment in assets to generate sales and vice versa total assets turnover ratio can be calculated as: dividing sales by total assets.

**Table No: 11**

**Total Assets Turnover Ratio of DDC**

| Fiscal Year | Net Sales | Total Assets (CA+FA) | Total Assets Turnover Ratio |
|---|---|---|---|
| 2061/062 | 1503690000 | 544820000 | 2.76 days |
| 2062/063 | 1728630000 | 630160000 | 2.74 days |
| 2063/064 | 1540990000 | 760420000 | 2.03 days |
| 2064/065 | 1236050000 | 762080000 | 1.62 days |
| 2065/066 | 1244730000 | 545300000 | 2.28 days |

Sources: Consolidated Balance Sheet and P/L statement of DDC

The above table no: 11 shows the total assets turnover ratio of DDc for five years starting from 061/062. Total assets turnover ratio is fluctuation during the study period. It varies from 1.62 to 2.76 time. Lowest turnover ratio is in 064/065 and highest turnover ratio is in 061/062. In 064/065 higher investment in assets to generate sales and in 061/062 lower investment in assets to generate sales in 064/065 huge amount of total assets is used in DDC.

**Figure 6**



Relation between Total asset and Sales of DDC
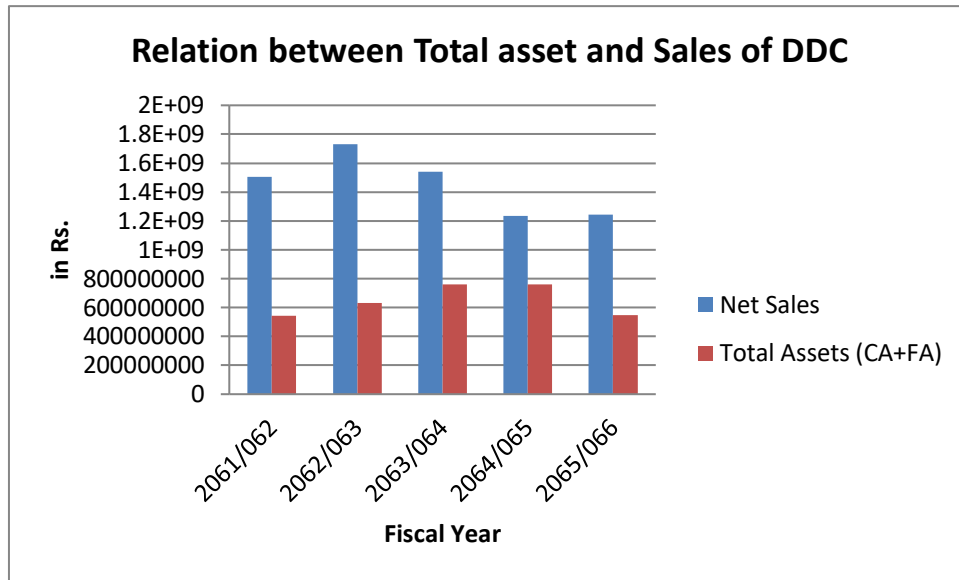
## 4.4.5 Net Working Capital Turnover:

The sales to net working capital ratio are calculated and presented in table no: 12. This also helps to analyze the efficiency of working capital management. This ratio indicates the velocity of the utilization of working capital. This indicates the number of times the working capital turnover in the course of an accounting year. This ratio also measures the efficiency with which the working capital is being used by DDC. It is calculated by this way.

$$\text{Net Working capital turnover ratio} = \frac{\text{Sales}}{\text{Net Working Capital}}$$

**Table No: 12**

**Net working capital Turnover of DDC**

| Fiscal Year | Net Sales | Net Working Capital | Net Working Capital Turnover |
|---|---|---|---|
| 2061/062 | 1503690000 | 85540000 | 17.58 days |
| 2062/063 | 1728630000 | 147480000 | 11.72 days |
| 2063/064 | 1540990000 | 149510000 | 10.31 days |
| 2064/065 | 1236050000 | 366670000 | 3.37 days |
| 2065/066 | 1244730000 | -27310000 | -45.58 days |

Sources: Consolidated Balance sheet and P/L statement of DDC

The net sales as well as net working capital are both fluctuation during the study period. This is clearly can be seen in the table. It varies from -45.58 to 17.58 times. In fiscal year 061/062, the company utilizes optimum working capital where as in 065/066 the company could not use well working capital. One fiscal year 065/066 has negative working capital i.e. -27310000 and remaining fiscal year has positive figure.

**Figure 7**



90
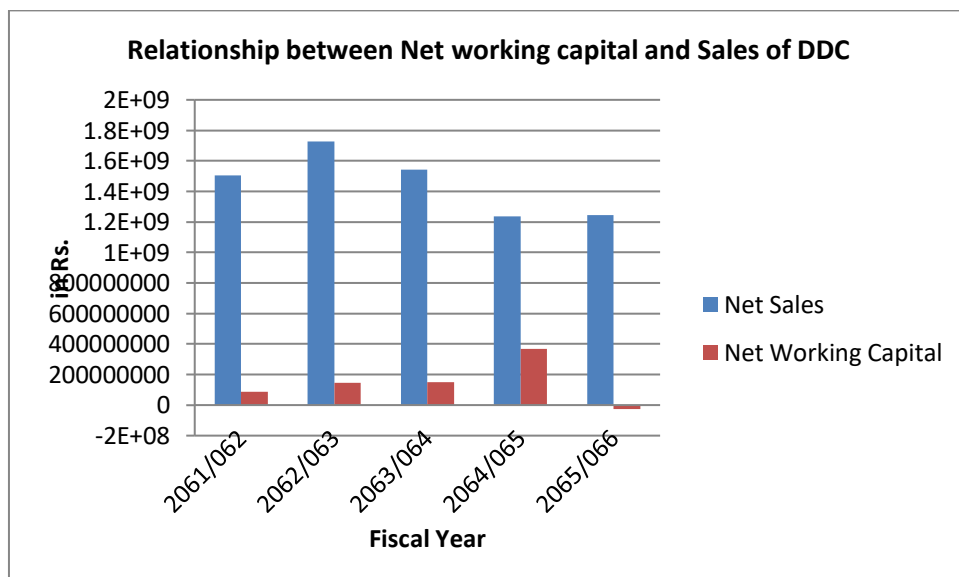
### 4.4.6 Current Assets to Fixed Assets:

For the propose of success of any manufacturing concern, firm should invest in current assets as well as fixed to support a particular level of out put. The appropriate level of current assets and fixed assets only generate the success of the firm. Therefore the firm should determine the proper portion of current assets with fixed assets. The level of current assets can be measured by relationship between current assets to fixed assets, which can help to find the current assets investment policy.

**Table No: 13**

**Relationship between CA to FA of DDC**

| Fiscal Year | Current Assets | Fixed Assets | Current Assets/Fixed Assets |
|---|---|---|---|
| 2061/062 | 352720000 | 192100000 | 2.73 times |
| 2062/063 | 452290000 | 177870000 | 2.54 times |
| 2063/034 | 567580000 | 192840000 | 2.94 times |
| 2064/065 | 589880000 | 172200000 | 3.43 times |
| 2065/066 | 399140000 | 146160000 | 2.73 times |

Sources: Consolidated Balalnce Sheet of DDC

According to the table no: 13 the ratio of current assets to fixed assets is increasing from 1.84 to 3.43 times than after it is decrease in the following year to 2.73. The ratio varies from 1.84 to 3.43 times. The lowest ratio of 1.84 in fiscal year 061/062 shows the more investment in current assets than fixed assets and the highest ratio of 3.43 in fiscal year 064/065 shows the highest invest in current assets than fixed assets. The company has more investment in current assets than fixed assets during the study period.

**Figure 8**



Relationship between Current Assets and Fixed Assets of DDC
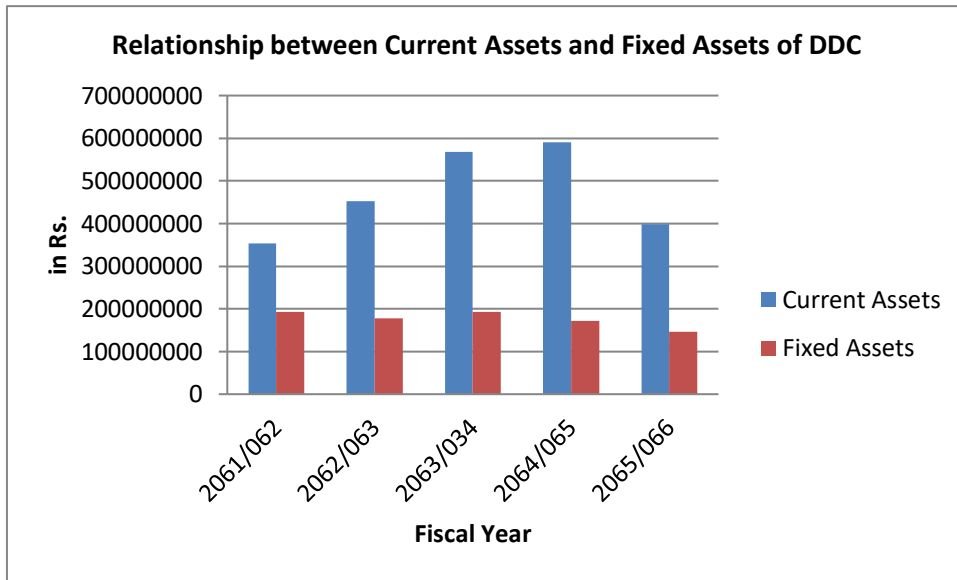
### 4.4.7 Proportion of Current Assets to Total Assets:

Current assets are generally required to meet working capital, which are fulfill the need of daily business requirements. Total assets contain sum of current assets and sum of fixed assets. Higher proportion of current assets in total assets shows the greater liquidity position of a firm and vice versa. The table given below represents the percentage of current assets on total assets.

**Table No: 14**

**Proportion of CA to Total Assets of DDC**

| Fiscal Year | Current Assets | Total Assets (CA+FA) | CA/TA×100 |
|---|---|---|---|
| 2061/062 | 352720000 | 544820000 | 64.74 % |
| 2062/063 | 452290000 | 630160000 | 71.77 % |
| 2063/034 | 567580000 | 760420000 | 74.64% |
| 2064/065 | 589880000 | 762080000 | 77.40% |
| 2065/066 | 399140000 | 545300000 | 73.20% |

Sources: Consolidated Balance Sheet of DDC

According to table no: 14 the proportion of current assets contains of more than 50% of the total assets. During the study period, the proportion of current assets to total assets are 64.74%, 71.77%, 74.64%, 77.40% and 73.20% respectively. In fiscal year 064/065 it holds the highest proportion of total assets, which is 77.40% and lowest proportion of total assets, which is 64.74% in fiscal year 061/062.

