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CHAPTER I

INTRODUCTION

1.1 Background of the Study

Industrialization plays a crucial role in the process of economic development and it is a means of achieving economic growth and prosperity within the country. Hence, "Industrialization is universally accepted as a strategy of economic development as well as fundamental goals of the most of the developing countries" (Pradhan, 1994, p 56). It facilitates on effective mobilization of capital, human resources and exploits the natural resources. It also facilitates the agricultural raw materials and by supplying necessary inputs to agricultural sector. It also acts vehicle for fostering innovation and technological improvement in industrial development, thus, has a multiplier effect to the economy therefore, an important pre-requisite for economic development and transition from an agrarian economy to modernization is to foster the industrialization. The reason of emphasizing industrialization is that of production where higher productivity is possible without reducing total agricultural inputs" (United Nations, Economic Bulletin for Asia and the Far East; 2003).

Industrialization in a poverty-stricken country like Nepal is an effective means of achieving economic development. Like most of the other developing countries, one of the most important aspirations in Nepal has become to bring out a structural change that would transform its agricultural economy into the industrial one. When industrialization is promoted as an effective way, it can he holdout prospects of abundant manufacturing goals. In order to increase national employment, there should be optimum utilization natural, human and capitals resources within the country and improvement in the balance of payment. It is believed that in order to achieve security, stability and high standard of living, the country must become industrialized. The manufacturing sectors have to face various problems which have acted constraints in growth of manufacturing industries. Such problems are arises due to the country being landlocked and underdeveloped, lack of trained and skilled human resources, inconvenience of transport and communication networks, non-availability of assured energy at reasonable rate, shortage of capital, small size of market, unawareness of the industrial potential, higher cost of production, low productivity of inputs, technology, instability in government policy etc. Along with Nepalese

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economy is facing stiff situation due to long peoples' war, insecurity, frequent strikes, lockouts and frequent power cuts and load shedding.

The Private sector implies market economy and market economy refers to the interaction of demand and suppliers determine price, competition, free entry and exit from the market. But in Nepal privatization is based much on frustration generated by public enterprises rather than the hope of private efficiency. The performance and profitability of most of public sector enterprise are not much satisfactory. They become burden to government instead of contributing to the economic development of the country. In general, the private sector in Nepal has a trade-oriented character rather than an industrial character and hence it is reluctant to bear high risks. It seeks to harvest larger profits from a short period investment often through small amount of share capital and big volume of institutional loans. Secondly, the private sector is in the form of family group that has recently taken shape of 'Business House'. While analyzing these family group and Business Houses, it is necessary to understand the domination of caste and ethnicity (http;//www.gefond.org/research /bigbuss/html/partl. htm).

Nepal is one of the least developed countries of the world with per capita income of 472 US dollars, the lowest in South Asia. The economy is historically growing at 5% or less, population of the country growing at a rate of 2.35 percent and therefore per capita income has grown by little over 0.6 percent (Economic Survey, 2008/9;P xx). Furthermore, that scenario has been changed in recent years of conflict and liquid political situation of the country which cause less than 1 percent of GDP growth and more than 2 percent of population growth and economy is not letting down by huge amount of remittance. Besides, the country is beset with 42 percent of the population in absolute poverty and half of the labour force either underemployed or unemployed. The distribution of income and wealth is uneven with 10 percent of the households enjoying 53 percent of the national income and 6 percent of the households occupying 33 percent of the agricultural land.

The unemployment situation is equally alarming. The labor force is growing at a rate of nearly 2.4 percent; and current output growth can create job opportunities for not more than half of the additional labor force. If gainful employment situation is considered, the unemployment rate goes as high as 14 percent. The existing

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employment elasticity of output growth is very low, somewhere around 0.4 implies that each 5 percent growth of the economy can create job opportunity for only 2 percent of the labor force. In such a situation, if unemployment and underemployment rates are to be reduced, either a significantly higher economic growth rate is required, or a highly labor intensive output growth strategy has to be adopted.

For want of proper planning process, commitment, accountability, and integrity of the government, and in lack of peoples' participation in development activities, forty years planned development efforts have been little successful in their objectives, hence to solve the problems facing Nepalese people. In an attempt to globalized national economy, the government, elected after the restoration of multiparty democracy in 1990, moved for and open, liberal and private sector led economy. Trade, investment, foreign exchange, financial and industrial sectors were subsequently deregulated, de-licensed, and privatized. Although the euphoria brought about by economic liberalization resulted in a satisfactory performance of the economy for a few years, the so-called success was soon over. Hasty liberalization and improper sequencing of globalization measures subsequently resulted in the slow down in industrial activities, low economic growth rate, and worsening income distribution.

The evolution of public enterprises in Nepal is not long, public enterprises have recorded spontaneous growth with in a period of two decades until 1994B.S the year when the first five years plan was introduce the only public enterprises was Nepal Bank L.td. Since first years plan, number of public enterprises has been established and greatly effects the economics structure of the country. Public enterprises have contributed through various means in the development process of the country. In manufacturing sector some of the largest industries with substantial share in total industries activities are in public sector. They have contributed through important substitution export promotion and strengthening the revenue generation of Nepal Government (Bajracharya, 1983; pp 56, 58).

The ultimate objective of Nepal is to achieve increased output of a basic goods and service, provides suitable development all infrastructures and attain in equitable distribution of the fruits of increased productivity in the shortest possible times (Narayan, 1992; p 156).

The responsibility of the government is not only production but some it has also to

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undertake the distribution of essential goods and services to remove the suspicion of adulteration and distrust of quality. Some times it has taken the lead in the industrial field of supply exploitation of labor by providing far remuneration and decent condition of work government intervention in this field is very necessary. So the role of public enterprise in contribution for economic growth and social justice of Nepal becomes more important.

It is essential in industrial policy 2037 of Nepal that the government can established and operate industries related to defense and to social overhead like electricity, drinking water, while in basic industries Government of Nepal would hold at least 51% of equity share (Bajracharya, 1983; p 159). It is also obvious that public enterprises in above mentioned field enjoy certain advantage of natural monopoly. It is possibilities of exploitation of the general people as well as competition these arc also not desirable.

Public enterprises as these organization namely government enterprises and public corporations which arc entirely of namely owned and love controlled by public authorities consisting of establishment which by virtue of their kind of activities, technology and made of operation are classified as industries (Bajracharya, 1983; p 125).

Public enterprises broadly refer to the nationalized or socialized industries and institution engaged either in the manufacturing of goods or in the supply of services. It also for a concern owned and managed by the state or any other public authority. In short public or stale enterprises in business denotes an undertaking which as its sale owner or major shareholder (Poudel, 2002; p 78).

The main objectives of the establishment of manufacturing in public sector are to provide high quality product to general people reasonable price. Similarly this type of the company exploits natural resources of the nation for the maximum benefit of the society, In other way the public manufacturing company is established to utilize the national natural resources which can be behalf and whole nation similar manufacturing company helps to make balance in foreign trade. It is possible cither by reduction in the volume of export of rational product so the government has to establish manufacturing company in the public sector to balance to the foreign trade (Narayan, 1992; p 125) which can be behalf and whole nation similar manufacturing

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company helps to make balance in foreign trade. It is possible either by reduction in the volume of export of rational product so the government has to establish manufacturing company in the public sector to balance to the foreign trade.

Public Enterprises is expected to the principal agent for rapid economic and social transformation by developing infrastructure. It is dominate position in the financial Held is intended to control and guide the private sector when every necessary.

The objective of reestablishing new enterprises and reason for nationality in some extent existing ones arc varied and often differ from case to ease from time to time, perhaps the only generalization possible in this regard is that public enterprises for us is more a matter necessity than of choice, it is not so much the ideology as the compulsion of situation, which led to the growth a most of the developing countries. As started in UN resolution Public Enterprises pays an important vital role in developing countries in as much as it helps in capital formulation in fuller utilization of natural resources in achieving a more equitable distribution of income and wealth (Pradhan, 1986; pp 136,139).

1.2 Introduction of DDC

In Nepal, Government of Nepal has operated numerous manufactures trading and commercial enterprise both public and private sectors. Each sector private as well as public has its own merits and demerits depending upon the ideology, resource availability, regulation, control, and monitoring and supervision mechanism.

Public enterprise was felt essential to create infrastructure because the public enterprises helps many areas as balanced regional development, public welfare, employment generation, export promotion opportunities. Various enterprises have established in the different Held such as:

- Manufacturing enterprises
- Trading enterprises
- Service enterprises
- Social/public utilization enterprises
- Financial enterprises

The main objective of these enterprises is to contribute to the rapid economic

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development of the country. But most of the public enterprises are suffering in losses.

Nepalese economy primarily based on agriculture in which more than 81.90% of total active population of the country is estimated to be involved. In land area of 54.4 thousand square miles, Nepal has a population of 23 million people. The total number of livestock is 9.71 million cattle and buffalo, 4.3 million sheep and goats, 4.9 million poultry, a small number of pigs, horses, mules, yaks and Chauries. The number of people engaged in the agricultural sector is about 9.7 million, whereas the total number of cattle and buffalo population is 9.71 million heads. This shows that each farm household in Nepal with 5.8 persons on the average keeps 5.8 livestock. Nepal rank as one of the highest amongst the developed countries in terms of population density of cattle and buffalo (Economic Survey, 2008/09; P. 34).

Nepal is basically an agricultural country where livestock farming has been a traditional secondary occupation of the Nepalese farmers. With a view enable these farmers to undertake dairy farming on a modern commercial scales, a need was felt a long back to set up milk collection centers in Kathmandu Valley, to set up cheese manufacturing units in hilly regions, and to set up ghee (animal fat) processing center at important center in Tarai regions.

A first five year plan stressed upon the need of developing modern dairy industry in public sector. The dairy development corporation was formed in 1955 A.D. The dairy development section was established in the year 2010/11. As the demand of milk and milk products were gradually growing so it was necessary to improvement of dairy development center. First dairy development center was establish at Bhotahity, Kathmandu on the same year. This center started to distribute the collected milk with processed to the urban people in Kathmandu. The demand of milk and milk product have been increasing day by day, the dairy plant became necessary. Due to the inadequacy of space this center was shifted to Lainchaur, which is central Dairy Development Corporation (DDC).

The dairy development activities in Nepal started in Tusal Village of Kavre District in B.S. 2009 on experiment basis with a small scale milk processing plant under the development of agriculture. In the year B.S. 2010/02/01, at the initiative of dairy development board, the central dairy plant was established and started milk collection, processing and marketing activities from the year B.S. 2014.

Dairy Development Corporation (DDC) is totally owned by government. It is also

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financing supported by the foreign grants and loans at interest. World Food Program (WFP) has been supporting DDC since 2030. Government of New Zealand and Denmark had contributed towards the establishment of milk processing plants.

DDC is a fully state owned corporation, initialed for the economic advancement of the poor fanning communities, has flourished into a nationwide movement with an annual collection over 66 million liters of milk from more than 75 thousands milk producers through 791milk co-operatives spread out in 34 district. It has 11 cheese manufacturing units, 45 milk chilling plants and highly qualified dairy specialists (www.dairydev.com.np).

DDC has been collecting cow, buffalo and Chauri milk from 34 districts. Milk is collected through the farmers owned, Milk Producers Cooperative Societies (MPCS). Its present milk collection network has spread from Panchthar in the East and Surkhet in the West DDC has managed the milk sales booths and sales center, in various urban areas as Kathmandu, Biratnagar, Hetauda, Pokhara, Butwal, Birgunj, Narayanghat etc for the sales of milk and milk products.

Hetauda Milk Supply Scheme (HMSS) also supports Kathmandu Milk Supply Scheme (KMSS) and Biratnagar Milk Supply Scheme (BMSS) by supplying excess milk above their local requirement. BMSS manufactures skimmed milk powder from its excess milk and milk excess from other supply schemes.

Table 1.1

The collection network under different milk supply scheme

Scheme	MPCS	Chilling Center	District Covered
KMSS	281	22	7
BMSS	126	11	4
HMSS	167	8	3
LMSS	79	9	3
JMSS	25	7	6
NMSS	40	4	4
DMSS	24	5	2
MPPSS*	49	-	5
Total	791	66	34

Source: Annual report of DDC (2066/67).

*MPPSS-Milk product production and supply scheme.

Pokhara Milk Supply Scheme has been operated under DDC before privatized in BS 2061-09-01.

1.2.1 Objectives of DDC

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- Provide a guaranteed market for milk to the rural farmers with fair price.
- Supply pasteurized milk and milk products to urban customers.
- Develop organized milk collection system to meet increasing demand for pasteurized milk and milk products.
- Develop an organized marketing system for milk and milk products in urban areas.

DDC provides qualitative milk and milk products to the customer at national level. The demand of milk is increasing day by day because of high quality and hygiene. DDC could not buy all the milk offered by the farmer especially during the flush season. Consequently, it had to impose milk holidays as certain days during the period. On the Other hand, during the lean season, DDC has been imports skimmed milk because it produces milk powder to meet the customers demand. DDC has declared from Aswin 1st to end Falgun as flush season and from first chaitra to end of Bhadra lean season. To mitigate this problem a skimmed powder plant was established in 1994 in Biratnagar and DDC started to export the milk to the cross broader area of India.

At present DDC supply different products. They arc Pasteurized Milk, full Cream Milk, Sterilize Flavored Milk (DDC Fresh), Dahi (Yoghurt), Butter, Yak Cheese, Spread, Kanchan Cheese, Mozzarella (Pizza) Cheese, Processed Cheese, Pannier, Ghee, Yak Ghee, LalMohan, Rasbhari, Peda, Gudpak, Geera Butler Milk and Skimmed Milk Powder.

Production plan of DDC depends upon the production capacity and availability of raw materials (i.e. milk). The capacity of DDC is around 200,000 ltrs and in case of skim milk powder the skim plant can product 3 metric ton skim milk powder by processing 40,000 ltrs milk in maximum level.

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Table 1.2

Production capacity of milk production and supply scheme

Scheme	No. of Chilling center	No. of milk producer co-operatives	Production Capacity (in ltrs.)	Daily average milk collection (in ltrs.)
KMSS	22	281	109000	72400
BMSS	11	126	38000	36300
HMSS	8	167	40200	23700
LMSS	9	79	32000	16300
JMSS	7	25	9000	4150
NMSS	4	40	21000	6700
DMSS	5	24	5000	2500

Source: Annual report of DDC (2066/67).

DDC has not included milk directly collected in Yak Cheese production center and milk directly collected in milk processing center.

1.3 Statement of the Problem

After the restoration of democracy on BS 2047, Nepalese government has been adopting the policy of liberalization through privatization. Most of Nepalese enterprises are suffering from losses due to lack of proper utilization of their available resources. They are not able to achieve their goals, objectives and strategies. Lack of delegation of authority and communication of objectives and goals from top to lower level of management is common scenario of Nepalese enterprises. Mismanagement or poor management of capital, under utilization of resources, hunch budgeting are the common problem of Nepalese Industry,

A study of Fortune 1000 firms found that more than one third of financial management time is spent managing current assets and about one-forth of financial management time is spent managing current liabilities (Gitaman JO & Maxwell CE, 1985; p. 578).

In most Nepalese enterprises, the management of working capital has been misunderstood as the management of money and the managers arc found over conscious about the hoarding of money rather than its efficient utilization. Regarding the management of working capital sources, most of the public enterprises never thought of it seriously. They are usually found to depend on Nepal Government even for overcoming the shortages of working capital in spite trying to manage working

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capital needs Horn their won sources. The researcher tries to find out the solution of Mowing problems:

- Is the composition of working capital of DDC is appropriate?
- Is DDC's investment in current assets appropriate to its total assets level?
- Is the DDC following appropriate working capital policy?
- What is the liquidity position of DDC?
- What is the relationship between liquidity & profitability in DDC?
- How working capital is being financed in DDC?
- What is the relationship between working capital and sales?
- How far is DDC able to utilize its current assets properly?