**Figure 9**
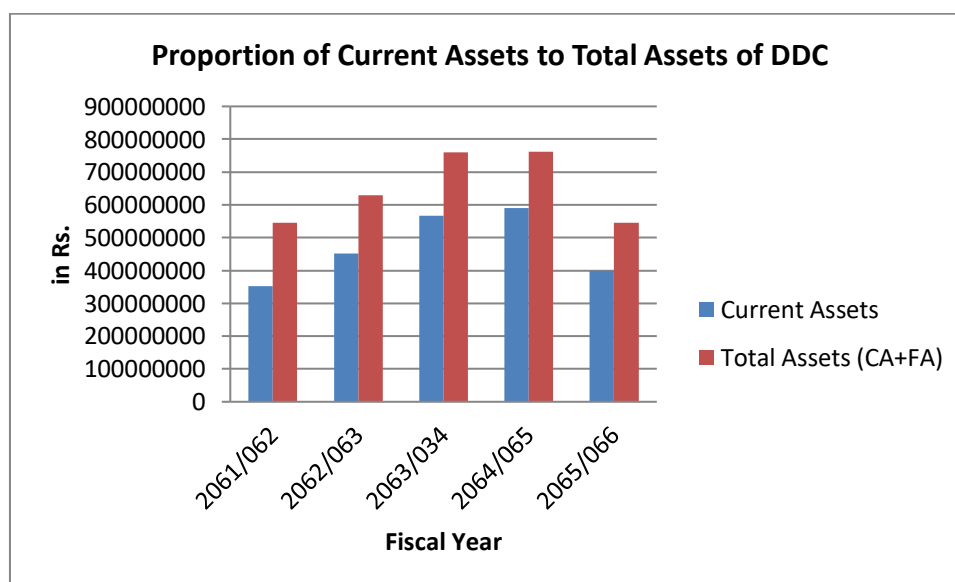
## 4.5    Solvency/Leverage/Capital Structure/Debt Management Ratio

The use of finance of is refers by financial leverage. These ratio are also called solvency ratio. The leverage ratio are calculatted to judge the long term financial position of a firm. These ratios measure the enterprise's ability to pay the interest regularly and to repay the principal on maturity.

The firms collects it's required fund by issuing share or by from long-term debt as well as short term debt. Debt refers to the funds that have been collected from the investors by paying regular interest. If firm issue the equity share, it does not have to pay regular interest. The debt management ratio affects the risks and return of the company. So, the firm should managef the proportion of debt and equity properly.

### 4.5.1  Debt to Total Capital Ratio:

This ratio shows the relationship between the long term debt and total capital. Total capital includes shareholder's equity as well as long term debt. The ratio is calculated as:

$$\text{Debt to Total Capital Ratio} = \frac{\text{Long term debt}}{\text{Total Capital}}$$

So, it is calcualated by dividing long term debt by total capital. A high raio shows the large share of financing by the creditors as compare to those owners. This means creditors would suffer more in times of distress than owners. This why creditors prefer low Debt to total capital ratio. The table is given below Debt to Total Capital ratio of DDC.

# Table No: 15

## Debt to Total Capital Ratio of DDC

(Rs. In million)

| Fiscal Year | Total Debt (Long Term Loan+CL) | Total Capital (Shareholder fund+CL) | Debt/Total Capital |
|---|---|---|---|
| 2061/062 | 267.18 | 544.28 | 0.49:1 |
| 2062/063 | 304.81 | 629.75 | 0.48:1 |
| 2063/064 | 418.07 | 760.42 | 0.55:1 |
| 2064/065 | 223.21 | 571.34 | 0.39:1 |
| 2065/066 | 426.45 | 784.88 | 0.54:1 |

Sources: Consolidated Balance Sheet of DDC

The above table no: 15 shows the debt to total capital ratio of DDC for fiscal year starting from 061/062.

More than 50% of the total capital contain by debt in fiscal year 063/064 and 065/066. The debt to total capital ratio is fluctuation from 0.39:1 to 0.55:1. In fiscal year 064/065, the less debt is used to total capital and in fiscal year 063/064, the more debt is used to total capital fund which is not good. There are only three fiscal years, which have less than 50%. Debt is used to total capital, which seems to be good for DDC to make strong position.

**Figure 10**



Debt to Total Capital Ratio of DDC
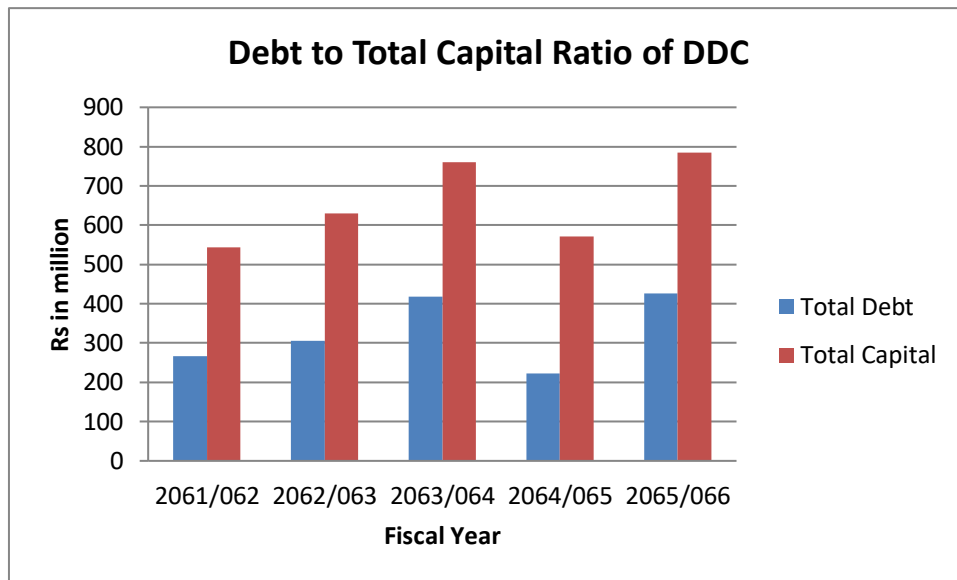
## 4.5.2 Debt Equity Ratio:

The relationship between borrowed fund and owners equity is known as Debt-equity ratio. Debt equity ratio shows the structural position of the firm.

High ratio shows the large share of financing by the creditors, as compare to that of owners, creditors always prefers low debt equity ratio. It is calculated in the following way:

$$\text{Debt-equity ratio} = \frac{\text{Total debt}}{\text{Share holder fund}}$$

**Table No: 16**

**Debt-equity Ratio of DDC**

(Rs. In Million)

| Fiscal Year | Total Debt | Shareholder's fund | Debt equity Ratio |
|---|---|---|---|
| 2061/062 | 267.18 | 277.10 | 0.96:1 |
| 2062/063 | 304.81 | 324.94 | 0.94:1 |
| 2063/064 | 418.07 | 342.35 | 1.22:1 |
| 2064/065 | 223.21 | 348.13 | 0.64:1 |
| 2065/066 | 426.45 | 358.43 | 1.19:1 |

Sources: Consolidated Balance Sheet of DDC

According to above table no: 16 the Debt equity ratio are fluctuation during the observed period. It varies from 0.64:1 to 1.19:1 ratio shows the large share of financing by the creditors, as compare to that of owners. This means creditors would suffer more in times of distress than owner. Ratio 0.64:1 shows the small share of financing by the creditors. This ratio is seems to be good.

**Debt-equity Ratio of DDC**
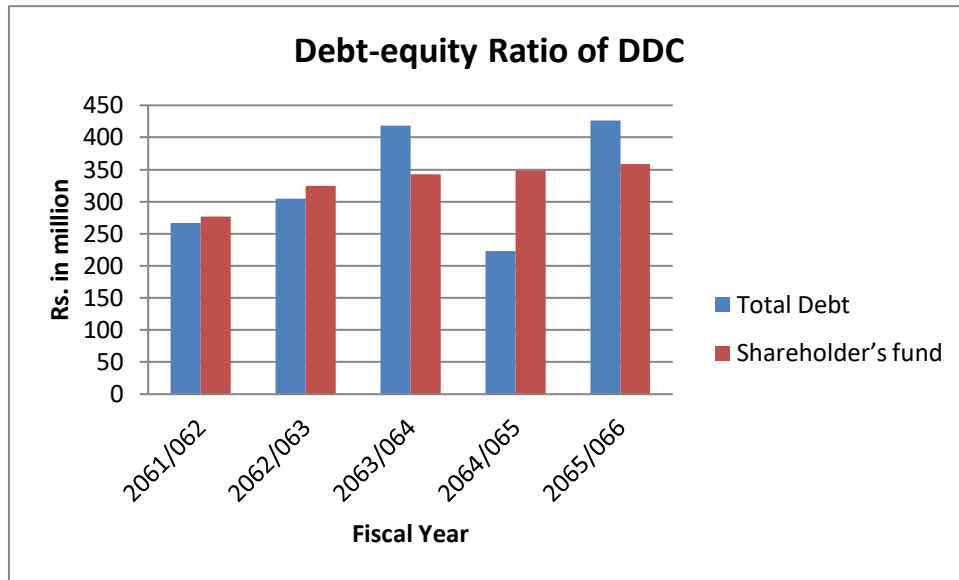
### 4.5.3 Debt to Total Assets Ratio

The relationship between total debt and total assets is known as debt ratio or Debt to total assets ratio. It measures the percentage of the firm's assets financed by creditors. Lower the ratio greater the protection afforded creditors in the event of liquidation and higher ratio, lower protection afforded creditors in the event of liquidation. Higher ratio is not preferable for a corporation. The decreasing ratio is favorable. It is calculated in the following way:

$$\text{Debt to total assets ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

The table is given below Debt to total assets ratio of DDC

**Table No: 17**

**Debt Total Assets Ratio of DDC**

| Fiscal Year | Total Debt | Total Assets | Debt equity Ratio |
|-------------|------------|--------------|-------------------|
| 2061/062 | 267.18 | 544.82 | 0.49:1 |
| 2062/063 | 304.81 | 630.16 | 0.48:1 |
| 2063/064 | 418.07 | 760.42 | 0.55:1 |
| 2064/065 | 223.21 | 762.08 | 0.29:1 |
| 2065/066 | 426.45 | 545.30 | 0.78:1 |

Sources: Consolidated Balance Sheet of DDC

According to above table No: 17 the proportion of total debt contain around 50% of total assets. There are two fiscal year, which have more than 50% the Debt to total assets and three fiscal year have less than 50%. The debt ratio is fluctuating during the study period. It varies from 0.29:1 to 0.78:1 in fiscal year 064/065 and 065/066 respectively. The corporaion use less debt in fiscal year 064/065, which seems to be good credit position for the company and the company used more debt in fiscal year 065/066, which seems to be not good credit position for the company.

**Figure No: 12**



**Debt to Total Assets of DDC**
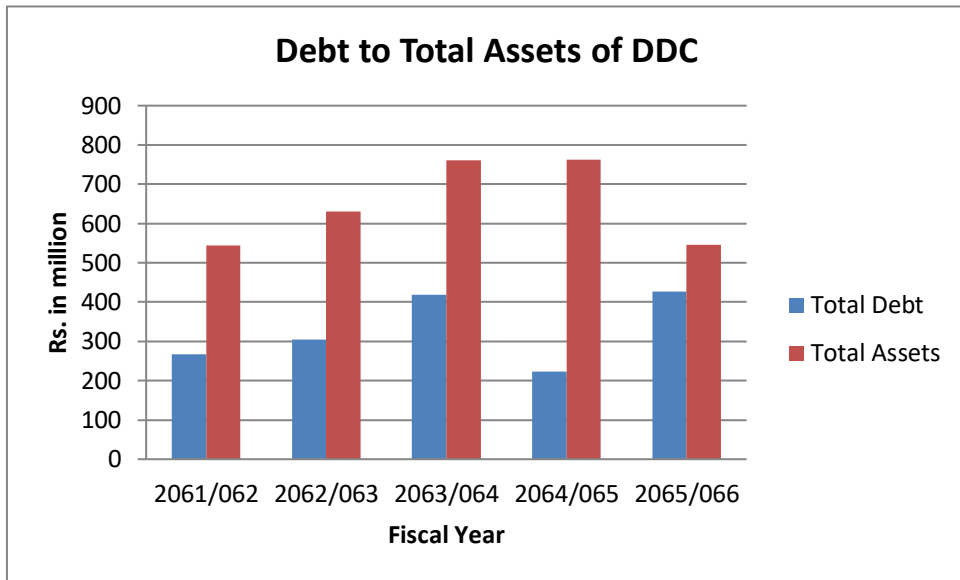
4.5.4 **Interest Coverage Ratio:**

Interest coverage ratio measures the debt servicing capacity of firm. It is computed by dividing net profit before interest and tax by interest this ratio is also known as time interest earned ratio. High ratio is a sign of low burden of borrowing of the business and lower utilization of borrowing capacity from the point of view of the creditors, the larger the coverage the greater the ability of the firm to make the payment of interest to creditors. It is calculated in the following way:

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit before interest and tax}}{\text{Interest}}$$

The table is given below interest coverage ratio of DDC

**Table No: 18**

**Interest Coverage Ratio of DDC**

(Rs. In million)

| Fiscal Year | Net profit before interest and tax (Interest exp.+Pre tax profit) | Interest | Interest Coverage Ratio |
|---|---|---|---|
| 2061/062 | 136.35 | 10.12 | 13.47 times |
| 2062/063 | 148.65 | 3.84 | 38.71 times |
| 2063/064 | 107.75 | 14.21 | 7.58 times |
| 2064/065 | 69.31 | 12.61 | 5.50 times |
| 2065/066 | 125.90 | 2.60 | 48.42 times |

Sources: Consolidated Balance Sheet and income statement of DDC

According to above table no: 18 the time interest earned ratio of five years are 13.47, 38.71, 7.58, 5.50 and 48.42 times. It is fluctuation during the study period. It varies from 5.50 to 48.42 times. It is increasing up to 062/063 but decreasing in next year and at last year it is increase to 48.42 times in fiscal year 065/066 the company have enough earning to pay the interest but in fiscal year 064/065 the company had not enough earning to pay the interest because in this fiscal year the company have only 5.50 times more earning than interest.

**Figure 13**



Proportion of Net Profit before interest and Tax of DDC
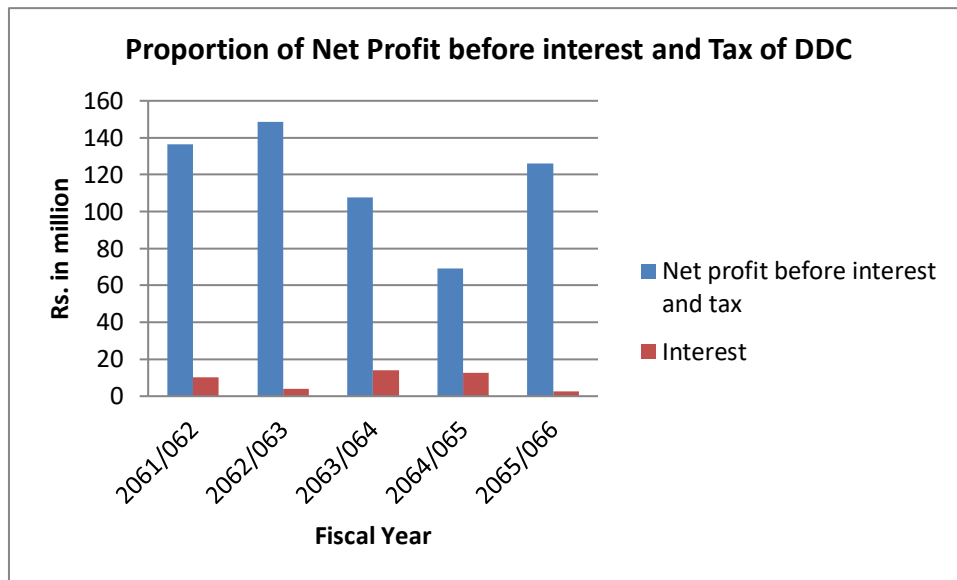
### 4.5.5 Short-Term Debt to Long-Term Debt Ratio:

The ratio between STD and LTD shows the firm's policy to raising funds. If the ratio is high the firm is raising more funds from STD and if ratio is low the firm is raising its more funds from LTD. STD is a source to meet short-term requirements of funds and long-term debt is a source to meet a long-term requirement of a funds. This ratio is calculated by dividing short-term debt by long-term debt here given in below. It is calculated in the following way:

Short-Term Debt to Long Debt Ratio = $\dfrac{\text{STD}}{\text{LTD}}$

**Table No: 19**

**STD to LTD Ratio of DDC**

| Fiscal Year | STD (CL) | LTD | STD to LTD Ratio |
|-------------|----------|-----|------------------|
| 2061/062 | 267.18 | 0 | ∞ |
| 2062/063 | 304.81 | 0 | ∞ |
| 2063/064 | 418.07 | 0 | ∞ |
| 2064/065 | 223.21 | 0 | ∞ |
| 2065/066 | 426.45 | 0 | ∞ |

Sources: Consolidated Balance Sheet of DDC

Table no: 19 shows the ratio of current liabilities (STD) and long-term debt liabilities (LTD). Ratio in given table indicates the proportion of current liabilities to long-term debt. The fiscal year 061/062 to 065/066 the company has not used any long term obligation. It means that the entire amount is financed from the short term financing in fiver years.

**Figure No: 14**
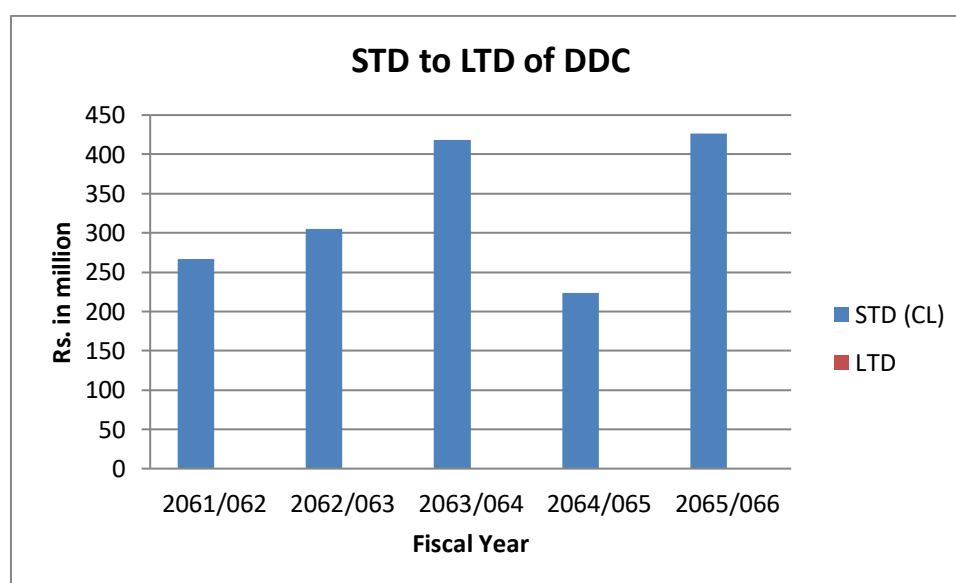
## 4.6    Profitability Ratio

It shows the overall efficiency of the business concern. The relation of the return of the firm to either its sales or its equity or its assets is known as profitability ratio. It shows the combined effects fo liquidity, assets management and debt management on operating results. It measures the earnings of the company for a certain period.

### 4.6.1  Gross Profit Margin:

Gross profit ratio expresses the relationship between gross profit and sales. Gross profit margin ratio shows the percentage of profit after cost of goods sold. A higher ratio is a sign of good management. A low gross profit may reflect higher cost of goods sold due to the firm's inability to purchase of favorable term. Gross profit margin can be calculated as:

Gross Profit Margin $= \dfrac{Gross\,\mathrm{Pr}\,ofit}{Sales}$

Here in table, the gross profit margin ratio of DDC

**Table No: 20**

**Gross Profit Margin of DDC**

(Rs. In million)

| Fiscal Year | Gross Profit | Net Sales | Gross Profit Margin |
|---|---|---|---|
| 2061/062 | 250.08 | 1503.69 | 16.63% |
| 2062/063 | 326.75 | 1728.63 | 18.90% |
| 2063/064 | 320.17 | 1540.99 | 20.78% |
| 2064/065 | 298.32 | 1236.05 | 24.13% |
| 2065/066 | 401.59 | 1244.73 | 32.26% |

Sources: Consolidated Income Statement of DDC

According to the above table no: 20 the gross profit margin ratio is increasing from 061/062 to 065/066. It means there is a sign of good management, which make the high gross profit in sales. In fiscal year 061/062 the gross profit margin is 16.63% and then after it gross profit margin ratio is going to increasing trend. In fiscal year 065/066 its gross profit margin ratio is 32.26% which is highest ratio during the study period.