1.4 Objectives of the Study

Industries of developing countries still using traditional techniques of working capital management. Most of Nepalese enterprises are victim of poor management of working capital. Diary Development Corporation is not far from this obstacle. Thus the study has felt necessary about it. The general objective of this is to discuss the working capital management of DDC. The Specific objectives are as follows:

- To assess working capital management of Dairy Development Corporation
- To examine current assets investment policy of DDC
- To evaluate the relationship between liquidity and profitability of DDC

1.5 Importance of the Study

This study is important to know about working capital management of public enterprises in respect of Dairy Development Corporation. Though it is not new topic, but this topic is most important aspects of the management of the organization and also impacts the overall position of the firm and its profitability. It also analyzes the impact of working capital, overall profitability of firm and the information to overcome current problems which is helpful for new researchers, government and organization itself.

1.6 Limitations of the Study

Although efforts have been made to make this study more realistic, practicable, analytical and informational for all the people, the study is suffering from the number

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of limitations as follows:

- This study concerned with the working capital management of public sector.
- This study has been confined only about the working capital management of DDC.
- This study used financial and statistical tools for measuring the working capital management of DDC.
- Limited years of data coverage i.e. FY 2062/63 to 2066/67 is the major weakness of this study.
- The major sources are the secondary data of balance sheet and income statement of DDC annual report.

1.7 Organization of the Study

The whole study has organized into the following five chapters.

A) Introduction

This chapter includes the Background, Focus of the Study, Statement of the Problem, Objectives of the Study, Importance of the Study and Limitation of the Study.

B) Review of Literature

This chapter includes conceptual review, review of literature in field of working capital management and research gap. It emerges knowledge about the concerned field.

C) Research Methodology

The third chapter, research methodology, describes the various research methods i.e.. research design, population and sample, nature and sources of data, data collection procedure, data analysis tools and limitation of the methodology.

D) Presentation and Analysis

This chapter deals with presentation and analysis of the data. It presents and analyzes the information by using various accounting, financing as well as statistical tools in specific form to meet the staled objectives of the study.

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E) Summary, Conclusions and Recommendations

This chapter consist summary and researcher conclusion from the study, which is based on the result through data analysis. It provides important recommendation to the concerned organization for better improvement.

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CHAPTER II

REVIEW OF LITERATURE

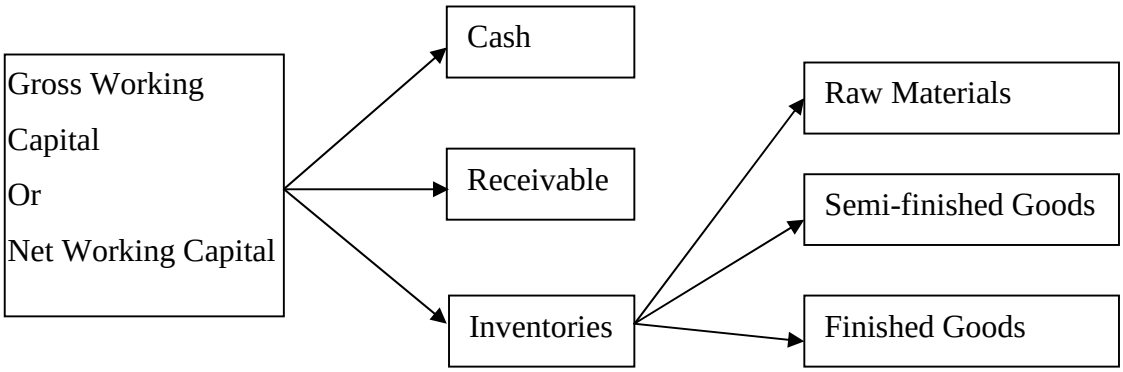
2.1 Conceptual Review

An enterprise needs not only fixed capital but also working capital. The working capital is the capital needed to conduct the day-to-day operations of a business. Working capital is nothing but the capital needed to run day-to-day operations of a business, such as wages, freight, raw materials etc. It all these expenses, which are to be incurred on short-term or day-to-day basis, are put together, it is called working capital.

There are two concept of working capital: Gross Concept and Net Concept or Gross Working Capital (GWC) and Net Working Capital (NWC). Both have equal significance from management viewpoint. According to the gross concept working capital refers to the capital invested in current assets of a firm. Gross concept focuses only the optimum investment in current assets and financing current assets (Khan MY & Jain PK, 1984; p. 156).

Figure 2.1

Gross Working Capital



Current assets are the assets when can be converted into cash with in an accounting year and includes cash, short-term securities, debtors, account receivable and inventory. The level of investment in current assets should be just adequate neither more nor less to changing business activities, Thus, this concept can be help earning more profits through maximum utilization of current assets. This concept called quantitative concept.

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Another aspect of the gross working capital is to the need of arranging funds to finance current assets. Whenever a need for working capital funds arise due to the increasing level of business activity or for any other reason, the arrangement should made quickly. Similarly if suddenly some surplus funds arise they should not be allowed to remain idle but should be invested short-term securities.

According to the net concept, working capital refers to the difference between current assets and current liabilities. In other word it is part of current assets financed with long term funds. It indicates the liquidity position of the firm. Suggestive extent to which working capital needs, may be financed by permanent sources of funds of current assets should be sufficiently in excess of current liabilities to constitute a margin of buffer for maturing obligations with the ordinary operating cycle of business. Every company has 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 poses a threat to the solvency of the company and makes it unsafe and unsound. It focuses the liquidity position of the firm and suggests extending which working capital should be financed with the permanent source of fund. It is not very useful for comparing performance very useful for internal control. This concept helps to compare the liquidity of the similar or same firm over a time.

Working capital is defined as or excess of current assets over current liabilities. Current assets are those which are immediately convertible into cash or tend to be converted in to cash with in short time, that is about a year, while current liabilities comprise such current obligations. As are payable with a year out of the income of the business. This constitutes net working capital. Gross working capital is the total amount of current liabilities, which is used to finance current assets. The distinction between gross and net working capital is useful in determining the amount and nature of assets that may be used working capital is useful in determining the amount and nature of assets that may he used to meet current liabilities surplus amount may be used to meet future operational needs. The gross concept is applied to the current amount of working capital at the right time in order to realize the greatest return on firm investment.

Net working capital can be positive or negative. A positive net working capital will

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arise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets (Pandey, 1992; p. 56)

For our present purpose working capital refers to funds which are used during an accounting period to generate a current income of a type. Which consistent with the major purpose of a company's existence, thus by definition non-working capital become funds which do not produce current income of if they do produce current income, they do not generate an income type, Which is consistent with a company's existence. It may be noted that in this concept the distinction between working capital and non-working capital rests upon what the funds are doing and not upon the firm in which they happen to exist. Working capital funds are different from working funds in a business working funds are the total resources of a business concerned and include internal and external equities, which are sunk in current and fixed assets working capital funds however sunk only in the current assets of concerns.

The net working capital (NWC) is difference between the sum of current assets and the sum of current liabilities. Since the long term financing is not required to pay back with in a year, the net working capital is determined as the excess of current assets over such liabilities which are require to be paid back with in a period of less than one year (i.e. NWC=CA-CL). In other words NWC is the portion of current assets financed by long term sources.

The meaning of the term "working capital" should not be allowed to limit either the gross or net concept of working capital as it keeps on circulating in the course of operations.

The circulating capital is a highly descriptive and meaningful term. Working capital is constantly flowing and changing its form as the enterprise accomplishes its objectives and performs its operations.

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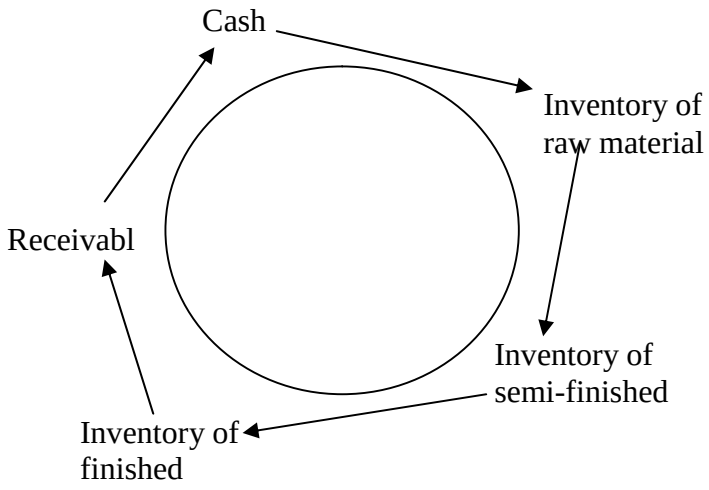
Figure 2.2

Working Capital Cycle



The enterprise starts its business with cash which will be converted into raw materials, semi-finished goods, finished goods, receivables and finally into cash again. 'This cycle keeps on repeating again and again. In a broader sense, both fixed and current assets circulate, but the current assets have a much greater velocity or turnover rate (Schultz RG & Shultz RE, 1972; p. 256).

Working capital is a broader term and there are chances of misunderstanding it. Both the concepts are equal value. Gross concept emphasizes that investment in current assets should be adequate, not more or not less, to the needs of the business firm. Excessive investment in current assets affects profitability as idle investment yields nothing. Similarly, inadequate investment in current assets makes it difficult to carry out the day-to-day operations of the business smoothly. It also threatens the solvency position of the business liabilities. It shows the extent of protection provided to short-term liabilities. The current ratio of 2:1 and quick ratio of 1:1 are considered to be the appropriate standards but they are simply-the conventional rules of thumb. The quality of current assets is more important than the current ratio of 2:l. The illiquid firm finds it difficult to borrow from outside.

The gross concept is more relevant for a new company because it has to decide how much money should be invested in the form of cash, receivables and inventories so as to begin (and continue) its operation. The net concept is more relevant for a going concern. Even when working capital is taken to mean current assets, there is no agreed list of such assets. And it is often difficult to draw a distinction between

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current assets from non-current assets or current liabilities from non-current assets. While differentiating current assets for non current assets or current liabilities from non-current liabilities, generally a period of one year is used as a line of demarcation. It suggests that the investment in any asset or liability with a life of less than a year falls into the realm of working capital management. The problem of working capital management begins with the attempt to define what were current assets and current liabilities.

In today's world of intense competition, working capital management is receiving increasing attention from managers. In fact, the goal of many leading companies today is Zero Working Capital. Proponent of the zero working capital concept claim that a movement toward this goal not only generates cash but also speeds up production and helps businesses make more timely deliveries and operate more efficiently. The concept has its own definition of working capital. Inventories + receivables - payables. The rational here is that inventories and receivables are the keys to making sales, but that inventories can be financed by suppliers. The idea is to reduce investment in working capital. Reducing capital requires increasing turnover. Reducing working capital forces a company to produce and deliver faster than its competitors. As investment disappear, warehouses can be sold off, both labor and handling equipment needs are reduced, and obsolete and/or out-of-style goals are minimized. The most investment disappear, warehouses can he sold off, both labour and handling equipment needs are reduced, and obsolete and/or out-of-style goals are minimized. The most important factor in moving toward zero working capital is increased speed. The production process has to be fast. Achieving zero working capital requires that every order and part move at maximum speed. Clearly, it is not possible for most firms to achieve zero working capital and infinitely efficient production.

The management of working capital is synonymous with the management of short-term financial liquidity (Kolb, 1983; p 189). The importance of short-term liquidity can best be gauged by examining the repercussions which stem from a lack of ability to meet short-term obligations (Bernstein, 1978; p. 68). The lack of liquidity implies a lack of freedom of choice as well as constraints on management's freedom of movement. If a lack of liquidity continues to be a problem, it may ultimately lead to

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insolvency and bankruptcy. Thus, working capital management is linked with the continued existence of an enterprise. Regardless of excellent products, effective marketing, efficient production, and wise fixed assets management, many a management has lost the control of its firm because a liquidity crisis resulted in takeover by creditors, forced merger or bankruptcy (Kolb, 1983; p. 72). An excellent long-run outlook for a business becomes immaterial if control is lost in the short run.

The management of working capital plays an important role in maximizing the value of an enterprise. The efficient management of working capital will lead to loss of profits in the short run but it will ultimately lead to the downfall of the enterprise in the long run. A .deeper understanding of the importance of working capital can load not only to material saving in the economical use of capital but can also assert in furthering the ultimate aim of business (Howard, 1971; p. 356). An excessive investment in working capital will lower the rate of return while inadequate investment will hamper the solvency position and growth, thereby affecting the smooth operation of business. entire year. It represents the amount of cash, receivables, and inventory maintained as a minimum to carry on operation at any time. In other words, the total of that part of the current assets, which would never decline to zero and which is there in the business on a continuing basis is called permanent working capital. It is permanent in the same way as the firms fixed assets are depending upon (he change in production and sales the need for working capital over and above the permanent working capital will fluctuate.

Permanent working capital means the minimum amount of investment in all current assets, which is regarded at all times to carry on minimum level of business activities. The operating cycle is a continuous process and therefore the needed for current assets but the magnitude of current assets increases and decreases over time. There is always a minimum level of current assets required all the time by the firm to carry on its business operation. This minimum level of current assets is known on permanent working capital or fixed working capital. Tendon committee has named it as core current assets. Current assets balance that do not change due to seasonal or economic condition, these balance exits between at the through of a firms is business cycle. Amount of permanent working capital remain in the business in one form to another. There is a positive correlation between the amount of permanent working capital and

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size of the business. Permanent working capital should be financed out of long term funds.

2.1.1 Variable (Fluctuate) Working Capital

The variable working capital is the one, which keeps on changing in the course of business transactions. These funds represent additional assets required at different times during the operating year. Inventory should be increased to support the peak selling periods. Receivables would also increase and must be financed following periods of high sales. That portion of working capital other than permanent working capital is known as variable working capital.

The amount of working capital keeps on changing depending upon changes in production and sales. Such an extra inventory of finished goods has to maintain the support for the peak period. In raw materials, work-in-progress and finished goods will decreases, if the market is slack. The extra working capital required to support the changing prediction and sale activities is known as variable or temporary working capital. Variable working capital represents that proportion of working capital.

The need for variable working capital in the firm is various due to the change in the volume of business. It can also again be distinguished under the head of seasonal and special working capital. The seasonal working capital should be provided for the fulfillment of seasonal variation in the business. Similarly, special working capital is required to finance special operation to enhance marked improvement in the day to day operation of business. Therefore this portion of working capital depends upon nature of firm production, relation between labor and management.

It is the volatile nature of working capital, which has led to the classification of working capital into permanent and variable ones. Fig. (2.3) shows clearly about this portion of working capital, if a firm has sound management of the portion of working capital. It can easily win the other competition in the cutthroat of the market.

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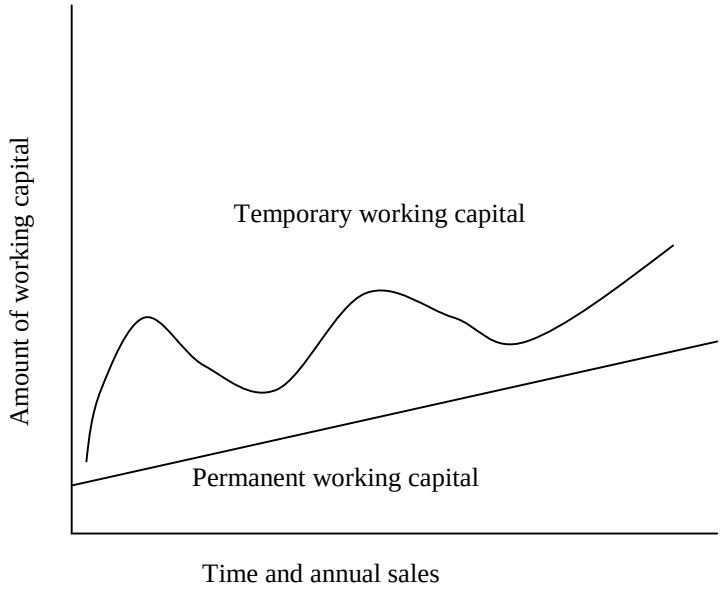
Figure 2.3

Types of Working Capital



Source: Adopted from financial management (I.M Pandey) P.808

2.l.2 Working Capital Policy

Working capital refers to the firm basic policies regarding i) Target level for each category of current assets. ii) How current assets will be financed (Weston, Basley and Brigham, 1996; P341).

The firm decision about the level of investment in current assets involves of trade off between risk and return. When the firm invests more in current assets, it reduce the rise of liquidity but loose in terms of profitability since opportunities of earning from the excess investment in current assets in lost. The firm therefore required striking a right balance.

The financing of current assets also involves trade of between risk and return. A firm can choose from short or long term sources of finances. If the firm used more of short-term funds for financing both current assets and fixed assets in financing policy is considered aggressive and risk. It financing policy will be considered conservative if it makes relatively more use in financing assets. A balanced approach is to finance permanent assets by short-term sources of finance. Theoretically short-term debt is considered to be risk and costly to finance permanent current assets.

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In the management of working capital posing question is how working capital to maintain? What types of financing to use? How to adjust the working capital when there is a changing in the level of business activities? In particular they face the following issue with respect to management of working capital:

- Size of working capital to maintain.
- Size of permanent and seasonal working capital investment.
- Sources of financing short-term debt and equality.
- Cost of financing cost of short-term Vs long term finance.
- Risk association with type of financing trade between cost and risk.
- Maintains of current ratio minimizing the risk of cash flow problem.

These issues call on the part of financial managers for proper analysis of sale fluctuation cash flow cycle, access to capital and money marked opportunity cost of various types of financing, type of industry and nature of business. The objectives of managing working capital is to aid in the value maximization of the firm by minimizing the cost of working capital depends on the source of finance used. The short-term sources generally cost less than the long-term sources, but they are riskier. The job of financial manager is to balance the costing working capital and the risk associated with the source capital in such a way that the trade off between the cost and risk is optimizes. The financial manager should determine the optimum level of current assets, so that the wealth of shareholders should be maximized. A firm needs fixed and current assets to support a particular level of output but the level of current assets may be different depending upon production level.

2.1.3 Current Assets Investment Policy

Current assets investment policy refers to the policy regarding total amount of current assets to be earned to support any level of sale. There are three alternative current assets investment policy fat cat, Lean or mean and moderate (Weston, Basley & Brigham, 1996; p. 345).

Following figure clearly show three alternative policies regarding the level of current assets. Under each policy, a different amount of way capital is carried to support each level of sales.

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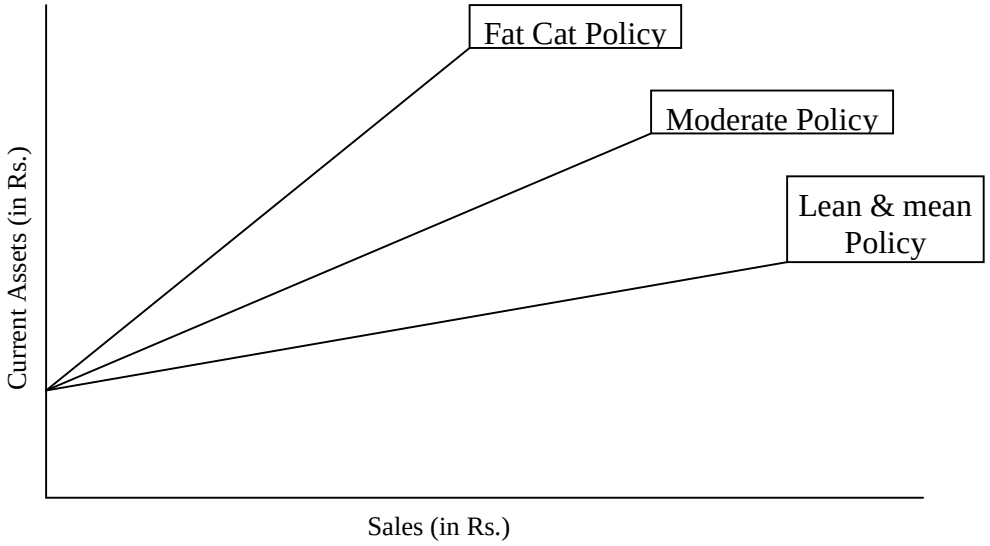
1) Fat Cat Policy

This is known as relaxed current assets policy. In this policy the firms holds relatively large amounts of cash and marketable securities, inventory and receivable to support a given level of sales. This policy results in high level of receivable. It is also creates the longer receivable collection period due to the liberal credit policy. This policy creates longer inventory and cash conservation cycle.

The most relaxed or conservative policy maintains high level of current assets. Such policy indicates high CA/FA ratio or CA/TA ratio which means greater liquidity and lower risk.

Figure 2.4

Alternative Current Assets Investment Policies:



Source: Western Basley and Brigham, Essential Managerial Finance. P.344

In short, a policy under which relatively large amount of cash and marketable securities and inventories are carried and under which sales are stimulated by liberal credit policy which result of current assets.

11) Lean and Mean Policy (Restricted, Aggressive)

A policy under which holding of cash marketable securities, inventories and receivables are minimized, such aggressive policy maintained low level of current assets and Indicates low CA/FA ratio of, CA/TA ratio and implies higher risk and poor liquidity.

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In lean and mean policy, a firm holds the minimum of cash, marketable securities, inventories, inventory and receivable to support a given level of sales. This policy provides to highest expected return in investment with greatest risk. This policy tends to reduce the inventory conversion and receivable conversion cycle under this policy firm follow tight credit policy and bears the losing sale.

III) Moderate Policy

In moderate policy a firm holds the amount of current assets in between in the relaxed and restrictive policies. But risk and return are moderate in this policy. The moderate current assets investment policy lies between the two extremes. In simple word a policy that exists between relaxed and restrictive policy.

A large investment in current assets would mean a low rate on investment. A smaller investment leads frequent interruption on production and sales. As we know that is not possible to estimate working capital needs accurately. The firm must decide about level of current assets to be policy. It may follow a conservative or aggressive policy. These policies have different risk-return implication. A conservative policy means loser return and risk. While an aggressive policy products higher return and risk. The important element that must be considered while making investment in working capital is profitability and solvency. To ensure solvency the firm should be very liquid which means the firm maintain larger current assets holding. It will have no difficulty in paying Claims of creditors. When they become due, the firm will be able to fill all sales orders and ensure smooth production.

To have a higher profitability, the firm may sacrifice solvency and maintain relatively low-level of current assets. When the firm does so, its profitability will improve as less funds are tied up in idle current assets. But its solvency would risk of cash shortage and stock outs. Therefore, to determining the optimum level of investment in working capital, the firm should balance the profitability solvency tangle by minimizing total cash cost of liquidity and cost of liquidity.

2.1.4 Current Assets Financial Policy

A firm must find out source of funds to finance its current assets. It is the manner in which the permanent and variable current assets are financed. Cost and risk affected the financing of any assets. It can be adopt different financing policies. A simple rule

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of Current assets financing, other things beings equal, is a firm with a high proportion a liquid assets is placed in a better position to finance its current assets, less payable and accruals on a short term basis than a firm with a low proportion of liquid assets. On the other hand, a fir that finances its current assets, less payable and accruals, entirely with equity, will have less need for liquidity than if it financed these assets entirely with short term borrowing (Van Home, 1974; p. 266).

A firm must find out sources of funds to financial its working capital. It can adopt different financing policies. They are; a) Long term financing, b) Short term financing and c) Spontaneous long term financing. The sources of long term financing are shares, debentures, preference shares, retained earning and debt from financial institutions. .Short term financing refers to those sources of short-term credit that the firm must arrange in advance credit. These sources include short term bank loan, commercial paper, factory receivable and public deposits. Spontaneous financing refers to the automatic sources of short term fund. The major sources of such financing are trade credit and outstanding expenses. Spontaneous source of finance is cost free. Therefore a firm would like to finance its current assets with spontaneous sources as much as possible. The manner in which the permanent and temporary current assets finance contribute the firm as working capital financing policy following are the three major financing policies for working capital.

1) Moderate Policy (Hedging or maturity matching approach)

The moderate financing policy attempts to achieve a trade-oil between risk and return. The hedging approach to financing suggests that each asset would be offset with a financing instrument of the same approximate maturity.

It lies between the aggressive and conservative policies. It leads to neither high nor low level of current assets and current liabilities. It lies between a low liquidity with high profitability and high liquidity with low profitability. Fig. shows temporaly working capital financed by short-term financing and long term by long term financing. Hence net working capital is zero under this policy. Under this policy no working capital is financed by long term funds. In simple word, financing policy that matches assets and liability maturates. This would be considered a moderate current asset financing policy.

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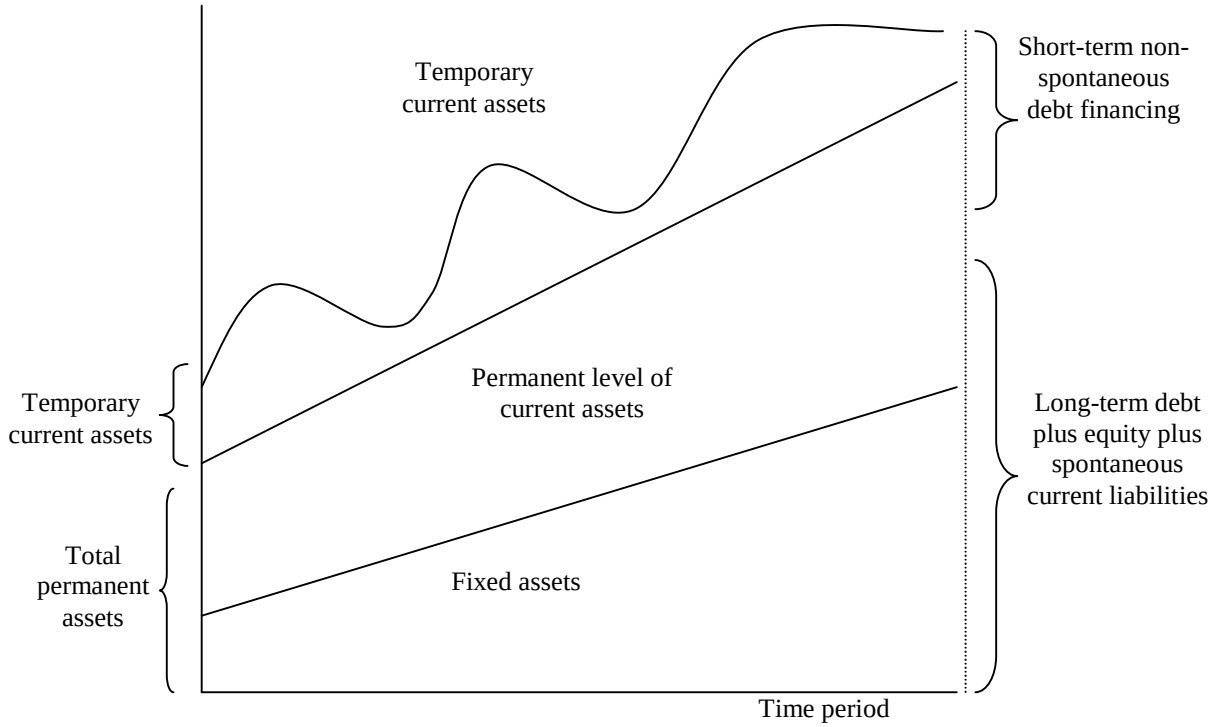
Figure 2.5

Moderate Policy (Maturity Matching Approach)



Source: Western Besley and Brigham, Essentials Of Managerial Finance P.347

II) Aggressive Financing Policy

We may follow more or less riskier to hedging policy to financing. The more risky policy is to follow aggressive financing policy. Here the firm attempts to employ more of the short-term funds. Shorter the maturity schedule of a firm's debt obligation, the greater the risk that it will unable to meet principal and interest payments and hence the approach is more risky.

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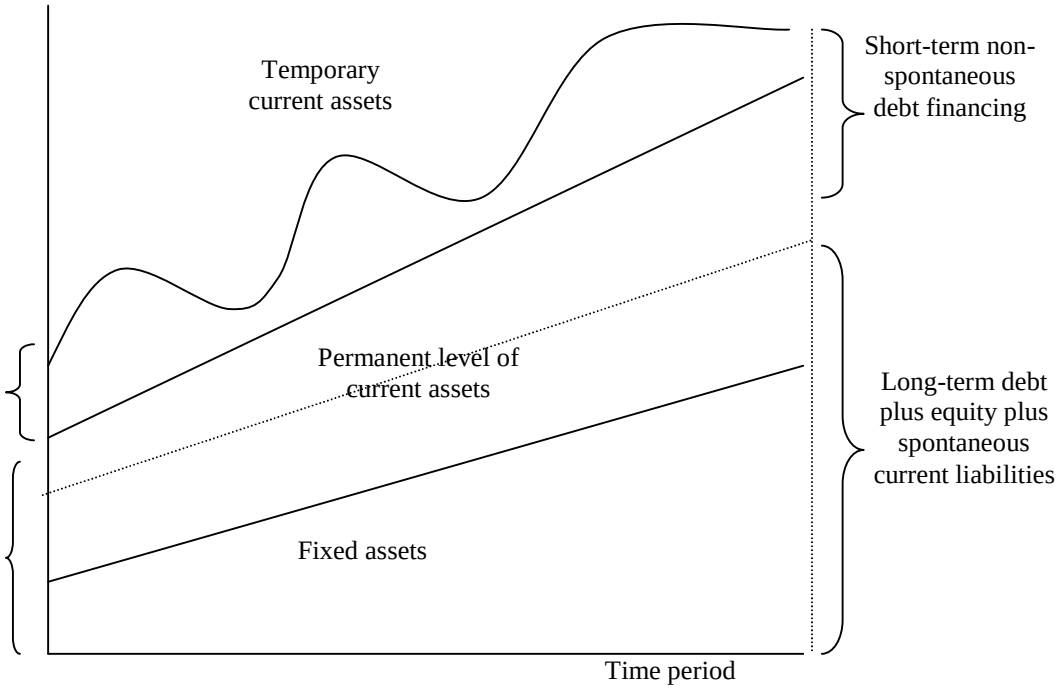
Figure 2.6: Aggressive Financing Policy



Adopted from: Western Besley and Brigham, essentials of Managerial Finance, p. 348

This situation is something like borrowing on short-term basis to finance the plant and machinery. It may be seen clearly from the above figure.The use of more short-term funds will enable to lower the financing cost of short-term funds is cheaper than the cost of long-term funds. So the return or profitability would increase but at the same time risk would also increase because of the greater amount of short-term funds.

Ill) Conservative Policy

A policy in which all of the fixed assets all of the permanent current assets, and some of temporary current assets of a firm are financed with long term capital. The financing of the firm is said to be conservative plan, the firm finance its permanent assets and part of temporary assets with long term financing. Thus in periods when the firm has no temporary current assets, its stores liquidity by investing surplus funds in two marketable securities. The conservative plan relies heavily on long term financing and there is less risky.