## 4.6.2 Net Profit Margin:

Net profit margin ratio is a relationship between net profit and net sales. Net profit is obtained by deducting all the tax, operating expenses and interest from gross profit. A higher ratio is an indication of the higher overall efficiency of the business and better utilization of total resources. Poor financial planning and low efficiency is the indication of lower ratio. It is calculated by divided the net profit by sales. So, it is calculated by this way:

$$\text{Net profit Margin Ratio} = \frac{Net\,Profit}{Sales}$$

The table is given below net profit margin ratio of DDC.

**Table No: 21**

**The net profit Margin Ratio of DDC**

(In Rs. Million)

| Fiscal Year | Net Profit | Net Sales | Gross Profit Margin |
|-------------|------------|-----------|---------------------|
| 2061/062 | 126.23 | 1503.69 | 8.39% |
| 2062/063 | 120.58 | 1728.63 | 6.98% |
| 2063/064 | 68.04 | 1540.99 | 4.42% |
| 2064/065 | 42.61 | 1236.05 | 3.45% |
| 2065/066 | 93.17 | 1244.73 | 7.49% |

Sources: Consolidated Income Statement of DDC

The above table no: 21 shows the net profit margin ratio of DDC for five years period. It is fluctuating during the study period. It varies from 3.45% to 8.39%. In fiscal year 061/062 earn the highest profit of 8.39% and in fiscal year 064/065 the profit of DDC is lowest of 3.45% during the observed period.

### 4.6.3  Return on Assets Ratio:-

It establishes a relationship between net profit after tax and total assets. Return on assets ratio measures that how successfully total assets is utilized. High ratio is better for firm and low ratio is not preferable for the firm. It is calculated by this way:

$$\text{Return on assets ratio} = \frac{Net\,Profit\,Before\,Interest\,And\,TAx}{Total\,Assets}$$

Or

$$\text{Return on assets ratio} = \frac{Net\,Profit\,After\,Tax + Interest}{Total\,Assets}$$

The relation between net operating income (EBIT) and total assets is known as return on assets. It measures the return on all the firm's assets after interest and taxes. It is calculated by dividing the EBIT by total asset. Higher ratio is favorable for all types of company, which shows that the net profit before interest and tax is increasing and lower shows that the net profit before interest and tax is increasing and lower shows that the net profit before interest and tax is decreasing. The calculated return on assets ratio of DDC are given in table No: 22.

**Table No: 22**

**Return on Assets of DDC**

(Rs. In million)

| Fiscal Year | Net Profit before interest and tax | Total Assets | Return on Assets |
|-------------|-----------------------------------|--------------|------------------|
| 2061/062 | 126.23+10.12=136.35 | 544.82 | 25.30% |
| 2062/063 | 144.81+3.84=148.65 | 630.16 | 23.60% |
| 2063/064 | 93.54+14.21=107.75 | 760.42 | 14.17% |
| 2064/065 | 56.70+12.61=69.31 | 762.08 | 9.09% |
| 2065/066 | 123.30+2.60=125.90 | 545.30 | 23.09% |

Sources: Consolidated balance sheet and Income Statement of DDC

The above table no: 22 shows the return on assets of DDC. It is decreasing from 061/062 to 064/065. In fiscal year 061/062 the return on assets ratio is 25.03% and in 064/065 the return on assets is 9.09%. It means the net profit before interest and tax is decreasing in this fiscal year.

**4.6.4 Return on Equity:**

The relation between net profit after interest and tax and shareholder equity is known as return equity. It measure the rate of return on common stockholder investment. Increasing ratio is favorable for a company, which shows that the net profit is increasing and decreasing

ratio is unfavorable for a company, which shows that the net profit is decreasing. Here we find out the return on equity of DDC. It is calculated by dividing net profit after interest and tax by shareholder equity. Thus

$$\text{Return on Equity} = \frac{Net\,ProfitAfterInterestAndTax}{Shareholder'sEquity}$$

The calculated return on equity of DDC is given in table no: 23

**Table no: 23**

**Return on equity of DDC**

| Fiscal Year | Net Profit after interest and tax | Shareholder's equity | Return on equity |
|---|---|---|---|
| 2061/062 | 126.23 | 277.10 | 45.55% |
| 2062/063 | 120.58 | 324.94 | 37.11% |
| 2063/064 | 68.04 | 342.35 | 19.87% |
| 2064/065 | 42.61 | 348.13 | 12.24% |
| 2065/066 | 93.17 | 358.43 | 25.99% |

Sources: Consolidated Balance Sheet and Income Statement of DDC

According to the above table no: 23 the return on equity of DDC is highest in the fiscal year 061/062, which is 45.55% and lowest in the fiscal year 064/065 which is 12.24%. Return on equity of DDC is fluctuation during the study period. It varies from 12.24% to 45.55% in fiscal year 061/062 the equity shareholder earned more profit than other, which made the shareholders happy. In last year study, the company ROE is 25.99% which seems to be good for equity shareholders.

## 4.7    Correlation Analysis between Net Profit Margin and Liquidity:

The correlation analysis is used to describe the degree of relationship between variables. It shows the positive and negative relationship between the variables. It can be used in two or more

variables. Theoretically, profitability and liquidity positions of the firm's are closely related. Theoretical relation between these variables should be adverse. In other words the principal of higher liquidity, the lower profitability should be held. In order to examine the significance of the relationship between the two variables like liquidity and profitability position of DDC. Karl Person coefficient of correlation (r) has been calculated. So, r between current ratio and net profit margin, quick ratio and net profit margin inventory turnover and net profit margin and receivable turnover and net profit margin have been worked out to examine the relationship between liquidity and the profitability position of DDC.

**Table No: 24**

**Simple Correlation Result of Profitability and Liquidity at DDC**

| Particular | Co-efficient of Correlation(r) | Relationship | Coefficient of Determination ($r^2$) | Probable error (P.E.) | Significant/insignificant |
|---|---|---|---|---|---|
| NPM and C.R. | -0.74 | Negative | 0.5476 | 0.14 | Insignificant |
| NPM and Q.R. | -0.67 | Negative | 04489 | 0.17 | Insignificant |
| NPM and RTR | 0.50 | Positive | 0.2500 | 0.23 | Insignificant |
| NPM and ITR | 0.28 | Positive | 0.0784 | 0.28 | Insignificant |

Sources: Consolidated Income Statement of DDC

According to above table, the coefficient of correlation between NPM and CR is -0.74, which shows there is negative relationship existing between them. In other words decrease in CR leads to decrease in NPM of DDC. The coefficient of determination is 0.5476, the indicates variation in CR explains 54.76% variation in NPM, Which is much high. The value of r is less PE, so the relationship is insignificant.

There is negative relationship exists between NPM and QR. The coefficient of correlation between them is -0.67. The value of coefficient of determination is 0.4489, which indicates variation in QR expain 44.89% variation in NPM. The value of r is less than PE so the relationship is insignificant.

The relationship between NPM and RTR are seems to be positive. The coefficient of correlation between NPM and RTR is 0.50, which indicates NPM and RTR has positive correlation. It indicates increase in RTR leads very high increase in NPM and vice versa. The coefficient of determination

$(r^2)$ is 0.2500 that indicates variation in RTR explains 25% variation in NPM of DDC. The value of r is not very high then PE so the relationship between NPM and RTR is insignificant. There is equal position relationship exist between NPM and ITR, which proved by the value of r (0.28). It indicates small amount of change in ITR leads not high amount of increase in NPM of DDC. Small amount of increase in ITR leads to not high amount of increase in NPM and vice versa. The coefficient of determination is 0.0784. It describe variation in ITR explain 7.84% variation in NPM. The value of r is equal the value P.E. So, the relation between NPM and ITR is insignificant.

## 4.8 Simple Regression Analysis:

The regression analysis is used to find out the estimation of unknown value or prediction of one variable from known value of other variables. Regression analysis is a mathematical measure of the average relationship between two or more variables in terms of the original units of data.

**Table No: 25**

**Simple Regression Result of NI and NWC and NI and STF**

| Particular | Constant (a) | Regression coefficient (b) | Coefficient of correlation (r) | Relationship | Coefficient of Determination n ($r^2$) | P.E. | Significant |
|---|---|---|---|---|---|---|---|
| NI and NWC | 113.23 | -0.16 | -0.65 | Negative | 0.4225 | 0.17 | Insignificant |
| NI and STF | 86.20 | 0.012 | 0.030 | Positive | 0.009 | 0.30 | Insignificant |

Source: Calculated data from DDC

The above table no 25 show the simple regression results of NI is dependent and NWC is independent and NI is dependent and STFj is independent respectively.

Net working capital (NWC) is the different between CA and C.L. If CA exceeds C.L., the NWC will be positive and if CL exceeds CA,

NWC will be negative. In general financial statement, NWC and NI has positive relationship exist. So, to find out the relationship NI and NWC of DDC, the simple regression analysis between NI and NWC has been analyzed.

The regression coefficient (b) between NI and NWC is negative (-0.16) which indicates that negative relationship exist between NI and NWC of DDC i.e. one rupees decrease in NWC leads to average -0.16 rupees decrease in NI. The value of constant is 113.23 million, which indicates DDC concern 113.23 million when the value NWC is zero. Similarly, the coefficient of determination ($r^2$) is only 0.4225 i.e. 42.25% variation in NWC explain variation in NI of DDC and the value of r is less than PE. So, the relationship ip defined as insignificance.

Short-term fund (STF) is the less costly and it contains less risk. In general statement higher utilization of STF leads to increase in profit. So, to find out the relationship between STF and NI of DDC, the simple regression analysis between NI and STF has been analyzed.