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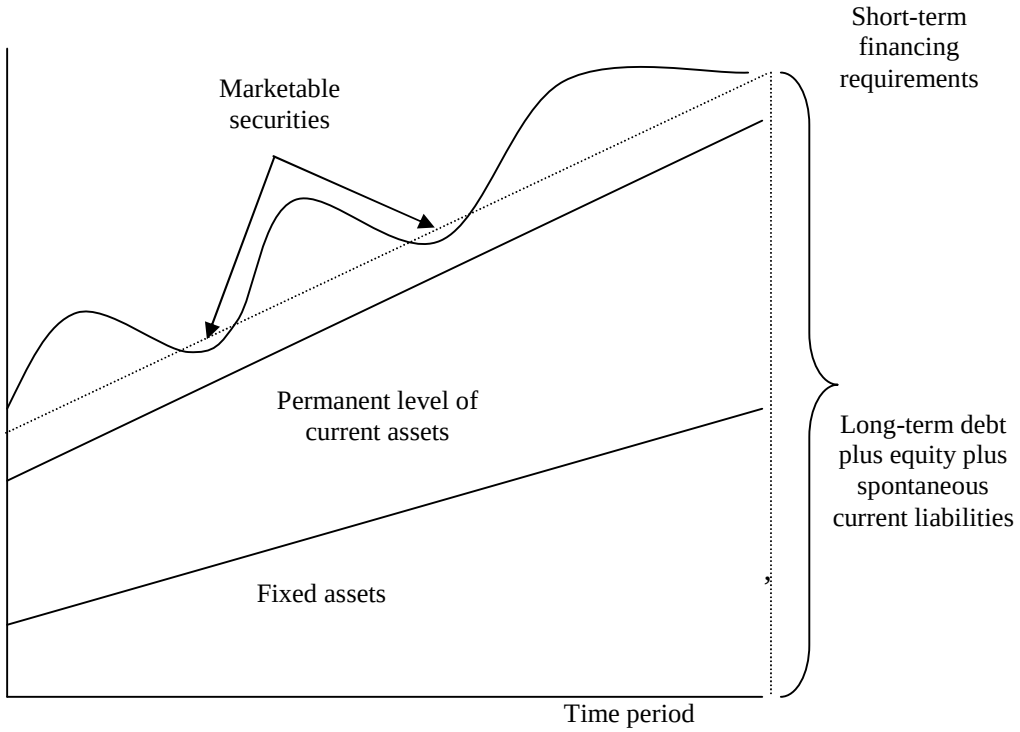
Figure 2.7

Conservative Financing Policy



Source: Western Besley and Brigham,Essentials Of Managerial Finance P.348

Under this policy a large portion of assets would be financed with long term debt. Again highly conservative working capital policy would seek to replace even long term debt by-equity capital. This policy is adopted to have greater liquidity and lower risk, since it refers higher ratio of long term sources to short term sources. This policy leads to high level of current assets with a long conservation cycle, low level liabilities and higher interest cost. The risk and liquidity position is higher than that aggressive one.

2.1.5 Need for Working Capital

The need for working capital to run day to day business activities can not be overemphasized. We will hardly find a business firm which does not require any amount of working capital Indeed differ in their requirements of the working capital.

We know that firm's aim of maximizing the wealth of shareholders, to maximum shareholders wealth, the firm should earn sufficient return. The firm has to invest enough funds in current assets for success of the sale activity. For constant operation of business every firms need to hold the working capital components, cash,

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receivable, inventory etc. therefore, every firm needs working capital to meet the following motives.

The basic objectives of financial management are maximizing the wealth of shareholders. This can be active, when a firm earns sufficient returns from its operation magnitude of sales'. The firm has to invest enough funds in current assets for accelerating its sole activity. There is always a time gap between sale of goods and the final realization of cash. Current assets are required during this time gap in order to sustain the sales activity. An adequate working capital is required during this period for purchase of raw materials, payment of wages, and other inevitable expenses required for the manufacturing of goods to be sold.

I. The Transaction Motive

Transaction motive active requires a firm to hold cash to conduct its business in ordinary course. The firm needs cash to make payments, purchase, wages, operating expenses and other inevitable payments. The needs to hold cash arise because cash receipts exceed cash payments. The firm should maintain some cash balance to able to make the required payments. For transaction purpose a firm invests in marketable securities. Usually the firm will purchase the securities whose maturity corresponds with some anticipated payments. Main objective of holding cash inventories to facilitate smooth production and sale operation. Thus, the firm needs working capital to meet their transaction motive.

II) The Precautionary Motive

The firm keeps cash balance to meet unexpected cash needs arising out of unexpected contingencies such as strikes, sharp increase in price of raw materials etc. The amount of precautionary cash is influenced by the firm's ability to borrow at short notice, when needs arises. The amount of cash set a side for precautionary reason is not expected to earn anything. Therefore, the firms should attempts to earn some profit if such funds should be invested in high liquid and low risk marketable securities. Precautionary balance is needed to ready borrowing power to meet emergency cash drains.

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III) The Speculative Motive

To take advantage of unexpected opportunities a firm holds cash for investing in profit making opportunities which is purely speculative in nature. For example holding cash to take advantage of an opportunity to purchase raw material at the reduced price in payment of immediate cash or delay purchase of material anticipate of declining prices. Similarly, it may like to keep some cash balance to make profit by buying securities in times which their prices fallow on account tight money.

IV) The Compensative Motive

Another motive to hold cash balance is to compensate balance for providing certain service and loan. Hank provides a variety of services to business firm such as defiance of cheque, supply of credit information, transfer of funds etc. While for some of the service bank charges or commission or fee, for other they seek indirect compensation. Usually clients are required to maintain a minimum balance of cash at the bank.

2.1.6 Financing of Working Capital

The need of working capital is increased by raising prices of end products and relatives output on the other hand the government and monitory authorities play their own role to curb the malice in period of inflection. The control ensures often take the form of dear money policy and restrictive credit. Financing of additional working capital requirements in such an environment becomes a real problem to finance manager of a concerned unit. Commercial bank plays the most significant role in working capital finance. There should be balance in long term borrowing or issuing equity or earning sufficient profits and retaining the same for copying will) the additional working capital requirements. The first choice before a finance manager when a part of additional working capital is not provided by bank is to take the long-term sources of finance.

Every manufacturing concern or industry require additional assets whether they are in Stable or growing condition, when the growing firm wants to generate sustained, normally required fixed capital as well as working capital. Additional portion of working capital is approximately dominated by the same rate as sales. But this portion of capital requirement depends upon the nature of firm (Pandey IM, 1992; p. 823).

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Financial management must determine an appropriate financing mix or decide how current liabilities should be used to finance current assets. However, a number of financing mixed are available to financial manager. He can resort generally three kind of financing: I) long term financing II) Short term financing III) Spontaneous Financing.

I) Long Term Financing

Long term financing has high liquidity and low profitability. The important example of external long-term financing are shares, debentures, preference shares and long term loan from financial institutions including commercial banks. The internal long-term sources of financing are retained earnings and depreciation provisions. Finding the net, working capital because generally the net working capital is financed from the long-term funds can need the portion of long term funds employed in financing working capital. In our context, World Food Program (WFP) has supported DDC for about a decade in the early years. The New Zealand and Danish Government had contributed towards the establishment and rehabilitation of milk processing plants. USAID in and Danish Government has been the major donors (www.dairydev.com.np).

II) Short-term Financing

Short-term financing refers to those sources of short-term credit than the firm must arrange in advance. These sources include short-term bank loans, commercial paper and factory receivables. Short-term credit defined as any liability originally scheduled for payment with in one year. There are numerous sources of short term funds and in the following section we describe three major types: (i) trade credit (ii) bank credit: a) loan arrangement b) overdraft arrangement c) cash credit arrangement d) commercial paper (iii) Spontaneous Financing,

(i) Trade Credit

The term given to the credit when one firm buy on credit from another firm recording the debt as an account payable. This type of financing is called trade credit. It is the largest single category of short-term debt representing about 4% of the current liabilities for the average non-financial corporation. The percentage is some what larger for smaller firms. Because small companies often do not quality for financing

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from other sources. They rely heavily on trade credit (Weston, Besley & Brigham, 1996; p. 366).

It refers to the credit that a customer gets from suppliers of goods in the normal course of business. The buying firm has not to pay cash immediately for the purchase made. This difference in payments is called trade credit. It is mostly an informal arrangement and granted on an open account basis. Another form of trade credit is bills payable, it depends upon the term of credit.

(ii) Bank Credit

Bank credit is primary institutional sources for working capital financing. Commercial bank Whose loans generally appears in firm's balance sheet as notes payable are second important type then trade credit as a source of short-term financing. The influence of Banks actually is greater than it appears from the dollar amounts they lend because bank provides non spontaneous funds. As a firm's financing need increase it specially requests addition funds is bank if the request is denied the firm might be forced to abandon attractive growth opportunities. The key features of bank loans are discussed in the following when provided by commercial bank (Van Home, 1994; p. 771).

(a) Loan Arrangement (Line of Credit)

A line of credit is arrangement between a bank and borrower indicating the maximum credit the bank will extend to the borrower. Under this system banker credits total amount of loan to the company's account. Interest is payable on the entire amount.

(b) Overdraft Arrangement

This system permits the party to overdraw on his current account with his banker up to stipulated limit. With this limit there are restrictions on the number of drawings. Interest is charged on the amount actually utilized. Loan agreement does not provide this facility.

(c) Cash Credit Arrangement

Cash credit facility is allowed against pledge or hypothecation of goods or by providing alternative securities from time to time, in conformity with the terms of advance. In this system the party may operate his account and when required.

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(d) Commercial Paper

Commercial paper can use only by well established high quality companies. The evidence of debts are unsecured short-term promissory not sold in the money market. It sold directly to investors. Bank provide loan against the ware house receipt inventory receivable.

Most popular sources of short term financing are short-term loan from commercial bank and other financial institutions. Short-term loans create by public deposit which also a main source of making capital financing in our country.

iii) Spontaneous Financing

Spontaneous finance refers to the automatic sources of short-term funds. The major sources of such financing are trade credit and outstanding expenses. Spontaneous sources of finances are cost-free. Therefore, a firm would like to finance its current assets from spontaneous sources as much as possible. Every firm is expected to utilize spontaneous sources to the fullest extent. Thus the real chance of financing current assets is between short-term and long-term sources.

2.1.7 Determinant of Working Capital

There are no set rules and formula to determine the working capital requirements of the firm. It is a large number of factors that influence the working capital needs of the firm. It is already stated that without working capital no business can operate its activities. Every types of business need working capital but the level of working capital differs from to another depending on different components.

A large number of factories influence Working capital needs of a firm. The basic objectives of working capital management are to manage the firm's current assets and current liabilities in such a way that a satisfactory level of working capital is maintained. The need for working capital to run the day to day business activities can not be overemphasized. We will hardly find a business firm, which does not required any amount of working capital. Indeed firms differ in their requirements of working capital. The function in the requirement of working capital is resulted from seasonal variations. Working capital needs typically declined during recession and increase during boom.

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1. Nature and Size of Business

The working capital requirement of a firm is depends upon related to size and nature of the business. Bigger size firm needs more working capital then the small firm. Similarly, greater the value of business, the higher will be the working capital requirements.

2. Manufacturing Cycle

Working capital requirement of an enterprise is also influenced by the manufacturing or production cycle. It refers to the time and steps involved to make finished goods from raw materials. Longer the manufacturing process, the higher will be the requirement of Working capital and vice versa. In fact that highly capital intensive industries require a large amount of working capital to run their sophisticated and long production process on the same principle trading concerns requires a much lower working capital than a manufacturing concern.

3. Production Policy

Working capital requirement is also determined by its production policy. The production schedule has a great influence on the level of inventories. The decision of the management regarding automation etc. will effect on the working capital requirements. In case of labor intensive industries the working capital requirements will be more. While in case of highly automatic plant the requirement of long term bonds will be more.

4. Credit Policy

The level of working capital determined by credit policy or terms which provided by its creditors. If the liberal credit terms are available to the firm than it ought to maintain less. Similarly, if the firm follows liberal credit policy towards its customers, then it needs high investment in receivable.

5. Availability of Credit

Availability of credit facility is another factor that effects the working capital equipment of the credit availability liberal credit-terms. Then the firm will need less working capital and vice versa, if the firm can get credit facility easily on favorable conditions.

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6. Volume of Sales

Volume of sales is another factor that affects the working capital requirements. This is the most important factor affecting the size and components of working capital, firm maintains current assets because they are needed to support the operational activities which result in sales. The volume of sales and size of the working capital are directly related to each other. If sales volume increased then level of investment of working capital also increase.

7. Growth and Expansion

Growth and expansion also a affect the working capital requirements of a firm. However, it is difficult to precisely determine the relationship between the growth and expansion of the firm and working capital needs.

8. Price Level Change

Working capital requirement is also affected by price level changes. Generally using price levels will require a firm to maintain higher amount of working capital. The same levels of current assets will need increased investment when prices are increasing. However, the companies which can immediately revise their product price with raising price level will not face a serve working capital problem. Further the effects of increasing general price level will be felt differently by the firms as individual price may more a differently. It is possible that some companies may not be affected by the rising prices will be different may be badly hit by it. Thus the effect of rising prices will be different for different companies. Some will not have to face the working capital problem, while the working capital problem of others may be guaranteed.

9. Operating Efficiency

Working capital requirement is also affected by operating efficiency. The operating efficiency of the firm relates to the optimum utilization of resources of minimum cost. efficiency will be efficiency contributing to its working capital if it is efficient in controlling the operating costs. The use of working capital is improved and pace of the cash cycle is accelerated with operating efficiency. Better utilization of resources improves profitability and thus helps realizing the pressure of working capital, Although it may not be possible for a firm to control the prices of materials and the

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wages of labor, it can certainly ensure efficient and effective use its materials, labor and other resources.

10. Profit Margin

The level of profit margin differs firm to firm, firms differ in the capacity to generate profit from business operation. Some firm enjoy a dominant position due to quality product or good marketing management or monopoly power in the market and earn a high profit margin. Some other firms may operate in an environment of intense competition and may earn low margin of profit. A high net profit margin contribute towards the working capital pool. In fact the net profit is a source of working capital to the extent it has been earned in cash.

11. Level of Taxes

The level of taxes also influences working capital requirement. The amount of taxes to be paid in advanced is determined by the prevailing tax regulations. But firms are not constant or can't be determined. Tax liability is a sense of short-term liquidity is payable in cash. Therefore the provision for tax amount is one of the important aspects of working capital planning. If tax liability increase, it needs to increase the working capital and vice-versa.

12. Profit Appropriation

Even if net profit is earned in the form of cash, whole of it is not available for working capital purpose. The contributions towards working capital would be affected by the way profits are appropriate, cash generated policy and depreciation policy.

13. Capital Structure of the company

It shareholders have provided some funds towards the working capital need also the management will find it. If the company has to depend upon outside sources for both payment and temporary working capital needs. It faces an uphill task under dear money condition.

14. Fluctuation in the Supply of Raw Materials

Certain companies have to obtain and maintain large reserve of raw materials due to then irregular sales and intermittent supply. This is particularly true in case of

companies requiring special kind of raw materials available only from one or two sources. In such a case a large quantity of raw materials has to be kept in store to avoid any possibility of halt in production process. Thus the working capital refers to the firm's basic policies regarding to the target level for each category of current assets and now current assets will be financed. Working capital management involves the administration with in policy guideline of current assets and current liabilities,

2.1.8 The Risk-Return Trade-off

Almost all financial decisions involve some sort of risk-return tradeoff. But this is more so in the case of working capital decisions. To take an example, the lower the cash balances held on hand, the higher would be the expected return. But at the same time the enterprise will have to assume the greater risk of running out of cash. The higher return is due to the less money tied up in non-income earning assets and the higher risk is due to the possibility of shortage of cash in the event of urgency. Thus, a low liquidity is associated with high rates of return. However, it does not mean that low liquidity is in the best interest of shareholder. No doubt, profitability has to do with the overall goal of shareholders wealth, but liquidity has to do with ensuring that the enterprise is able to satisfy all its current financial obligations. The liquidity goal is, therefore, closely connected with management of working capital, that is, decisions concerning short-term assets and liabilities, while the profitability goal reflects both short-term and long-term decision making (Smith, 1975; p. 12).

Generally, the enterprises can, not have zero investment in working capital. Even if this is possible, the enterprises generally make investment in working capital because it pays them to do so. The investment in working capital provides a desirable flexibility so far as personal requirement for funds is concerned, thereby avoiding the shortage of capital or capital lying idle in the business. It does not mean that larger the working capital, the better it is. Regarding the size of working capital to be held in the business, there is likely to be some position or range of positions that is best (Archer, Choate and Racette, 1979; p. 577). If the investment in fixed assets is held constant, then the benefit resulting from an additional increase in working capital will be subject to diminishing returns (Archer, Choatc & Racette, 1979; p. 593). If the objective of working capital management is maintain high liquidity in the business, it means a reduced return to shareholders and a lower risk of becoming technically

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insolvent. All working capital policies ranging from low to high liquidity policies are not at all favorable. The extremely high and low liquidity policies are not at all favorable as the required rate of return or cost of capital is higher than the expected rate of return, Hence, only those liquidity policies are favorable where the expected rate of return is higher than the required rate of return or cost of Capital.

2.2 Review of Related Studies

2.2.1 Review of Journals

It is not possible to estimate working capital needs accurately the firm must decide about level of current assets to be carried. The current assets holding of the firm will depend upon working capital policy. It may follow a conservative or aggressive policy. This policy has different risk return implication (Van Horne, 1970; p. 71). The financial manager should determine the optimum level of current assets, so that the wealth of shareholders will be maximized. In fact optimum level of each type of current assets should be fixed (Walker, 1964; P 21). To find out corporate bankruptcy, Zeta model was developed by Altman and others (Edward, Altman, Haldmand and Narayan, I 997; PP 29,54). The author extended the 2 score model to include among other things. The capitalization of leaves and they updated its application. A sample of 53 bankrupt films and 58 non-bankrupt firms were employed. Manufacturing and for the first time in any study retailing enterprises were included, on the basis of discriminatory ability, 27 original variables were reduced to 7, the retained earning to total assets ratio the current ratio, the company equity to total capital ratio and size of total assets using the linear discriminate model, the authors were successful classification ranges from 96 percent 1 year before failure to of percentage 5 year before to failure, a better performance than the 2 score mode, both quadratic and linear models were tested, with linear function winning out.

2.2.2 Review of Articles

An article on working capital management in PEs by Prof. Dr. Manohar Krishna Shrestha, has studied the working capital management of ten selected PEs i.e. Birgunj Sugar Factory, Janakpur Cigarette Factory, Royal Drugs, Raghupati Jute Mill, Dairy Development Corporation, National Trading, Harisiddhi Brick and Tile Factory, Nepal Cheery has focused on the liquidity turnover and profitability position of those enterprises in this analysis he found that four PEs has maintained adequate liquidity

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position. On the turnover side, two PEs had negative working capital turnover; four had adequate turnover; one had higher turnover and the remaining three had not satisfactory turnover on net working capital, He had also found that out of ten PEs; six were operating in losses while only four were getting some percentage of profit, with the reference of his finding. He has brought certain policy issues such as: lack of suitable financial planning, negligence of working capital management, deviation between liquidity and turnover assets and inability to show the positive relationship between turnovers and return in on net working capital. At the end he had made some aggressive measures to overcome from the above policy issues, i.e. identification of needed funds, regular check of accounts, development of management information system, positive attitudes towards risk and profit and determination of right combination of short term and long term sources of fund to finance working capital needs (Shrestha, 1982; p. 83).

Prof. Manohar K. Shrestha in an article (Working Capital Management of Public Enterprises: A Study on Financial Results and Constraints, ISDOC Vol 8, No 1-4: July September 2004) has studied the working capital management of ten selected PEs especially focusing on liquidity, turnover and profitability position of those enterprises. In this study, he found that four PEs have maintained adequate liquidity position, two PEs has excessive and the remaining four PEs has failed to maintain desirable liquidity position. On turnover side, two PEs had negative working capital turnover, 4 had adequate turnover, one had higher turnover and remaining three had no satisfactory turnover on net working capital. He has also found that out of 10 PEs, six were operating in loss while only four were generating some profit. With the reference of findings, he has brought certain policy issues such us lack of suitable financing planning, negligence of working capital management deviation between liquidity and turnover of assets and inability to show the positive relationship between turnover and turn on net working Capital. At the end, he has made some suggestive measures to overcome from the above issues i.e. identification of needed funds, regular check of accounts, development of management information system, positive attitude towards risk and profit and determination of right combination of short-term and long term sources of funds to finance working capital needs.

A study was conducted by the management consultant and company on the performance of PEs of Nepal in the study; it was conducted that the assets

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management in general and current assets management in particular was the weakest point in Nepalese PEs. It has not received due and serious attention and yet pointed out the financial performance of the PEs was poor and indicative mismanagement of the resources. The report also showed that because of the lack of operational objectives, application of long range planning, use of modern management tools, capital budgeting and efforts towards cost control had not been made so far.

Dr. K, Acharya has described in his article "Problems and Impediments in the Management of Working Capital in Nepalese Enterprises" (ISDOC Bulletin Vo. 10, No. 3: January-March 2005) that in most of Nepalese Enterprises, the management of working capital has been misunderstood as the 'management of money' and the manager are found over conscious about the hoarding of money rather than its efficient utilization.

Thus, the existing problems in the finance are mostly related to the management of working capital than in any other area. In his studies, he found that the operation of public enterprises is not efficient due to high cost of production. Thus, he has stressed to reduce the cost of production because 'cost reduction' is the possible measure for the smooth operation and long term existence of PEs in Nepal. In fact, cost reduction is highly concerned with the optimization of working capital volume. He has pointed out some operation and organizational problems of PESs in Nepal such as: aggregate current liabilities have increased quickly than their current assets; they have not followed conventional traditional norms of 2:1 between their current assets and current liabilities, they have not followed conventional proportion of debt equity as 1:1; low inventory turnover ratio impacts over the profitability: ineffective management information: use of performance evaluation tools and techniques and working capital has never been considered in a management job.

He has suggested that they have to follow system and method for decision making. It is also said to optimize its level of investment at a point of time because over and under investment in working capital will reduce the efficiency of the enterprises. Similarly, he has suggested using modern scientific tools for the presentation and analysis of data.

Prof. Radhe Shyam Pradhan and Kundan Datta Koirala jointly have conducted a study on working capital management in Nepalese corporation (Pradhan and Koirala, 1985).

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They have focused on evaluation of the working capital position of selected manufacturing and non-manufacturing corporations of Nepal. They have sampled five manufacturing and six non-manufacturing public enterprises. This study is concentrated in the size of investment, trend of investment and need to control the investment in current assets significance of current assets management. Major findings of this study are as follows:

- Investment in total assets had declined over the period of time in both manufacturing and non-manufacturing corporations.
- Management of working capital was more different than that of fixed capital. They found the high level of inventory in manufacturing ones.
- Inventory management was a great significant in manufacturing corporation and management of cash and receivable was a great significance in non-manufacturing corporations.

The major motive for holding cash in Nepal's corporation was to provide a reserve for routine not outflows of cash to keep on the production process and sales.

2.2.3 Review of Thesis

Mr. Tamrakar has earned out a study on Management of Working Capital in National Trading Limited (NTL). This study has covered the span of six years (2058/59 to 063/64). The objectives of this study were to analyze the importance of the proper management of working capital and the relation between different components of current assets and current liabilities, He has used financial ratio as the major tool of analysis. In this Study, he found a very low inventory turnover and high financing of current assets and low earning capacity. From his study, he has drawn the conclusion that the working capital mgmt of NTL, in general, is poor (Tamrakar, 2008)

Mr. Acharya has carried out a research on "A Study of Working Capital Management of Bottlers Nepal Limited" in 2005. The main objectives of his thesis, to examine the working capital policy, to know the correlation of inventory with net working capital and account receivables and to evaluate the trend of current or total assets position. He Analyzed five years published data of Bottlers Nepal Balaju Ltd. from 1999/2000 to 2003/2004 and used statistical and financial tools to achieve these objectives. After analyzing the data he has found that the proportion of sundry debtors is negligible in

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current assets. It proves that the almost all its products are sold in cash basis. The current ratio of the company is 1.74 that is near to standard ratio. It proves that the company has managed current assets effectively. Account receivable of the company is very lower. It shows that the company has good management over account receivables. The quick ratio of the company is 1.15, which meets standard. It reveals that the company is using current assets other than inventory efficiently. The average increment of the current assets is greater than total assets. It increases the important of working capital in the company. The profit margin of the company is not so satisfactory. The company should expand sales volume and should operate marketing activities in the competitive market. The correlation between assets and total assets is about 97%. That means 100% increase in current assets result 97% increase in total assets. He found that the cash conversion cycle of the company is negative. It means that the company should not borrow additional loan for them management of the working capital (Acharya, 2005).

Mr. Lohani has done a research on "A study on working capital management of Nepal tube Oil Limited, 2004." His main objectives of study are to analyze the structure of the different components of working capital of Nepal Lube Oil Ltd, To analyze composition of Working capital liquidity ratio, profitability ratio and turnover ratio of the company and to evaluate the financial performance and to examine the relationship between the various components of working capital and overall profitability and their impact.

He analyzed five years published data of Nepal Lube Oil Limited from 2055/56 to 2059/60 and used statistical and financial tools to achieve these all objectives. After analyzing the data, Mr. Lohani found that current assets to fixed assets were increasing. current assets to fixed assets ratios are in increasing trend. If means that Nepal Lube Oil has applied aggressive current assets policy. Furthermore, he has calculated liquidity position, turnover position, conversion cycle, profitability and so on for financial performance analysis. Annual current ratios are higher than standard, which might cause to decrease profitability. Quick ratios are also higher than standard which might cause to decrease profitability. The receivable turnover ratios showed that the company had better management 2059/60 because there is higher the sales and lesser the debtors. The annual cash won cycle are said to be more fluctuating. The company had poor cash management in 2057/58 having highest

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conversion cycle. There is low degree of positive correlation between sales and current assets that can be concluded that increase in sales may increase in current vice-versa (Lohani, 2004).

Mr. Mainali has carried out his research on "Problem and Prospects of Listed Manufacturing Companies in Nepal, 2003." His main objectives of the study are to major problems of listed manufacturing companies, to rank the major problems of listed manufacturing companies, to study the reasons of low trading of stocks of listed manufacturing companies, to conduct an opinion survey for analyzing problems and prospects of listed manufacturing companies. He analysis live year data from 1997-2001 and used financial and statistical tools to achieve these objectives.

After analyzing the data, he found that 76.67 percent of the companies have government related problems like income tax, custom and import duty widely prevails. His analysis also shows that 71.11% of the companies have finance related problem, most of the companies expressed problem on high interest rate spreads. 70% companies have demand related problem where competition from other firms and inadequate protection from imports are first problems in demand, Similarly 65.56 percent companies have business support related problems. Other problems are research and securities related problems, inputs problems, labor related problems, infrastructure related problems, trade policy and foreign government related problem and securities market related problem.

His study not only showed problems but also found prospects of manufacturing companies. Sugar factory have large scope of market demand for their products then shoe factory have large market demand and adequate amount of animal skin is available in Nepal. Similarly match factory. Bricks and tiles industries and Bitumen and Barrel Udhyog also have large market.

He calculate average current ratio, quick ratio, long term debt to net worth ratio, total debt to net worth ratio, interest coverage ratio, gross profit margin, net profit margin. Return on capital employed etc. Most of the ratios of almost all the listed manufacturing companies are out of the line of standard revealing very weak financial performance. In spite of weakness of manufacturing companies this sector almost fulfill basic needs of the people (Mainali, 2003).

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Mr. Paudel has found out Gorakhakali Rubber Udyhog Ltd, (GRUL) simultaneously followed various working capital policy at a time (Paudel, 2002), which indicates the GRUL has failed to set proper working capital policy and has not any clear vision about the investment policy of working capital. He also drawn that GRUL has not took seriously about liquidity management and its overall liquidity position unfavorable. GRUL has negative cash flows, negative EBIT and they had high level of current debts. He recommend to GRUL to determine certain proportion of the components of current assets in order to improve the current assets performance; In determine the appropriate sources of funds. Mr. Paudel has also suggested that certain proportion of current liabilities of should be .set to avoid the risk of default.

Mr.Shrestha has done research on "A study on working capital management in Brikuti Paper Mills Limited, 1994." His main objective of this study is to present overall picture and analyzes the current asset and current liabilities of Brikuti paper mill limited. He used financial and statistical tools to achieve these objectives.

According to his calculation of current assets with respect to total assets and net fixed assets ratio has showed in increasing trend during the study period. Cash and bank balance of the company holds largest amount of idle cash balance due to the mismanagement of cash. He has also found that average cash and bank balance with respect to current assets and total assets is increasing year after years during his study period. In his analysis inventory to current assets ratio shows decreasing trend .but this ratio has improved from fiscal year 2046/47. Similarly inventory to total assets ratio has also showed fluctuating trend year after year. According to him, there is no consistency in balance.

The various turnover ratio of his analysis indicates the increasing and fluctuating trend. Gross working capital, net working capital turnover is in decreasing trend in the study period. He has mentioned the receivable turnover. Besides this condition, there is no consistency in inventory turnover but it does not fluctuate largely. Liquidity position of the company shows increasing trend. Net working capital of the company is found positive and increasing year after year. The current ratio is also increasing during study period. He has analyzed the profitability position from various angles, Gross profit margin and net profit margin are found in increasing trend in the first three year of the study period and then decreasing in subsequent year and increasing

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in next year, He has also defined that company has earning profit but it is enough to return on total assets (Shrestha, 1994).

2.3 Research Gap

The above mentioned studies in the context of Nepalese manufacturing companies were done in the last few years in respect to working capital management. Many changes have been taken places in and out side of Nepal after these studies and DDC. Nepal also has followed the policy of liberalization, privatization and globalization. More companies have also come up after these studies and most, of the PEs are privatized because of poor showing though DDC still running successfully. Therefore it is necessary to bring out a fresh studies in working capital management of manufacturing companies whether the finding of above studies are still valid or not. This research study is based on different variable and tools using new secondary as well as primary data. This research examines the liquidity and profitability position, efficiency of working capital and cash conversion cycle of DDC. No one has analysis/examine in this way of DDC. Thus, to fill up the gap, this research has been conducted.

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CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

This chapter consists of the methodology of studying working capital management of DDC. The proper analysis of this study can be meaningful only one the right chose of research tools. Here the focus has been made on research design, nature and sources of data, sample and population, data processing procedure and tools analysis.

3.2 Research Design

"A research design is the arrangement of conditions for collection analysis of data is a manner that aims to combine relevance to the research purpose with economy in procedure (Claire Seltiz and Others, 1962; p. 50). Research design is a plan, structure and strategy of investigation conceived so as obtain answers to research questions and to control variance (Kerlinger, 2000; p. 300). It is a blue print for the collection, measurement and analysis of data.

The research design is the conceptual structure within which the research is conducted. Analytical as well as descriptive research design is applied for study. Descriptive approach has been utilized mainly for conceptualization of problem. Analytical approach has been followed mainly to analyze the relationship among earning margin, asset size rate of return and other variables.