The value of r (0.030) shows that there is positive relationship exist between NI and STF and the value of regression coefficient (0.012) indicates, one million increase STF leads to 0.012 million increase in NI. The coefficient of determination (0.0009) indicates 0.09% variation explains by STF in NI and value of constant (86.20) indicates DDC can be earn 86.20 million when there is zero. The value of r is less than PE. So, the relationship between STF and NI is defined as insignificance.

## 4.9    Analysis of Primary Data

Basically, the requirement of the working capital is influent by the nature of its business. Trading and financial firms required the very large sum of working capital and hey invest the small amount in fixed assets.

For e.g. retail stores must carry large stocks for a variety of goods to satiety the varied and continually demand of customer. The manufacturing firm requires a significant level of working capital and fixed assets. But in public utility or service providing organization, they hold very limited working capital because of cash nature of their business and partly of their selling a service instead of a commodity and there is no need of maintaining big inventories. As the question is asked to DDc about the management in DDc about the performance role of working capital management in DDC is high important.

In the organization there are different level of management oand their performance role is very important. The top level cannot work without support and co-operation of lower level and the top level cannot take operate their work with out the good management of lower lever. The working capital consist the current assets, which are crucial for the day to day operations. The question is asked to the DDC about the responsible person to the management of working capital. There is not specific person to responsible about the working capital management but a top level management is responsible to manage the working capital.

There are three types of working capital financing policy. They are aggressive, moderate and conservative working capital financing policy. The policy may depend upon the nature of business. In the DDC, it is following moderate working capital policy in which it is investing STF to temporary current assets and fixed assets.

The firm may adopt the same working capital policy as they are adpting the previous year. DDC is also adopting the same working capital policy to earn the considerable profit.

As the question asked to DDC that does working capital policy have impact on profitability and risk of the company, it is found that the working capital policy have impact on profitability and risk of the company.

The organization needs various types of current assets. The major components of current assets are inventory, sundry debtors and cash and bank balance. The organization may keep different types of current assetrs in different level. Some organization may keep inventory in a large amount, some may keep sundry debtors, some may cash and bank balance. The composition of current assets depends upon the nature of organization and business. The financial institutions may keep cash and the balance in large amount and the manufacturing organizations may keep large amount of inventory of raw material, work in progress and finished goods to regular operation system. So, the question is asked that the proportion of current assets and current liabilities of DDC is appropriate? It is found that both the proportion of current assets and current liabilities are appropriate.

The firm may keep different level of current and fixed assets. If the firm is keeping higher level of current assets and fixed assets. IF the firm keeping higher level of current and fixed assets the firm is adopting relaxed working capital investment policy and if firm is keeping low level of current asset. The firm is adopting restricted policy, and the medium level is called moderate working capital investment policy. AS the question is asked that wihich working capital policy is adopting by DDC. It is found that the company is adopting moderate working capital investment policy.

There are various factors that affect in working capital policy of the firm. DDC is requested for ranking the factors that affect in the working capital policy to their importance. The company has ranking in this way.

a) Nature and size of Business,
b) Sales and demand conditions,
c) Inventory conversion period,
d) Supplies credit policy,
e) Credit policy of company.

And the factory "Availability of credit (Loan) from institutions" is not available in  company.

## 4.10  Findings of the study

Working capital management plays the vital role in the organization and the success and failure of the organization depends upon it. To study the working capital management of DDC, the primary as well as the secondary data has been collected and analyzed by using various financial and statistical tools. The major finding/conclusion the study has been presented below:-

a) The major component of current assets in DDC are inventories, receivable and prepaid expenses and advance. Among these inventory holds the higher proportion of current assets. The average proportion of inventories, trade and other receivable, cash and bank balance and miscellaneous current assets to the total current assets are 37.49%, 9.04%, 19.67% and 33.80% respectively during the study period.

b) The major components of current liabilities of DDC are short-term loan, trade and other payable and provision. Trade and other payable hold the higher proportion for five year 063/064 and

064/065. The average proportion of short-term loan, trade and othe payable and provision to the total current liabilities are 7.43%, 47.37% and 45.20% respectively during the study period.

c) The liquidity position of the company is analyzed with the help of current ratio and quick ratio. The current ratio of the company is varies from 0.94 to 2.64 during the study period in fluctuating trend. The company has unable to maintain its current ratio of 2:1 in average of the study. The overall current ratio of the company has found o be satisfactory but not enough to be perfect one. In year 065/066, quick ratio of DDC is lowest among five years study. The quick ratio varies from 0.60 to 2.08. It is fluctuating during the study period.

d) The assets management ratio of DDC measures how effectively the firm is managing its assets. So, inventory turnover ratio for five years is 8.73, 13.05, 5.24, 9.08 and 8.62 times. The inventory turnover ratio is highest in the year 062/063, which is 13.05 times and year 063/064 is lowest which is 5.24 times.

e) Receivable turnover is very much fluctuating during the study period. It varies from 19.08 to 47.89 times. The highest turnover shows the minimum day's sales outstanding and lowest turnover shows the maximum day's sales outstanding. The account receivable turnover ratio for five years is 44.44, 35.06, 47.89, 19.08 and 38.70 times respectively. The ACP for five years is 8, 10,8, 19 and 9 respectively.

f) The current assets turnover ratio is also fluctuation during the study period. It varies from 2.10 to 4.26 times. The assets turnovers during study period are 4.26, 3.82, 2.72, 2.10 and 3.12 times. In year 064/065 sales is decrease by low amount but current assets

increase by low amount. So, in this year the turnover ratio is very low.

g) Total assets turnover ratio is not much fluctuating during the study period. It varies from 1.62 to 2.72 times. The total assets turnover ratios for five years are 2.79, 2.74, 2.03, 1.62 and 2.28 times respectively.

h) Net working capital turnover ratio is decreasing during the study period. The net working capital turnover ratios for five year starting from 061/062 are 17.58, 11.72, 10.31, 3.37 and -45.58 times respectively for study period.

i) Trade and other payable have held the major portion liabilities of DDC. The average percentage of trade and other payable, short-term loan and provision are 47.37%, 7.43% and 45.20% respectively. These all are fluctuating during the study period.

j) The ratio of current assets to fixed assets are 1.84, 2.54, 2.94, 3.43 and 2.73 times respectively during the study period which are starting from 061/062. The ratios of current assets to fixed assets are increasing up to 064/065. In fiscal year 065/066 the ratio is decrease.

k) The proportions of current assets to total assets of DDC for five years are 64.74%, 71.77%, 74.64%, 77.40% and 73.20%. The company uses more than 60% current assets during he stuyd period.

l) Debts to equity ratio of DDC for five years as are 0.96, 0.94, 1.22, 0.64 and 1.19 times respectively. In fiscal year 065/066, the company has high debt to total assets ratio during the study period and lowest in the fiscal year 064/065.

m) Debt to total assets ratio for five years are 0.49, 0.48, 0.55, 0.29 and 0.78 respectively. In fiscal year 065/066, the company has high

debt to total assets ratio during the study period and lowest in the fiscal year 064/065.

n) Interest coverage ratios of DDC for five year starting from 061/062 are 13.47, 38.71, 7.58, 5.50 and 48.42 times respectively. In fiscal year 065/066 have highest ratio and in fiscal year 064/065 have lowest interest coverage ratio.

o) DDC is collecting move funds from short term fund. Short term debit to long term debt ratio for five years are infinitive during the study period. In other study period, the company did not collect long term fund.

p) Gross profit ratio of DDC is in increasing trend. It is highest in 065/066 and lowest I 061/062. Gross Profit margin of DDC for five years are 16.63%, 18.90%, 20.78%, 24.13% and 32.36%.

q) Net profit margin of DDC for five years are 8.39%, 6.98%, 4.42%, 3.45% and 7.49%. It is highest in 061/062 and lowest in 064/065. It is fluctuating during the study period.

r) Karl Pearson's coefficient of correlation between current ratio, Quick ratio, inventory turnover and receivable turnover with net profit margin are -0.74, -0.67, 0.50 and 0.28 respectively.

s) Simple regression analysis of net income and net working capital shows that there is negative relationship exists. By which decrease in net working capital leads decrease in net income by average Rs -0.16 and simple regression analysis of net income and short term fund shows that there is positive relationship exists. By which increase in short term fund leads to increase in net income by average Rs. 0.012.

# CHAPTER-V

# SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter is used to summarize th whole study and to draw the major finding of this study. This study also aims to draw the conclusion of the study and forward the applicable recommendation for more efficient working capital management of DDC.

## 5.1    Summary

Industrialization plays a crucial role I the process of economic development and its importance is as a means of achieving economic growth and prosperity within the country hence industrialization is universally accepted as a strategy of economic development as well as fundamental goals.

It is believed that in order to achieve security stability and a high standard of living the country most become industrialized. The most importance reason for e-banking on the performance of industrialization is to increase the national income. Industrialization is the major tools with the aid of which the various circle of backwardness and poverty can be broken.

The manufacturing sectors have to face various problems which have acted as constraints in growth of manufacturing industries. Such problems are arises due to land locked and undeveloped situation of the country. Lack of trained and skill manpower. Financial resources inconvenience in transport and communication net work, non-availability of assured energy at reasonable rates. Shortage of capital, small size of the market unawareness of the industrial potential, higher cost of

production, low productivity of inputs, technology, instabilities in government policies etc.

Realizing the importance of the industrializing in the country, Government of Nepal has given due emphasis on the industrial sector. Development plans of Nepal have been emphasizing the development of industries both in he public and private sector. In every plan he word industrialization has been realization sector of Neap is still in very critical situation.

The success or failure of business industries or manufacturing industries mainly depends upon the effective overall management of the organization. Beside this financial management pays the crucial role in the success of the organization. One of the most important aspects of the financial management for the success of the business is proper working capital management working capital is said to be lifeblood of the business organization. To run the daily production activities of the company, besides the manpower equipment etc. One of the major components is working capital. Without proper management o f working capital no business success can be imagined. In this regard, DDC is selected and this study is alternate to know that how far DDC has been able to manage its working capital for achieving the goals.

This study has been in five chapters for the purpose of the analysis. The first chapter focuses the brief introduction of the study, industrialization and its role in Nepal. It attempts a little bit to introduce the working capital management of DDC. It deals with problems studied and objective of the study too. The second chapter deals with review of literature. Which include the conceptual framework and different view of different unites, book and articles. The third chapter deals with research

and methodology followed in this study. It presents the nature and sources of data, data collection and processing technique and financial and statistical tools used. The fourth chapter includes the presentation and analysis of data derived from DDC. An attempt to analysis the working capital policy and trade off between liquidity and profitability of DDC for five years (from 061/062 to 065/066) has been done.

The basic objectives of the study are to examine the management of working capital of DDC. To fulfill this objectives and other specific objectives as described in chapter on and appropriate research and methodology has been applied which includes the ratio analysis as a financial tools and coefficient of correlation as a statistical tool. The major ratio analysis consists of the composition of working capital position, liquidity position, turnover position and profitability position. The necessary data are derived from the balance sheet and profit and loss account of the DDC for the period of five years from 061/062 to 065/066.

## 5.2    Conclusion

Working capital management plays crucial role in the success and failure of an organization as it deals with the part of assets, which are transformed from one form to another form during the course of manufacturing cycle. Hereford the role of working capital management is more significant for every baseness organization irrespective to their nature. It is the crucial factor of the financial management. It is the life blood and controlling nerve center for any types of business organization because without the proper control upon it no business can run smoothly., The management of current assets and current liabilities is necessary for day to day operations of any organizations. So many studies have been

done on working capital management from different experts in various enterprises.

a) All components of current assets of DDC are highly fluctuating during the study period. CA/FA ratio is also fluctuation, but it is greater than 2 times in the study period except fiscal year 061/062. The firm is investing higher proportion of current assets. The current ratio of DDC for five years are less than the general acceptance ratio 2:1 except fiscal year 064/065 and quick ratio is also less than considerable ratio 1:1 beside fiscal year 062/063 and 064/065 in fiscal year 062/063 and 064/065, the corporation has able to maintain the standard quick ratio or more than standard. The company follows conservative financing policy.

b) The account receivable turnover ratio of the company seems satisfactory during the observed period. The highest turnover ratio is 47.89 times, which exists in year 063/064 and days sales outstanding is only 8 days and the lowest account receivable turnover ratio of the company is 19.08 times which exists in fiscal year 064/065 and days sales outstanding is 19 days. The higher ratio indicates that within a short period, the firm is collecting the cash from debtors a low ratio shows that debts are not being collected rapidly. If the assets are too high, the interest expenses will be too high and hence their profit be depressed and on the other hand if assets are too low, profitable sales may be cost. The correlation analysis shows CR, QR has negative relationship with NPM and RTR, ITR has negative relationship with NPM. The relationship between inventory turnover ratio and Net Profit margin, quick ratio and Net profit margin is insignificant, current

ratio and net profit margin receivable turnover ratio and net profit margin is insignificance.

c) Net income has negative relationship exists with net working capital. It means decrease in net working capital leads to decrease in nnet income. The regression coefficient (b) -0.16 million decrease in the net income. Similarly net income has positive relationship with short term fund. The regression coefficient (b) 0.012 explains one million increase in short term fud leads to increase in net income by 0.012 million.

d) DDC is a manufacturing company, but it has still followed conservative working capital management policy. It reduces the risk of the company but it also lead to reduce the possibility of higher return. It can improve it working capital management by following moderate working capital policy. Beside all above conclusion the profitability of DDC is satisfactory.

e) Inventory is the major current assets and holds the highest proportion in DDC, which is 37.49% in average sundry debtors holds the lowest proportion of only 9.04% and cash and bank balance and miscellaneous are 19.67% and 33.80% respectively. The inventory turnover seems not satisfactory. The highest inventory turnover ratio is only 13.05 times, which exist in fiscal year 032/063 and lowest turnover ratio is 5.24 times in fiscal year 063/064.

## 5.3 Recommendation

The working capital management plays a vital role in the success of the corporation. It is concerned with the adequacy of current assets as well as the lever of risk posed by current liabilities, on the basis of above

finding of the study following applicable recommendations for the overall improvement of the working capital management of the DDC.

1. Dairy Development Corporation should determine certain proportion of the components of current assets in order to improve the current assets management in future. Inventory is consisting largest proportion in total current assets. The huge amount of inventory kept by DDC should be reduced or the optimum level should be adjusted according to the sale and production. In this regard management is advised to improve its marketing policy and should be integrated with credit policy the credit policy has highly influenced the sale.

2. Dairy Development Corporation determine the appropriate sources of fund. Its current liability composition is not directed by certain fixed rule. Thus, certain proportion of current liabilities should be set to avoid the risk of default. DDC has not fixed rule about the financing policy. It is very dangerous for the liquidity position of the firm in future so. It should fix the financing policy.

3. Dairy Development Corporation should set the standard for the ratio of current assets. It has not any clear vision about the management of current assets to total assets. Thus, DDC should have the proper plan to improve its profitability in future. It is also recommended that the volume of sales should be increased and the proportion of current assets should be maintained according to its volume.

4. The management of DDC should give attention to the minimization of operating cost. It should reduce its general expenses. This seems higher in each year even its sales lower than previous years. It should also reduce its manufacturing expenses by using new

technologies. It should give attention to the suppliers and chooses the best one, which provides the high quality goods in low cost.

5. The debtor turnover ratio of the company is very effcient. It amy extent debtors base by doing tradeoff between cash sale price and credit terms the sales price. To be somewhat liberal in credit sales may be increased more than the present level.

6. The working capital should be arranged in such a way that in which it should generated maximum turnover. The working capital and net working capital are not fully utilized then to have a sound turnover position by adopting the matching working capital policy instead of adopting conservative working capital policy. The company can improve in its profitability in the short run as well as in the long run.

7. The correlation analysis shows CR and QR have negative relationship exists with net profit margin. The ITR and RTR have positive relationship exists with net profit margin. So, DDC should try to use fewer amounts of current liability to increase CR as well as QR. To increase inventory turnover ratio and receivable turnover, DDC should try to increase sales.

8. The regression analysis of net income and net working capital shows it has negative relationship exists. The relationship shows that higher amount of net working capital leads higher net income, which does not support the theory of working capital. This may be inadequate sample. But if it is fact, DDC should try to increase net working capital to increase net income. Short term fund is less costly and it brings less risk in the company. The data shows STF has positive relationship exists with net income. So if company wants to increase net income. It should increase short term fund and should adopt aggressive working capital policy.

9. Effective inventory control techniques should be introduced in order to control inventory in accordance with their value and importance. And maintain good inventory position.

# BIBLIOGRAPHY

Acharya, K (1985), problem and impediment In the management of working capital in Nepalese Enterprises. ISDOC

Acharya, K (1998), The Management of working Capital in the Public Enterprises of Nepal . Nepalese development activities.

Agarawal, N.K. (1992), Management of working capital , fourth Edition streling publisher P.LTD, New Delhi.

Dangol, R.M. (2050), Financial Management, Taleju Prakashan Bhotahity, Kathmandu.

Giri, Bashudev (2003), Working Capital Management in Birgunj sugar Factory LTD. MBA Dissertation.

Haptmton, J. John (1986), Financial Decision Making, Prentice Hall of India Pvt. LTD. New Delhi.

Joshi, Arjun lal (2002), A study on Working Capital Management of Biratnagar Jute Mill limited, MBA Dissertation.

Khan, M.Y. and Jain P.K. (1998), Financial management, Tata Mcgraw Hill Publishing co. ltd., New Delhi.

Kothari, C.R. (1993), Quantitative Techniques, Vikash Publishing House Pvt. LTD, New Delhi.

Ministry of financial Economic Survey Report (1990/091), Kathmandu.

Muny, D. Bryle (1969), Industrial Development, A Guide for acceleration Economic Growth, MC Growth Company, New York.

Pandey, I.M., (1992), Financial Management, Vikash Publishing House, LTD. New Delhi.

Pant, G.D. and Chaudhary, A.K. (2053 B.S.), Statistics and Quantitative Techniques for Bechelor of Studies, Kathmandu, Variety Printers Pvt. LTD.

Pathak, Pradeep kumar (1994), An Evaluation of Working Capital Management in Nepal Lube Oil LTD. MBA Dissertation.

Pradhan, R.S. (1994), Industrialization in Nepal, NBO Publisher and Distributor, New Delhi,

Pradhan, R.S. (1986), Management of Working Capital, NBO, Publisher and Distributor, New Delhi.

Pradhan, R.S. (1988), The Demand for Working Capital by Nepalese corporation. Vol. 8

Pradhan, R.S. and Koirala, K.D. (1986), Aspect of Working Capital Management of Nepalese Corporations, Kathmandu: IOM.T.U.

Pradhan, S. (2000) Basic of Financial Management, Kathmandu, Educational Enterprises.

Sapkota, Jiban Nath (1994), A Study on Working Capital Management of Himal Cement Company limited. MBA Dissertation.

Sharma, Dipendra Raj (2000), Working Capital Management in Nepal Battery Co. LTD. Unpublished Master Degree Dissertation.

Shrestha, K.N., (2053), Mathematic and Statistics for Management, Valley Publisher's 8th ed. , Kathmandu.

Shrestha, Manohar K., Working Capital Management in PEs; A Study on Financial Results and Constraints ISDOC Vol.8 (1982/83)

Shrestha, Shailesh Man (1989), A Study in Working Capital Management of Dairy Development Corporation MBA Dissertation.

UN Committee for Industrialization Development Report of the Third session (1963), New York.

Yogi, Dhrub Nath (2003), A Study in Working Capital Management of Nepal Lever limited, MBA Dissertation, Kathmandu.