3.3 Nature Sources of Data

The data used in this study are basically secondary nature. The secondary data used for this study are taken from the balance sheet, profit and loss account and income statement. Besides these financial statements, others necessary data are also taken from other sources such as: related dissertations, research studies, books, journal of finance, accounting journal, internets' website etc.

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3.4 Data Processing

The balance sheets, income statements and profit and loss accounts of the corporation of five years period from 2062/63 to 2066/67 are collected for the convenience of the study. Then all the raw data are processed and presented in tabular form with the help of simple arithmetic rules. Entire raw data are converted into approximate and condensed in the form of consolidated balance sheet and income statement. Most of the data have been applied in one form and processed and interpreted as per the need of the study. The secondary type of data is presented for the analytical purpose after the tabulation of the data.

3.5 Population and Sample

There are many enterprises operating by government. Some are privatized and some are in process of privatized. Some enterprises have been running in huge loss and some enterprises have been running successfully. Among the number of public enterprises, the researcher has selected the Dairy Development Corporation for the study of working capital management because on the contrary of most of public enterprises Dairy Development Corporation making profit.

3.6 Financial Tool

Financial tool is defined as the systematic use of ratio to interpret the financial statement so that the strength and weaknesses of a firm as well as its historical performance and current financial condition can be determined. Management may have different types of weakness that can be found from ratio analysis. So the company should use an analytical tool to know about its own situation and take a suitable and corrective action to relieve from arising problems. "The most useful tool of financial analysis is ratio analysis. In order to bargain more effectively for outside founds, the management of a firm should be interested in all aspects of financial analysis that outside supplier of capital use it in evaluating the firm (Van Horne, 2000; p/ 205). With the help of financial ratio analysis, we can understand the financial condition and performance of the firm and they would obtain from analysis of the financial data alone. There are following financial ratios, which can be analyzed to determined financial position of organization.

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Liquidity Ratio

It is the most important of the company. It shows the ability of the company to pay its current obligation obligations. The liquidity position of DDC has been computed by analyzing current ratio and quick ratio.

a. Current Ratio

This ratio is computed by dividing current assets by current liabilities. The high ratio indicates the liquidity position of company is strong and able to pay its current obligation of bills. Generally, the current ratio 2:1 is considered to be satisfactory. More ratios indicate the greater amount of working capital and fewer ratios indicates the lesser amount of working capital. It is given by:

$$Current\ Ratio\ \mathrm{X}\frac{Current\ Assets}{Current\ Liabilities}$$

b. Quick Ratio

All current assets are not equally liquid. Inventory and prepaid expenses cannot be termed to be liquid assets. The assets can be converted into cash immediately as per requirement of company. Therefore, liquid assets mean current assets after deducting inventory amount. It can be calculated as:

$$Quick\ Ratio\ \mathrm{X}\frac{Current\ assets\ \mathrm{Z}\ Inventory\ \mathrm{Z}\ \mathrm{Pr}\ epaid\ Expenses}{Current\ Liabilities}$$

Generally, the company with the quick ratio of 1: is considered to be in sound position.

Profitability Ratio

The company should aim at earning maximum profit by fulfilling social responsibility. It is necessary to have enough profit to meet different obligation of the firm. Every investor invests his saving only after when he is confident of reasonable return. In addition, the adequate return to its shareholders depends on profitability of the company. In other words, pro ill provides money for repaying debt and providing internal funds. Therefore, it shows the overall efficiency of the business concern. It

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can be calculated by following ways:

I. Gross Profit Margin

Gross profit Margin ratio indicates the percentage of profits after cost of production. This ratio is a measure of productivity efficiency. It can be calculated by:

$$Gross\ \Pr ofit\ \ M\ \arg in\ \mathrm{X}\frac{Gross\ \Pr ofit}{Sales}\ |\ 100\%$$

A high 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 at favorable terms.

II. Net Profit Margin

Net profit margin is obtained after deducting all operating expenses and income tax from gross profit. The net profit margin is indicator of management's ability to operate the business with sufficient success, not only to recover from revenue of the period. The cost of merchandise or service, the expenses of operating the business and the cost of the borrowed fund deducted. It shows the percentage of net profit out of total sales. It is computed dividing by total sales to net profit after tax.

$$Net\ \Pr ofit\ M\ \arg in\ \mathrm{X}\frac{Net\ \Pr ofit\ After\ Tax}{Sales}$$

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

III. Return on Assets (ROA)

ROA measures the profitability of total funds or investment of the firm. But ROA is not sufficient for the analysis on profitability of different sources of funds for financing the total assets. It can be expressed as the relationship between net profit after taxes and total assets.

$$\mathrm{Re}turn\ on\ Assets\ \mathrm{X}\frac{Net\ \Pr ofit\ After\ Tax}{Total\ Assets}$$

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Turnover Ratio

The turnover ratio indicates the relationship of utilization of assets in generating the sales. It traces out that how the firm manages the assets. It is related with measuring the efficiency is assets management as well as the effectiveness of the investment of resources in the business enterprises. With the help of this ratio, we can easily know whether the funds have been effectively used or not. The relationship between sales and various assets of the firm can be defined with the help of activity ratio.

I. Inventory Turnover Ratio

The inventory turnover ratio shows how rapidly the inventory is turning into receivable through sales. It means the ratio shows the efficiency of the business concern in inventory management. Inventory turnover equals sales divided by closing inventory.

$$Inventory\,Turnover\,Ratio\ \mathrm{X}\frac{Cost\,of\ Good\ Sold}{Average\,Inventory}$$

The higher inventory turnover ratio indicates the good inventory management and lower turnover indicates the weak turnover management and it suggests for the proper management of inventory.

II. Debtors Turnover Ratio

The liquidity position of the firms depends upon the quality of debtors to a target extent. The debtors' turnover indicates the collection efficiency of the firm. Higher debtors' turnover indicates the efficient management of credit and vice-versa. This ratio is given by:

$$Debtors\,Turnover\,Ratio\ \mathrm{X}\frac{Sales}{Debtors}$$

III. Current Assets Turnover Ratio

Current assets turnover ratio shows the relationship between current assets and sales. It analysis how far company can efficiently utilize its current assets. The ratio shows the requirement of working capital for one rupee of sales. It can be calculated as

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follows

$$Current\ Assets Turnover\ Ratio\ \mathrm{X} \frac{Sales}{Current\ Assets}$$

A low current assets turnover ratio may reflect an inadequacy of working capital because of low turnover of inventory or receivable.

Working Capital Cash Flow Cycle

Cash conversion cycle reflect the net time interval in days between actual cash expending of the firm productive resources and ultimate recovery of cash. One the purchase of raw material is made the inventory conversion period determines the number of days it takes to produce and sell the product. The average collection period determines the average number of day it takes to collect credit sales. The operating cycle which measures the number of days from purchase as to date of cash received.

The raw materials typically are not paid for immediately. We must determine how long for the firm defers its payments. The difference between the operating cycle and the deferral period is the cash conversion cycle.

Cash Conversion Cycle = Operating cycle - Payable Deferral Period

Where, Operating cycle = ICP + RCP

The cash conversion cycle is a quick and convenient way to analyze the on going liquidity of firm overtime. We see that the cash conversion cycle approach may pick up information by the liquidity measures. The cycle shows how much of time need to collect cash.

I. Inventory Conversion Period (ICP)

Inventory conversion period defined as the length of time required to convert raw material into finished goods and then to sell these goods. The inventory conversion period can be calculated as 365 divided by the inventory turnover ratio.

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$$Inventory\,Conversion\,Period\ \mathrm{X}\frac{365}{Average\,Inventory}$$

II. Receivable Conversion period (RCP)

Receivable conversion period indicates the time period required to convert debtors into cash, It refers the firm how fast can collect its credit. It analyzes the collectability of debtors and efficiency of collection effects and analysis in ascertaining the firm comparative strength and advantage relative to its credit policy. Receivable turnover can be calculate by dividing total sales of the year end balance of debtor and receivable conversion period is calculated by dividing the number of days in a year by receivable turnover.

$$\mathrm{Re}ceivable\,Conversion\,Period\ \mathrm{X}\frac{Sales}{Debtors}$$

Payables Deferral Period (PDP)

Payable deferral period is the length of time between the purchase of raw materials and labor and the payment of cash for them. PDP can compute by dividing accounts payable by purchase per day.

$$Payable\,Deferral\,Period\,(PDP)\ \mathrm{X}\frac{Account\,Payable}{Daily\,Purchase}$$

3.7 Statistical Tool

Besides the financial tools various statistical tools have been used to conduct this study. The result of analysis has been properly tabulated; compared, analyzed and interpreted. In this study, the following statistical tools are used for analysis.

I) Trend Analysis

It is important to analyze trends in ratio as well as their absolute levels, for the trends give clue to whether the financial situation is improving or whether it is deteriorating. In order word trend analysis of ratios indicates the direction of Changes. The significance of the movement is whether the movement is favorable or not. Thus, the tools that are used to show grandly increase of decrease of variables over a period of

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time is known as trend analysis. With the help of trend analysis the tendency of variables over the period can be seen clearly.

II) Correlation Analysis

The correlation analysis is the technique used the measure the closeness of the relationship between the variables. It helps us in determining the degree of relationship between two or more variables. It describes not only the magnitude of correlation but also its direction. The coefficient of correlation is a number, which indicates to what, extent two variables are related with each other and to what extent variations in one leads to the variation in the other and it is denoted by 'r'.

The value of coefficient of correlation always lies between ±1. A value of -1 indicates of perfect negative relationship between the variables and a value of +1 indicates a perfect positive relationship. A value of zero indicates that there is no relation between the variables. The zero correlation coefficient means the variable, are uncorrelated. The closer r is +1 or-l, the closer the relationship between the variables and closer r is to zero (0). The less close relationship. The algebraic sign of the correlation coefficient indicates the direction of the relationship between two variables, whether direct or inverse, while the numerical value of the coefficient is concerned with the strength, or closeness of the relationship between two variables. The correlation coefficient can be calculated as:

$$r = \frac{Cov(x,y)}{\pm_x \pm_y}$$

Or

$$r = \frac{(X - \bar{X})(Y - \bar{Y})}{N \pm_x \pm_y}$$

Or

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

Where,

$\pm_x \pm_y$ are the standard deviation of the distributions of X and Y values respectively

Cov(X,Y)=Covariance of X,Y value.

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CHAPTER IV

DATA ANALYSIS AND PRESENTATION

Chapter presents the following calculation of different ratios and their applications on analysis of working capital management. The ratio will help us to find the objective of the study and give valuable suggestion to the particular organizations for improvement in further transactions.

4.1 Analysis of Working Capital Position

There are various types of current assets that have been used in manufacturing company. Some of them have high amount of current assets and some them have occupied low amount. It is affected by nature of business and attitude of the management towards risk. A firm/company, who has risk adverse management, maintains the high liquid assets in total working capital and vice-versa. It should hold optimum current assets in order to meet increasing sales level. The excess and low working affects on profitability and liquidity position of the company. Therefore, the effective composition of the current assets has the greater impact on the whole working capital management as well as the success or failure of the organization. There are following ratio/tools has been calculated to analyze the position of working capital of DDC.

4.1.1 Position of Current Assets

The major components of working capital of DDC are inventory of milk and its products and other than its milk products, cash and bank balance, debtors etc. their ratio will be calculated to study the position of working capital of DDC.

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Table 4.1

Components of Current Assets of DDC (Rs. in million)

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Financial year	Cash and bank balance	Stock (milk & milk product)	Stock (other than milk and milk product)	Debtors and prepaid exp.	Total current assets
2062/063	299	42	64	91	496
2063/064	274	98	71	98	541
2064/065	304	104	63	87	558
2065/066	230	123	99	111	563
2066/067	188	173	95	101	557
Total	1295	540	392	488	2715

Source: Appendix-I.

Above table 4.l depicts that the components of current assets of DDC consists cash and bank balance, stocks (milk and milk products and other than milk and milk products) and debtors and prepaid expenses. In Fiscal year 2062/63, total current assets of the amounted to Rs. 496 million include Rs. 299 million of cash and bank balance, Rs. 42 million of stock milk and milk products, as 64 million of other than milk and milk products and Rs. 91 million of debtors and prepaid expenses. The current assets of the corporation every from fiscal year from 2062/63 expect in FY 2066/67. In FY 2064/65, it increased to Rs. 558 million and it is slightly increased to Rs. 563 million in FY 2065/66. And it is slightly decreased to Rs. 557 million in FY 2066/67, which consists of Rs. 188 million, Rs. 173 million, Rs. 95 million and Rs. 101 million of bank and cash balance, stocks (milk and milk products), stocks (other than milk and milk products) and debtors and prepaid expenses respectively.

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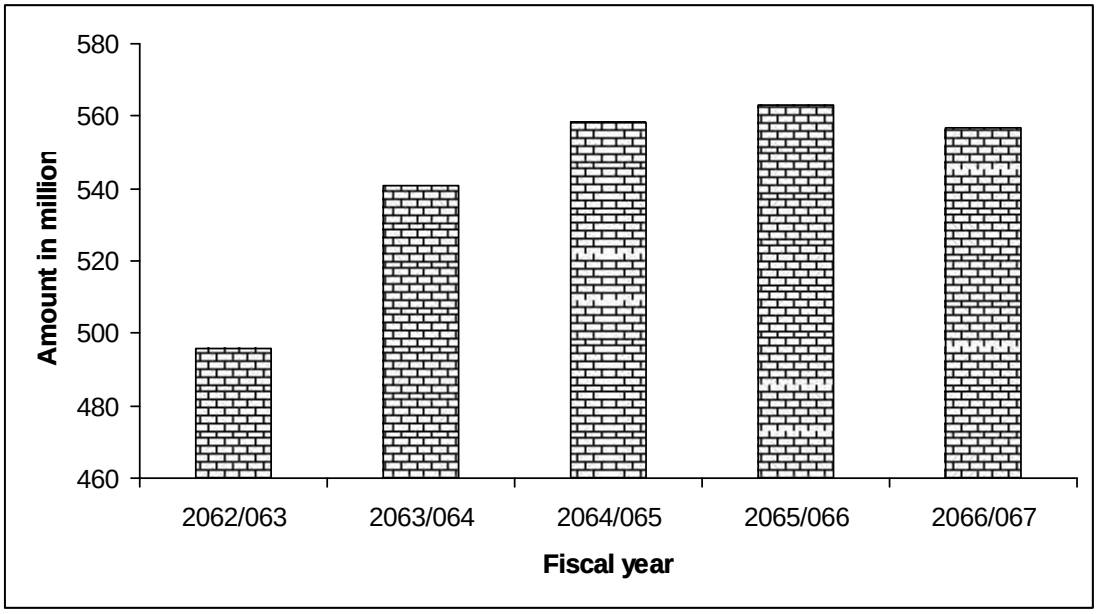
Figure 4.1

Components of Current Assets of DDC



As stated in above figure 4.1 the current assets of DDC increasing steady except in year 2066/067 when it decreased slightly.

4.1.2 Position of Current Liabilities

Current liability is a short-term obligation payable within a year. The composition of current liability or the main components of current liability of DDC are outstanding interests and tax credit of milk and porter wages payable, collateral, other outstanding etc.

Table 4.2

Components of Current Liabilities of DDC (Rs. in million)

FY	Outstanding interest and tax	Outstanding milk and porter	Other	Total CL
2062/063	41	46	30	117
2063/064	45	51	22	118
2064/065	46	48	27	121
2065/066	46	56	24	126
2066/067	37	69	29	135
Total	15	270	108	617

Source: Appendix-I.