## APPENDIX-1

**Calculation of co-efficient of correlation of current ratio and Net profit margin**

| Year | CR(X) | NPR(Y) | u=x-Ax | V=Y-Ay | UV | $U^2$ | $V^2$ |
|------|-------|--------|--------|--------|-----|-------|-------|
|      |       |        |        |        |     |       |       |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 061/062 | 1.32 | 8.39 | -0.16 | 1.41 | -0.2256 | 0.0256 | 1.9881 |
| 062/063 | 1.48 | 6.98 | | 0 | 0 | 0 | 0 |
| 063/064 | 1.36 | 4.42 | -0.12 | -2.56 | 0.3072 | 0.0144 | 6.5536 |
| 064/065 | 2.64 | 3.45 | 1.16 | -3.53 | -4.0948 | 1.3456 | 12.4609 |
| 065/066 | 0.94 | 7.49 | -0.54 | 0.51 | -0.2754 | 0.2916 | 0.2601 |
| | | | $\sum u$ $= 0.34$ | $\sum v$ $= 4.17$ | $\sum uv$ $= -4.2886$ | $\sum u^2$ $= 1.6772$ | $\sum v^2$ $= 21.2627$ |

Sources: Table no. 6 & 21 of DDC

Where, Assume mean AX=1.48          U=X-AX

Where, Assume mean AY=6.98          V=Y-AY

Current Ratio (CR)= X and Net profit margin (NPM)= Y

$$r = \frac{n \sum uv - \sum ux \sum v}{\sqrt{n \sum u^2 - (\sum u)^2} \times \sqrt{n \sum v^2 - (\sum v)^2}}$$

$$= \frac{5 \times (-4.2886) - 0.34 \times (-4.17)}{\sqrt{5 \times 1.6772 - (-0.34)^2} \times \sqrt{5 \times 21.2627 - (-4.17)^2}}$$

$$= \frac{-21.4430 + 1.4178}{\sqrt{8.3860 - 0.1156} \times \sqrt{106.3135 - 173889}}$$

$$= \frac{-20.0252}{\sqrt{8.2704} \times \sqrt{123.7024}}$$

$$= \frac{-20.0252}{2.8758 \times 9.4300}$$

$$= \frac{-20.0252}{27.1148}$$

= -0.7384 or -0.74

$$\text{Probable Error (PE)} = \frac{0.6745\ (1 - r^2)}{\sqrt{N}}$$

$$= \frac{0.6745\ (1 - (0.74)^2)}{\sqrt{N}}$$

$$= \frac{0.3051}{2.2361}$$

$$= 0.1364 \text{ or } 0.14$$

## APPENDIX-2

**Calculation of co-efficient of correlation of Quick ratio and Net profit margin.**

| Year | QR(X) | NPR(Y) | u=x-Ax | V=Y-Ay | UV | $U^2$ | $V^2$ |
|------|-------|--------|--------|--------|-----|-------|-------|
| 061/062 | 0.68 | 8.39 | -0.37 | 1.41 | -0.5217 | 0.1369 | 1.9881 |
| 062/063 | 1.05 | 6.98 | 0 | 0 | 0 | 0 | 0 |
| 063/064 | 0.65 | 4.42 | -0.40 | -2.56 | 1.0240 | 0.1600 | 6.5536 |
| 064/065 | 2.08 | 3.45 | 1.03 | -3.53 | -3.6359 | 1.0609 | 12.4609 |
| 065/066 | 0.60 | 7.49 | -0.45 | 0.51 | -0.2295 | 0.2025 | 0.2601 |
| | | | $\sum u$ = 0.19 | $\sum v$ = -4.17 | $\sum uv$ = -3.363 | $\sum u^2$ = 1.5603 | $\sum v^2$ = 21.26 |

Sources: Table no. 7 & 21

Where, Assume mean AX=1.05          U=X-AX

Where, Assume mean AY=6.98          V=Y-AY

Quick Ratio (QR)= X and Net profit margin (NPM)= Y

$$r = \frac{n\sum uv - \sum u \times \sum v}{\sqrt{n\sum u^2 - (\sum u)^2} \times \sqrt{n\sum v^2 - (\sum v)^2}}$$

$$= \frac{5\times(-3.3631)-(-0.19)\times(-4.17)}{\sqrt{5\times1.6772-(-0.19)^2}\times\sqrt{5\times21.2627-(-4.17)^2}}$$

$$= \frac{-16.8125-0.7923}{\sqrt{7.8015-0.0361}\times\sqrt{106.3135-173889}}$$

$$= \frac{-17.6078}{\sqrt{7.7654}\times\sqrt{88.9246}}$$

$$= \frac{-17.6078}{2.7866\times9.4300}$$

$$= \frac{-17.6078}{2.7866 \times 9.4300}$$

$$= 0.6701 \text{ or } -0.67$$

$$\text{Probable Error (PE)} = \frac{0.6745\,(1-r^2)}{\sqrt{N}}$$

$$= \frac{0.6745\,(1-(0.67)^2)}{\sqrt{5}}$$

$$= \frac{0.3717}{2.2361}$$

$$= 0.1662 \text{ or } 0.17$$

## APPENDIX-3

### Calculation of co-efficient of correlation of inventory turnover ratio and net profit margin.

| Year | QR(X) | NPR(Y) | u=x-Ax | V=Y-Ay | UV | $U^2$ | $V^2$ |
|---|---|---|---|---|---|---|---|
| 061/062 | 8.73 | 8.39 | -1.07 | 1.41 | -1.5087 | 1.1449 | 1.2996 |
| 062/063 | 13.05 | 6.98 | 3.25 | 0 | 0 | 10.5625 | 0 |
| 063/064 | 5.24 | 4.42 | -4.56 | -2.56 | 11.6736 | 20.7936 | 6.5536 |
| 064/065 | 9.80 | 3.45 | 0 | -3.53 | 0 | 0 | 12.4609 |
| 065/066 | 8.62 | 7.49 | -1.18 | 0.59 | -0.6018 | 1.3924 | 0.2601 |
| | | | $\sum u$ $= -3.56$ | $\sum v$ $= -4.17$ | $\sum uv$ $= 9.5631$ | $\sum u^2$ $= 33.893$ | $\sum v^2$ $= 20.57$ |

Sources: Table no. 8 & 21

Where, Assume mean AX=9.80          U=X-AX

Where, Assume mean AY=6.98          V=Y-AY

Inventory turnover Ratio (ITR)= X and Net profit margin (NPM)= Y

$$r = \frac{n \sum uv - \sum u \times \sum v}{\sqrt{n \sum u^2 - (\sum u)^2} \times \sqrt{n \sum v^2 - (\sum v)^2}}$$

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$$= \frac{5 \times 9.5631 - (-3.56) \times (-4.17)}{\sqrt{5 \times 33.8934 - (-3.56)^2} \times \sqrt{5 \times 20.5742 - (-4.17)^2}}$$

$$= \frac{47.8155 - 14.8452}{\sqrt{169.467 - 12.6736} \times \sqrt{102.871 - 17.3889}}$$

$$= \frac{32.9703}{12.5217 \times 9.2457}$$

$$= \frac{32.9703}{115.7718}$$

$$= 0.2448 \text{ or } 0.28$$

$$\text{Probable Error (PE)} = \frac{0.6745\,(1 - r^2)}{\sqrt{N}}$$

$$= \frac{0.6745\,(1 - (-0.28)^2)}{\sqrt{5}}$$

$$= \frac{0.6216}{2.2361}$$

$$= 0.2780 \text{ or } 0.28$$

## APPENDIX-4

**Calculation of co-efficient of correlation of Receivable turnover ratio and net profit margin.**

| Year | RTR(X) | NPR(Y) | u=x-Ax | V=Y-Ay | UV | $U^2$ | $V^2$ |
|------|--------|--------|--------|--------|-----|-------|-------|
| 061/062 | 44.44 | 8.39 | 5.74 | 1.41 | 8.0934 | 32.9476 | 1.9881 |
| 062/063 | 35.06 | 6.98 | -3.64 | 0 | 0 | 13.2996 | 0 |
| 063/064 | 47.89 | 4.42 | 9.19 | -2.56 | -23.5264 | 84.4561 | 6.5536 |
| 064/065 | 19.08 | 3.45 | -19.62 | -3.53 | 69.2586 | 384.9444 | 12.4609 |
| 065/066 | 38.70 | 7.49 | 0 | 0.51 | 0 | 0 | 0.2601 |
| | | | $\sum u$ $=-8.33$ | $\sum v$ $=-4.17$ | $\sum uv$ $=53.825$ | $\sum u^2$ $=515.59$ | $\sum v^2$ $=21.26$ |

Sources: Table no. 9 & 21

Where, Assume mean AX=38.70            U=X-AX

Where, Assume mean AY=6.98            V=Y-AY

Receivable turnover Ratio (RTR)= X and Net profit margin (NPM)= Y

$$r = \frac{n\sum uv - \sum u \times \sum v}{\sqrt{n\sum u^2 - (\sum u)^2} \times \sqrt{n\sum v^2 - (\sum v)^2}}$$

$$= \frac{5 \times 53.8256 - (-8.3300) \times (-4.1700)}{\sqrt{5 \times 515.5977 - (-8.33)^2} \times \sqrt{5 \times 21.2627 - (-4.17)^2}}$$

$$= \frac{229.1280 - 34.7361}{\sqrt{2577.9885 - 69.3889} \times \sqrt{106.3135 - 17.3889}}$$

$$= \frac{234.3919}{50.0859 \times 9.4300}$$

$$= \frac{234.3919}{472.31}$$

$$= 0.4963 \text{ or } 0.50$$

$$\text{Probable Error (PE)} = \frac{0.6745\,(1 - r^2)}{\sqrt{N}}$$

$$= \frac{0.6745\,(1 - (-0.50)^2)}{\sqrt{5}}$$

$$= \frac{0.5059}{2.2361}$$

$$= 0.2262 \text{ or } 0.23$$

# APPENDIX-5

## Simple Regression of Net income on net working capital

**Rs. In million**

| Year | NWC(X) | NI(Y) | XX | $X^2$ |
|------|--------|-------|-----|-------|
| 061/062 | 85.54 | 126.33 | 10797.7142 | 7317.0916 |
| 062/063 | 147.48 | 120.58 | 17783.1384 | 21750.3504 |
| 063/064 | 149.51 | 68.04 | 10172.6604 | 22353.2401 |
| 064/065 | 366.67 | 42.61 | 15623.8087 | 135446.8889 |
| 065/066 | -27.31 | 93.17 | -2544.4727 | 745.8361 |
| | $\sum X$=721.89 | $\sum Y$=450.63 | $\sum XY$=51832.8490 | $\sum X^2$=186613.4071 |

Sources: Table no. 5 & 23

Value of X represents independent variable and Y represents dependent variable.