Above table 4.2 depicts the components of current liabilities i.e. outstanding interest and tax, outstanding (milk and porter charge) and other outstanding. In year 2062/63, total current liabilities was Rs. 117 million which consists of Rs. 41 million of

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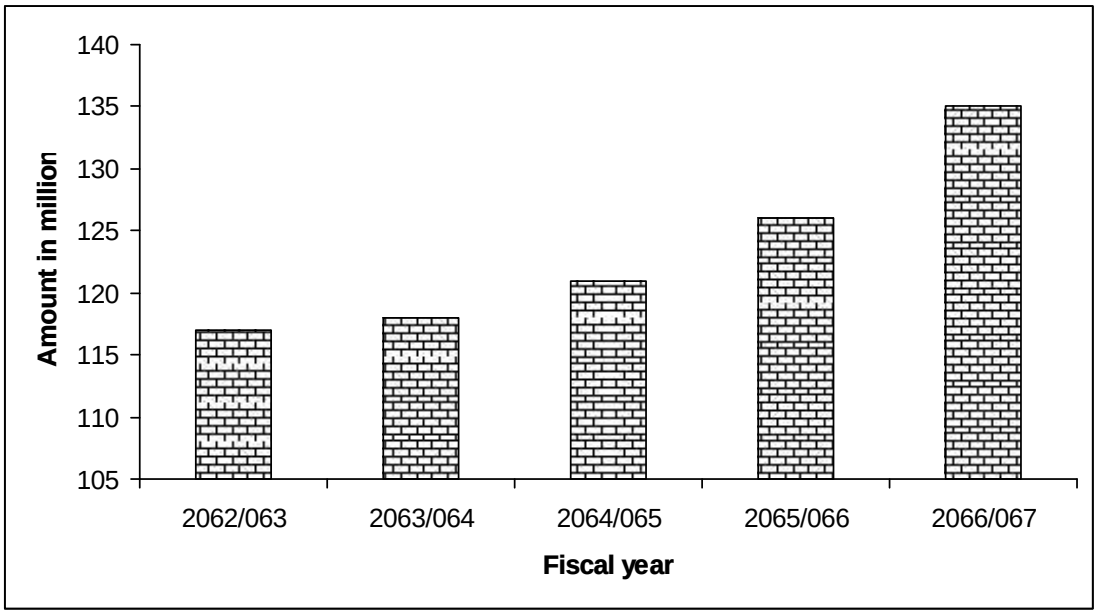
outstanding interest and tax, Rs. 46 million of outstanding milk and porter charge, Rs. 30 million of other outstanding. CL increased slightly in every successive year 2062/63, 20645/65, 2065/66, 2066/67 reached to Rs. 118 million, Rs. 121 million, Rs. 126 million and Rs. 135 million respectively.

Figure 4.2

Components of Current Liabilities of DDC



As stated as above figure 4.2, current liabilities of DDC in subsequent year 2062/63 to 2065/66 increased slowly although it year 2066/67 rate if increasing current liabilities is aggressive than other years.

4.1.3 Working Capital of DDC

The working capital has to be regarded as one of the conditioning factor in the long-range analysis and decision making to achieve the goal of overall business. The determinants of working capital management should be accurate as soon as possible. It means money invested in working capital should be neither more nor less because both the position of working capital affects not only liquidity but also profitability of the organization. The investment decision should be made on any type of current assets by considering their role in organization and determining which on is more beneficial or which is not. The following table shows the amount of working capital of DDC of the study period.

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Table 4.3

Net Working Capital of DDC

(Rs. in million)

FY	TCA	TCL	NWC = TCA – TCL	Ratio
2062/063	496	117	379	4.24
2063/064	541	118	423	4.58
2064/065	558	121	437	4.61
2065/066	563	126	437	4.47
2066/067	557	135	422	4.13
Total	2715	617	2098	4.41
Mean	543	123.4		
SD	27.54	7.38		
CV	5.07	5.99		

Source: Appendix I

In above table 4.3, net working capital of the DDC is not remaining same over the period or it is fluctuating. Since FY 2063/64 net working capital increased sharply, it is decreased by 15 million in FY 2066/67. In year 2064/65 and 2065/66, it is remaining same.

As stated below net working capital of the DDC has been overused by current assets. The working capital depicts the liquidity position of the company i.e. higher the working capital higher the liquidity of the firm and vice-versa. Since investment in current assets is huge but level of current liabilities is negligible, DDC has huge ratio of liquidity.

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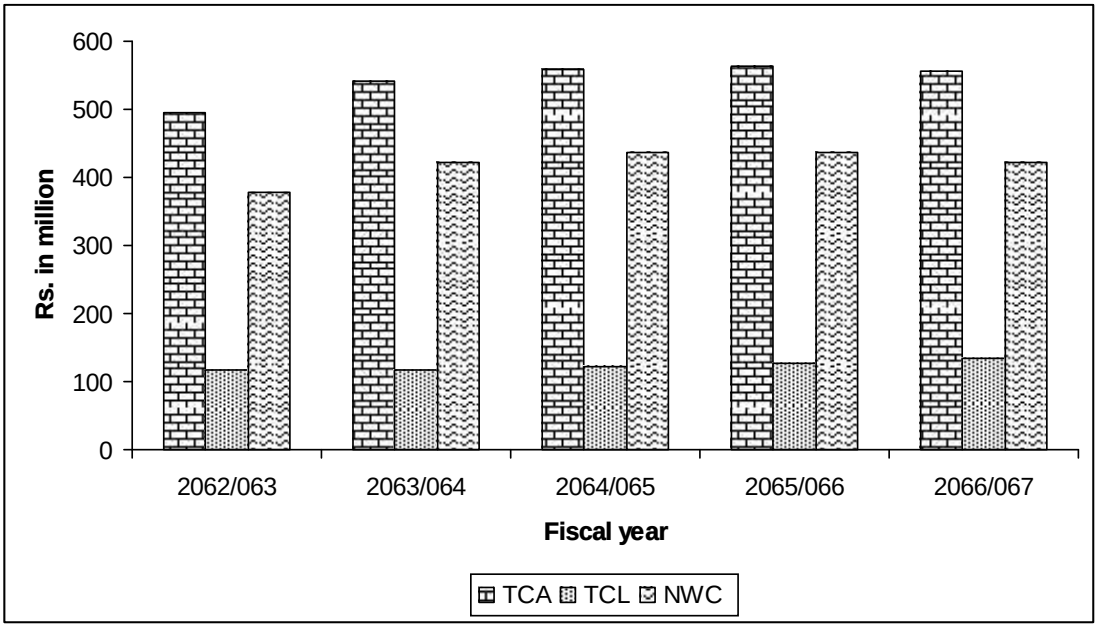
Figure 4.3

Networking Capital of DDC



In order to test the significance of the relationship between current assets and current liabilities during the period of Karl Pearson's correlation coefficient (r) is calculated and the result is 0.604. The value shows the correlation coefficient between current assets and current liabilities during the study period is 0.604 which probable error of 0.19. So there is high degree positive correlation between current assets and current liabilities.

4.1.4 Quick Ratio or Acid Test Ratio Position

Quick ratio or acid test ratio is the relationship in between quick assets and quick liabilities. It measures the capacity firm to pay the current liabilities immediately. It is the measurement of corporation's ability to convert it current asset's quickly in to cash order to meet its current liabilities. Quick assets are those assets which can be converted into cash immediately or at a short-notice without domination of value. Quick liabilities included all the items of current liabilities excluding bank overdraft and cash credit. This ratio shows the firm's ability to meet quick liabilities with its most liquid assets.

Generally, the established standard of this ratio is 1: 1 however it depends upon the nature of business. This implies that for every rupee of quick liabilities should be equal with a rupee of quick assets. Quick ratio can be computed by dividing quick

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assets by quick liabilities. The quick ratio of DDC during the study period is presented in table below:

Table 4.4

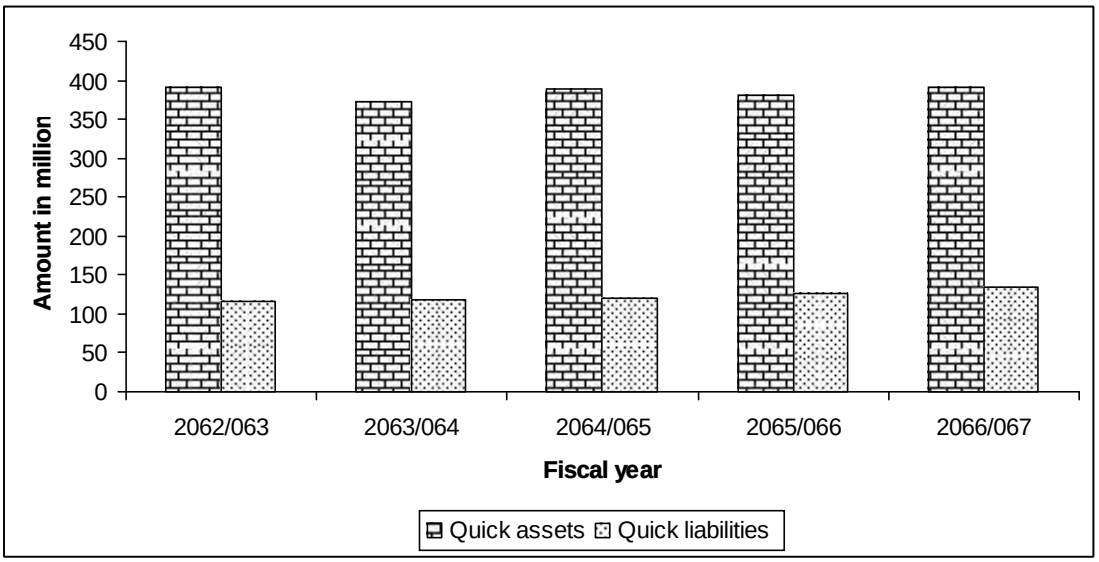
Quick Ratio Position of DDC (Rs. In million)

FY	Quick assets	Quick liabilities	Ratio (times)
2062/063	391	117	3.34
2063/064	372	118	3.18
2064/065	389	121	3.21
2065/066	381	126	3.02
2066/067	390	135	2.89
Total	1923	617	
Mean	384.6	123.4	
S.D.	8.08	7.38	
C.V.	2.1	5.99	

Source: Appendix I

Figure 4.4

Quick Ratio Position of DDC



The above table shows the quick ratio of the quick ratio of the DDC is fluctuating. It was 3.34 times in FY 2062/63 decreased to 3.15 times in FY 2063/64. However, it was increased to 3.21 times in 2064/65, again decreased to 3.02 times in FY 2065/66 in the end of the study period it decreased to 2.89 times. Though it is fluctuating, it is always remaining more than the standard quick ratio. So, the DDC has invested huge

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amount of its capital on cash and bank balance and it follows liberal credit policy to its debtors.

In order to test the significance of the relationship between quick assets and quick liabilities during the period of studies Karl Pearson's correlation coefficient (r) is calculated as the result is 0.29 with probable error 0.27. So, there is low degree positive correlation between quick assets and current liabilities.

4.2 Composition of Working Capital

Different types of assets are needed to operate business. For day-to-day business operations different types of current assets are required the composition of current liabilities must be analyzed for the purpose of proper working capital management.

4.2.1 Proportion of Current Assets to Total Assets

As the requirement of the current assets depends upon the nature of the business, it is required to meet the working capital, which is required to run the day-to-day activities. Higher percentage of current assets in total assets denotes greater liquidity position of the firm as well as lowers the risk of being insolvent and vice-versa. The table 4.5 given below represents the percentage of current assets to total assets.

Table 4.5

Proportion of Current Assets to Total Assets

(Rs.in million)

FY	Current assets	Total assets	Ratio in %	Change in %
2062/063	496	771	64.33	
2063/064	541	813	66.54	2.21
2064/065	558	822	67.88	1.34
2065/066	563	819	68.74	0.86
2066/067	557	770	72.33	3.59
Total	2715	3995	67.96	
Mean	543	799		
S.D.	27.54	22.53		
C.V.	5.07	2.82		

Source: Appendix I.

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This ratio represents the proper current assets investment to total assets investment in DDC in the selected 5 years study period. The overall proportion of current assets and total assets is being steady throughout the period except the first FY 2062/63. Since, total current assets proportion to total assets in FY 2062/63 is 64.33%, after that it is increases to 66.54% and remains around 69% in next thee years. In average there are 67.96% of current assets in ratio to total assets but increasing trend of the current assets percentage is fluctuating.

In order to test the significance of the relationship between current assets and total assets during the period of studies Karl Pearson's correlation coefficient (r) is calculated and the result is 0.65.

The value shows the correlation coefficient between current assets and total assets during the study period is 0.65 with probable error of 0.17. So, there is high degree positive correlation between current assets and total assets.

4.2.2 Proportion of Cash and Bank Balance to Total Assets

The main reason for holding cash is for transactional motive, precautionary motive and speculative motive. So to meet the daily business requirement such as bills payment, purchase of raw materials and payment of debt, cash balance has to be maintained. Table 4.6 presents the proportion of cash to total assets.

Table 4.6

Proportion of Cash and Bank Balance to Total Assets

(Rs. in million)

FY	Cash or bank	Total assets	Ratio %	Change %
2062/063	299	771	38.78	-
2063/064	274	813	33.70	(5.08)
2064/065	304	822	36.98	3.28
2065/066	230	819	28.08	(8.90)
2066/067	188	770	24.44	(3.64)
Total	1295	3995	32.42	
Average	259	799		

Source: Appendix I.

The above table shows the investment in cash out of its total assets in DDC during study period. The ratio is 38.78% in the FY 2062/63 and 33.70 and 36.98% in FY 2063/64 and 2064/65 respectively. But way of changing the ratio is fluctuating

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unevenly sometimes even low or negative also. The average percentage of cash and bank balance to total assets for study period is 32.42%.

The above table shows us that the cash and bank balance of DDC is normally higher position. It indicates it can invest cash in a profitable sector. "Reducing the cash balance by reinvesting in all liquid assets that gives a higher return and may increased the risk that there will be sufficient cash to meet future obligations. On the other hand excessive liquidity can lead to a loss of earning power if a company is unable to finance attractive investment" (Benerjee, 1987).

4.3.3 Proportion of Inventory to Current Assets and Total Assets

One of the important parts of current assets is inventory. In the manufacturing corporation like DDC, inventory of raw material i.e. milk and milk product is very important. The shortage of required inventory result is irregular production, high manufacturing cost, unfavorable labour variances etc. On the other hand, excessive inventory causes unnecessary holding of capital in forms of inventory, which earns nothing. It also result high cost in inventory management. So, the level of inventory must be in optimum position so that neither it raised the excessive inventory problem nor short-inventory problem. The ratio calculated below table 4.7 (i) show the proportion of inventory, it currents assets.

Table 4.7 (i)

Inventory (Milk and Milk Product) to Current Assets to Total Assets

(Rs. in million)

FY	Inventory	Current assets	Ratio %	Total assets	Ratio %
2062/063	42	496	8.47	771	5.45
2063/064	98	541	18.11	813	12.05
2064/065	104	558	18.64	822	12.65
2065/066	129	563	21.85	819	15.02
2066/067	173	557	31.10	770	22.47
Total	540	2715	19.89	3995	13.52
Average	108	543		799	

Source: Appendix I.

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The figure in the above table shows the percentage inventory with respect to its current assets and total assets. In the FY 2062/63, it is 8.47% and 5.83% of current assets and total assets respectively. Then it is increased and went up to 31.10% and 22.47% in FY 2066/67 of current assets and total assets respectively. The average percentage of inventory to its current assets found 19.89% which shows the relatively quite good percentage of current assets has invested in inventory.

But on the other hand, the corporation also invested the money on inventory other than milk and milk products. But figure of investment in inventory (other than milk and milk items) is decreasing gradually. The table below 4.7 (ii) represents the investment of inventory other than milk and milk products.