$$\text{Regression Co-efficient (b)} = \frac{N\sum XY - \sum X \sum Y}{N\sum X^2 - (\sum X)^2}$$

$$= \frac{5 \times 51832.8490 - 721.89 \times 450.63}{5 \times 186613.4017 - (721.89)^2}$$

$$= \frac{259164.2450 - 325305.2907}{933067.0355 - 521125.1721}$$

$$= \frac{-66141.0457}{411941.8634}$$

$$= \text{-0.1606 or -0.16}$$

$$\text{Regression Constant (a)} = \frac{\sum Y - b(\sum X)}{N}$$

$$= \frac{450.63 - (-0.16) \times 721.89}{5}$$

$$= \frac{566.1324}{5}$$

$$= 113.23$$

No. of Observation = 5

$\sum X = 721.89$

$\sum Y = 450.63$

$\sum XY = 51832.8490$

$\sum X^2 = 186613.4071$

Regression constant (a) = 113.23

Regression Co-efficient (b) = -0.16

Co-efficient of correlation (r) = -0.65

Co-efficient of determination ($r^2$) = 0.4225

Now,

| Year | NWC(X) | NI(Y) | u=x-Ax | V=Y-Ay | UV | $U^2$ | $V^2$ |
|------|--------|-------|--------|--------|-----|-------|-------|
| 061/062 | 85.54 | 126.23 | -619400 | 33.06 | -2047.7346 | 3836.5636 | 1092.9636 |
| 062/063 | 147.48 | 120.58 | 0 | 27.41 | 0 | 0 | 751.3081 |
| 063/064 | 149.51 | 68.04 | 2.03 | -25.13 | -57.7990 | 4.1209 | 631.5169 |
| 064/065 | 366.67 | 42.61 | 219.19 | -50.56 | -11082.2464 | 48044.2563 | 2556.3136 |
| 065/066 | -27.31 | 93.17 | -174.79 | 0 | 0 | 30551.5441 | 2556.3136 |
| | | | $\sum u=$-15.51 | $\sum v=$-15.22 | $\sum uv=$-13187.7828 | $\sum u^2=$82436.4847 | $\sum v^2=$5032.1022 |

Sources: Table no. 5 & 23

Where, Assume mean AX=147.48          U=X-AX

Where, Assume mean AY=93.17               V=Y-AY

$$r = \frac{n\sum uv - \sum u \times \sum v}{\sqrt{n\sum u^2 - (\sum u)^2} \times \sqrt{n\sum v^2 - (\sum v)^2}}$$

$$= \frac{5\times(-13187.7828)-(-15.51)\times(-15.22)}{\sqrt{5\times82436.4748-(-15.51)^2} \times \sqrt{5\times5032.1022-(-15.22)^2}}$$

$$= \frac{-66174.9726}{641.8270\times157.8888}$$

$$= \frac{-99174.9726}{101337.2734}$$

$$= \text{-0.6530 or -0.65}$$

Again,

Coefficient of determination $(r^2)= 0.4225$

## APPENDIX-6

## Simple Regression of Variable of Short term Fund on Net Income

**Rs. In million**

| Year | NWC(X) | NI(Y) | XX | $X^2$ |
|---|---|---|---|---|
| 061/062 | 267.18 | 126.33 | 33726.1314 | 71385.1524 |
| 062/063 | 304.81 | 120.58 | 36753.9898 | 92909.1361 |
| 063/064 | 418.07 | 68.04 | 28445.4828 | 174782.5249 |
| 064/065 | 223.45 | 42.61 | 9510.9781 | 49822.7041 |
| 065/066 | 426.45 | 93.17 | 39732.3465 | 181859.6025 |
| | $\sum X$=1639.72 | $\sum Y$=450.63 | $\sum XY$=148168.9286 | $\sum X^2$=570759.12 |

Sources: Table no. 16 & 23

Value of X represents independent variable and Y represents dependent variable.

Regression Co-efficient (b) $= \frac{N\sum XY - \sum X \sum Y}{N\sum X^2 - (\sum X)^2}$

$$= \frac{5 \times 148168.9286 - 1639.72 \times 450.63}{5 \times 570759.12 - (1639.72)^2}$$

$$= \frac{1937.6194}{165113.9216}$$

$$= \text{-0.0117 or 0.012}$$

Regression Constant (a) $= \frac{\sum Y - b(\sum X)}{N}$

$$= \frac{450.63 - (0.012) \times 1639.72}{5}$$

$$= \frac{430.9534}{5}$$

$$= 86.1907 \text{ or } 86.20$$

Regression constant (a) = 86.20

Regression Co-efficient (b) = 0.012

Co-efficient of correlation (r) = 0.030

Co-efficient of determination ($r^2$)= 0.0009

Now,

| Year | STR(X) | NI(Y) | u=x-Ax | V=Y-Ay | UV | $U^2$ | $V^2$ |
|------|--------|-------|--------|--------|-----|-------|-------|
| 061/062 | 267.18 | 126.23 | -37.63 | 33.06 | -1244.0418 | 1416.0169 | 1092.9636 |
| 062/063 | 304.81 | 120.58 | 0 | 27.41 | 0 | 0 | 751.3081 |
| 063/064 | 418.07 | 68.04 | 113.26 | -25.13 | -4846.2238 | 12827.8276 | 631.5169 |
| 064/065 | 223.21 | 42.61 | -81.60 | -50.56 | 4125.6960 | 6658.5600 | 2556.3136 |
| 065/066 | 426.45 | 93.17 | 121.64 | 0 | 0 | 14796.2896 | 0 |
| | | | $\sum u$=-115.67 | $\sum v$=-15.22 | $\sum uv$=35.4244 | $\sum u^2$=35698.6941 | $\sum v^2$=5032.1022 |

Sources: Table no. 16 & 23

Where, Assume mean AX=304.81          U=X-AX

Where, Assume mean AY=93.17          V=Y-AY

$$r = \frac{n \sum uv - \sum u \times \sum v}{\sqrt{n \sum u^2 - (\sum u)^2} \times \sqrt{n \sum v^2 - (\sum v)^2}}$$

$$= \frac{5 \times (35.4244) - 115.67 \times (-15.22)}{\sqrt{5 \times 35698.6941 - (115.67)^2} \times \sqrt{5 \times 5032.1022 - (-15.22)^2}}$$

$$= \frac{1937.6194}{406.3421 \times 157.8888}$$

$$= \frac{1937.6194}{101337.2734}$$

$$= \text{-0.0302 or 0.030}$$

Again,

Coefficient of determination $(r^2)$ = 0.0009

## Appendix-7

### Dairy Development Corporation

### Kathmandu, Nepal

### Comparative Balance Sheet

(Rs. In million)

| Fiscal Year | 061/062 | 062/063 | 063/064 | 064/065 | 065/066 |
|---|---|---|---|---|---|
| Total Assets | | | | | |
| A. Current Assets | 352.72 | 452.29 | 567.58 | 589.88 | 399.14 |
| Cash and Bank Balance | 20.46 | 99.51 | 6.27 | 317.40 | 62.34 |
| Trade and Other receivable | 33.84 | 49.31 | 32.18 | 64.77 | 32.16 |
| Inventories | 172.2 | 132.47 | 293.93 | 126.11 | 144.45 |
| Miscellanies | 126.22 | 171.00 | 235.20 | 81.60 | 160.19 |
| B. Fixed Assets | 192.10 | 177.87 | 192.84 | 172.20 | 146.16 |
| Gross Block | 280.34 | 270.47 | 317.06 | 325.63 | 314.06 |

| | | | | | |
|---|---|---|---|---|---|
| Less: Deprecation | 88.240 | 102.13 | 124.22 | 153.43 | 167.90 |
| Assets under the construction | 0 | 9.60 | 0 | 0 | 0 |
| C. Investment Bond | 0 | 0 | 0 | 0 | 48.84 |
| D. Misc. Assets | 0 | 0 | 0 | 0 | 0 |
| Total Capital and Liabilities | | | | | |
| E. Current Liabilities | 267.18 | 304.81 | 418.07 | 223.21 | 426.45 |
| Trade and other payable | 142.86 | 156.18 | 129.36 | 96.59 | 247.01 |
| Short term Loan | 6.51 | 0 | 145.08 | 0 | 0 |
| Provision | 117.81 | 148.63 | 143.63 | 126.62 | 179.44 |
| F. Deferred Liabilities | 0 | 0 | 0 | 0 | 0 |
| Long term Loan | 0 | 0 | 0 | 0 | 0 |
| Misc. Deferred Liailities | 0 | 0 | 0 | 0 | 0 |
| Net worth | 277.1 | 324.94 | 342.35 | 348.13 | 358.43 |
| G. Shareholders Funds | 277.1 | 324.94 | 342.35 | 348.13 | 358.43 |
| Share Capital | 92.07 | 92.07 | 92.07 | 92.07 | 92.07 |
| Reserve and Retain Earning | 185.03 | 232.87 | 250.28 | 256.06 | 266.36 |
| Working Capital | 85.54 | 147.48 | 149.51 | 366.67 | -27.31 |

Sources: Annual audit report of DDC

# Appendix-8

Dairy Development Corporation

Kathmandu, Nepal

Comparative Profit and Loss Account

(Rs. In million)

| Fiscal Year | 061/062 | 062/063 | 063/064 | 064/065 | 065/066 |
|---|---|---|---|---|---|
| Net Sales | 1503.69 | 1728.63 | 1540.99 | 1236.05 | 1244.73 |
| Less: Cost of good sold | 1253.61 | 1401.88 | 1220.83 | 937.73 | 843.14 |
| 1.  Stock consumed | 1104.13 | 1225.38 | 1044.41 | 701.93 | 666.38 |
| Opening Stock | 52.58 | 110.58 | 87.49 | 176.96 | 85.36 |
| Add: Purchase Material | 1101.90 | 1202.3 | 1133.90 | 610.4 | 651.7 |
| Less: Closing Stock | 50.35 | 87.50 | 177.0 | 85.40 | 70.70 |
| 2.  Wages and Salaries | 17.73 | 18.87 | 25.55 | 25.61 | 23.96 |
| 3.  Direct Manufacturing Exp. | 131.75 | 157.6 | 150.90 | 210.2 | 152.90 |
| Gross Profit | 250.01 | 326.75 | 320.17 | 298.32 | 401.59 |
| Less: General exp. | 94.85 | 160.30 | 192.21 | 201.6 | 258.90 |
| Less: Interest exp. | 10.12 | 3.84 | 14.21 | 12.61 | 2.60 |
| Pre Dep. Operating Profit | 145.11 | 162.64 | 113.74 | 84.11 | 140.14 |
| Less. Deprecation | 21.86 | 21.44 | 22.82 | 29.21 | 24.04 |
| Operating profit | 123.25 | 141.20 | 90.92 | 54.90 | 116.10 |
| Add: Income from other Sources | 2.98 | 3.61 | 2.62 | 1.76 | 7.13 |
| Pre tax profit | 126.23 | 144.81 | 93.54 | 56.7 | 123.30 |
| Less: Provision for taxation | 0 | 24.20 | 25.50 | 14.00 | 30.00 |
| Net Profit | 126.23 | 120.58 | 68.04 | 42.61 | 93.17 |

Sources: Annual audit report of DDC