Table 4.7 (ii)

Investment of Inventory other Than Milk and Milk Products

(Rs. in million)

FY	Inventory	Current assets	Ratio %	Total assets	Ratio %
2062/063	64	496	12.90	771	8.30
2063/064	71	541	13.12	813	8.73
2064/065	63	558	11.29	822	7.66
2065/066	99	563	17.58	819	12.68
2066/067	95	557	17.05	770	12.33
Total	392	2715	14.43	3995	9.81
Average	78.4	543		799	

Source: Appendix I.

4.2.4 Proportion of Receivable to Current Assets and Total Assets

Trade credit is marketing tool, which protect company's sales form its competitors and attract potential customer to buy it product. It creates debtors or receivables. The company has to arrange some working capital for this purpose. The nature and period of term of credit should be determined in advance in order to avoid the company from lack of working capital. The management of these all is known as receivable management. Higher degree of receivable results unnecessary held up of working capital and lower degree of receivable may cause of negative result in sales level. The proportion of receivable on current assets and total assets of DDC is shown in following table:

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Table 4.8

Receivable to Current Assets and Total Assets

(Rs. in million)

FY	Receivable	Current assets	Ratio %	Total assets	Ratio %
2062/063	91	466	19.53	771	11.80
2063/064	98	541	18.11	813	12.05
2064/065	87	558	15.60	822	10.58
2065/066	111	563	19.71	819	13.55
2066/067	101	557	18.13	770	13.01
Total	488	2715	17.97	3995	12.22
Average	97.6	543		799	

Source: Appendix I

The figure in the above table shows the percentage receivable with respect to its current assets. In FY 2062/63, it is 19.53% and 11.80% current assets and total assets respectively. Then it is increased and went upto 19.781% and 13.55% in FY 2065/66 of current assets and total assets respectively.

Above table shows that either there are high or low fluctuation in respect of receivable to current assets and receivables to total assets. So, it is indicated that normal management of the corporation towards its receivable or debtors.

In order to test the significance of the relationship in between receivables and current assets during the study period Karl Pearson's correlation coefficient (r) is calculated and the result (r) is 0.45. As the figure shows that there is low degree correlation in between current assets and receivables in DDC during the study period.

4.2.5 Proportion of Current Liabilities and Long-Term Loan

The working capital of a company will also increase when it makes long-term borrowing by issuing debenture or obtaining loans from the financial institutions. It needs the funds to purchase these assets and make payment of various expenses. Therefore, firm raised funds from various sources depending on the nature of financing policy of the corporation. But the corporation should maintain appropriate

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mix of current liabilities and long-term loan. If the corporation follows in aggressive policy, corporation uses high proportion of current liabilities. If the firm follows conservative policy, it uses higher portion of long-term loan than current liabilities.

Table 4.9

Current Liabilities to Long-Term Loan (Rs. in million)

FY	Current liabilities	Long-term loan	Proportion (in times)
2062/063	117	85	1.37
2063/064	118	84	1.40
2064/065	121	83	1.45
2065/066	126	85	1.48
2066/067	135	87	1.55
Total	617	424	1.45
Average	123.4	84.80	
SD	7.8	1.5	
C.V.	5.99	1.77	

Source: Appendix I

The given table 4.9 indicates the proportion of current liabilities to long-term debt. It is in increasing trend during the period from 1.37 to 1.46. Current liabilities are in increasing trend. However, long-term loan is fluctuating. Highest value of current liability is 135 million in FY 2066/67. Ratio proportion increased slightly in every year except in FY 2066/67 when it increases in huge proportion.

The value of Carl Pearson's coefficient of correlation of current liabilities and long-term loan for the study period is 0.76 with probable error of 0.13. So, the correlation between current liabilities and long-term loan has high degree of positive correlation.

So, the above analysis table concludes that corporation adopted aggressive working to maintain working capital, which is highly riskied for corporation.

4.3 Turnover Position

BY analyzing the current assets net working capital, cash, receivable and inventory turnover ratio the corporation's turnover position i.e. how many times they are turned in terms of sales are calculated. This section or part of the study intends to analyses

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the efficiency of working capital in DDC: to earn more profit and to increase sales volume, fund is invested in the various assets in the business. The efficiency of managing assets directly influences the sales volume. With high proportion of current assets the corporation maintains the high liquidity position, but it may not achieve the desired profitability.

4.3.1 Current Assets Turnover or Gross Working Capital Turnover Position

The amount of working capital is affected by sales policy. If the credit sales increased, more working capital will be required to meet the daily requirement. If the other hand, if tight credit policy is applied the amount of working capital to replace the amount held by credit sales will be decreased. The ultimate effect will be decreased in working capital need.

The current assets turnover ratio indicates the adequacy of sales in relation to investment in current assets. Generally a high current asset turnover ratio means efficient utilization of current assets. The current assets turnover position of DDC during the period of study is tabulated below:

Table 4.10

Current Assets Turnover Position (Rs. in million)

FY	Sales	Current assets	Ratio (times)
2062/063	1604	496	3.23
2063/064	1618	541	2.99
2064/065	1800	558	3.22
2065/066	2193	563	3.89
2066/067	2628	557	4.74
Total	9843	2715	3.62
Average	1968.6	543	

Source: Appendix I and II.

It is observed from the table that during the study period, sales are increased in the every financial year but on the other hand current assets also sharply increasing in 2063/64. So, current assets turnover ratio is increasing throughout the study period except FY 2063/64. The figure shows that there is positive correlation between current assets and sales during the period of the study. Since the calculated value of 'r' is 0.60, which shows the high degree of correlation coefficient between current assets and sales during study period.

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4.3.2 Net Working Capital Turnover Position

New working capital is the difference between current assets and current liabilities. The ratio explains the now net working capital has been utilized to general sales in a firm. The size of working capital depends upon production cycle and business cycle. The net working capital position maintained by the DDC is tabulated below:

Table 4.11

Net Working Capital Turnover Position

(Rs. in million)

FY	Sales	Net working capital	Ratio (times)
2062/063	1604	379	4.23
2063/064	1618	423	3.82
2064/065	1800	437	4.11
2065/066	2193	437	5.02
2066/067	2628	422	6.23
Total	9843	2098	4.69
Average	1968.6	419.6	

Source: Appendix I & II

The table shows that the net working capital turnover in the FY 2062/63 was 4.23 times and decreased till FY 2063/64 and went up in FY 2064/65. Since sales increased steady during the period net working capital increased to FY 2065/66 and decreased in FY 2066/67 by 15 million.

In order to test the relationship in between sales and net working capital of the DDC during the study period, Karl Pearson's correlation coefficient (r) is calculated as the value is 0.38.

So, the above calculation shows that there is low degree of positive correlation between went working capital. So, it is better to associate the medium combination of working capital.

4.3.3 Cash Turnover (Cash Conversion Cycle) Position

It is one of the main parts of current assets, which has greatest value to meet the current liabilities occurred in the business. It should just adequate to run the business

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and excess cash has no meeting, as it run nothing. So the company always sees the risk return trade off to maintain the just adequate cash balance. The table 4.12 shows the cash turnover position of DDC during the study period.

Table 4.12

Cash Turnover Position

(Rs. in million)

FY	Sales	Cash and bank balance	Ratio (times)
2062/063	1604	299	5.36
2063/064	1618	274	5.90
2064/065	1800	304	5.92
2065/066	2193	230	9.54
2066/067	2693	188	14.32
Total	9843	1295	7.60
Average	1968.6	259	

Source: Appendix I and II.

The above table shows the turnover position is increased steady whereas cash and bank balance fluctuate time to time during the study period. The company has able to maintain 14.32 times sales so its cash balance in FY 2066/67. So, the average turnover position has been found 7.60 times. It is due to fluctuated volume of cash in study period and average cash conversion cycle is 70 days for the study period.

In order to test the relationship in between cash and sales of DDC during the period of study, Karl Pearson's correlation coefficient is calculated and the value of (r) is -0.32. So the correlation between sales and receivable is low degree negative.

4.3.4 Receivable Turnover Position

Receivable is one of the essential components of working capital. In order to increase the business activities, the company ahs increased the sales volume. Giving in credit to the customer and providing many facilities to the customers can increase the sales volume. In such a case the level of receivable goes up. Table 4.13 presented below shows turnover position of the DDC during the study period and the average collection period of its receivables.

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Table 4.13

Receivable Turnover Position

(Rs. in million)

FY	Sales	Receivables/Debtors	Ratio (times)
2062/063	1604	91	17.63
2063/064	1618	98	16.51
2064/065	1800	87	21.43
2065/066	2193	111	19.75
2066/067	2693	101	26.66
Total	9843	488	21.97
Average	1968.6	97.6	

Source: Appendix 1 and 2.

As per the table 4.13 presented above the receivables turnover is 15.15 times in the FY 2062/63. The turnover position is decreased 16.51 times in 2063/64 and increased to 21.43 in FY 2064/65. After then turnover ratio is increased to the final year of study period. The average receivable turnover position in the period of the study year is 21.97 times. The collection period of credit has found low in year of study period and then it is in increasing trend in the last two year of the study period.

In order to test the relationship in between receivables and sales of DDC during the period of study, Karl Pearson's correlation coefficient is calculated as the value of (r) is 0.81. So the correlation between sales and receivable is high degree positive.

4.3.5 Inventory Turnover Position

Inventory is also one of the components of current assets, which is to be maintained effectively and efficiently. It has already been started that the working capital, production and sales are correlated in general cases. The production should be increased to meet the higher level of sales target. To produce more, more raw materials will be required. The stock level of raw material should be properly maintained to meet the raw material requirement for higher level for production. Hence, to fulfill this requirement the company has to increase its working capital.

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Table 4.14 presented below show the inventory position of DDC during the study period.

Table 4.14

Inventory Turnover Position

(Rs. in million)

Year	Cost of Good sold	Average stock	Ratio (times)
2062/063	1386	46	30.13
2063/064	1409	54	26.09
2064/065	1425	62	22.98
2065/066	1991	67	29.71
2066/067	2493	69	36.13
Total	8704	301	28.91
Average	1740.8	60.2	

Source: Appendix I and II

The above the table the cost of good sold during the period increase sharply, average stock was also increases in study period. Consequently, inventory turnover ratio fluctuated during the study period. It was 30.13 times in FY 2062/63 increased to 34.62 in FY 2066/67.

4.4 Profitability Position

Every company should earn sufficient profit for successfully handling it day-to-day operations and long-run survival. Behind the establishment of a corporation or company, there is the objective of earning profit or getting maximum profit from the maximum use of available resources by the business organization is known as profitability. It is the measure of efficiency and an incentive to achieve efficiency. The opening efficiency and its ability to ensure adequate return to its investors (shareholders) ultimately depend upon the profit earned by it. The profitability position of corporation measured by analyzing its profitability ratio, operating ratio, return on total assets and current assets etc. Thus profitability ratio shows the overall efficiency of the business enterprises. These profitability position of DDC during the study period are studied under this head.

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4.4.1 Gross Profit Margin Position

Gross profit margin is also known as gross margin, which reflects the efficiency with which management produce each unit of product. This ratio is calculated by dividing profit by sales. This ratio sis generally expressed in term of percentage. It measures production efficiency. Therefore, gross profit margin is very significant on evaluating the profitability of a manufacturing organization. It indicates the average speed between the cost of good sold and sales revenue. Higher percentage indicates the better efficiency.

The gross profit is obtained by deducting cost of goods sold form net sales. The table 4.15 presented below shows the relation between gross profit earned by the DDC during the study period and sales made there of.

Table 4.15

Gross Profit Margin Position

(Rs. in million)

Year	Gross profit	Sales	Ratio (%)
2062/063	233	1604	14.53
2063/064	255	1818	15.76
2064/065	394	1800	21.89
2065/066	222	2193	10.12
2066/067	355	2628	13.51
Total	1459	9843	14.82
Average	291.8	1968.6	

Source: Appendix I and II.

The above table shows the gross profit margin ratio is fluctuating trend during the period but its standard deviation is low. In the FY 2062/63, the gross profit margin was 14.53%, 15.76%, in 2063/64. It was increased to 21.89% in FY 2064/65 but after that it was decreased to 10.12% in FY 2065/66 and 13.51% at the end of the study period.

Generally 20% of gross profit margin ratio is standard of manufacturing concern. But the average gross margin ratio of DDC is around 14.82% for the study period. So, the

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gross margin ratio of DDC is not satisfactory. In order to test the relationship between gross profit and sales during the study period, Karl Pearson's correlation coefficient (r) is -0.03. It shows the insignificant correlation between sales and gross profit during the study period.

4.4.2 Net Profit Margin Position

Net profit is the profit, which comes after deducting operating expenses and income tax form gross profit. This ratio is the relationship on net profit after taxed to sales. This ratio indicates the management ability to operate the business with sufficient success. The ratio of net profit to sales essentially express the expenses mainly affect the net profit of the company. Higher the ratio, higher the profitability position of the corporation and lower ratio indicates the weak business efficiency and income or increasing unnecessary of the firm. Table 4.16 presented below shows the net profit margin in DDC during the study period.

Table 4.16

Net Profit Margin Position

(Rs. In million)

Year	Net Profit /Loss	Sales	Ratio(%)
2062/063	11	1604	0.69
2063/064	14	1618	0.86
2064/065	(79)	1800	(4.39)
2065/066	(88)	2193	(4.01)
2066/067	26	2628	0.99
Total	(116)	9843	(1.18)
Average	(23.2)	1968.6	

Source: Appendix 1 and 2.

The above table shows the net profit margin of the corporation is fluctuating over last 5 years. First two years it assumed profit and decreasing profit but after the FY 2064/55 was sharply loss since it was (-)4.39% in FY 2064/65 and (-)4.01% in FY 2065/66 and after that it increased to 0.99% in FY 2066/67.

Normally the net profit margin ratio is 7% to maintain its standard (but it depends upon the nature of business and risk involvement) but the DDC's margin ratio is

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always remaining around (–)1.18% even though it is in fluctuating trend.

4.4.3 Return on Total Assets Position

It measures the percentage of return on the overall total assets employed for every activities of the corporation. It gives the profit earning efficiency of the corporation in relation to total assets. The return on total assets employed of DDC is presented below in table 4.17 during the study period.

Table 4.17

Return on Total Assets Position

(Rs. in million)

Year	Net profit	Total assets	Ratio %
2062/063	11	771	1.43
2063/064	14	813	1.72
2064/065	(79)	822	(9.61)
2065/066	(88)	819	(10.74)
2066/067	26	770	3.38
Total	(116)	8170	(1.41)

Source: Appendix 1 and 2.

Above table shows that return on total assets is fluctuating over the period. It was 1.43% in FY 2062/63, 1.75% in FyY2063/64. After that it decreased and huge losses to (-)10.74% in FY 2065/66. Since DDC's profit decreasing after the FY 2063/64, it affects the return on total assets which is in fluctuating trend. It can be concluded from the above ratio that DDC has not efficiently using its assets and has not invested its capital in efficient manner.

4.4.4 Return on Current Assets Position

This is the rate of return on current assets or working capital employed by company. It measures the profit with respect to its total current assets. It gives the utilization of current assets effectiveness. It is calculated by dividing net profit by total current assets. So, it shows the relationship in between net profit and current assets. The return on current assets ratio of DDC is presented below in table 4.18.

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Table 4.18

Return on Current assets Position

(Rs. in million)

Year	Net profit	Current assets	Ratio %
2062/063	11	496	2.21
2063/064	14	541	2.59
2064/065	(79)	558	-14.16
2065/066	(88)	563	-15.63
2066/067	26	557	4.67
Total	(116)	2715	-4.27
Average	(23.2)	543	

Appendix: I & II

The above table shows the percentage return on current assets. In FY2062/63 it was 2.21%, 2.59% in FY 2003/04. But in FY 2064/65 it is negative ratio i.e. (-)14.16% and FY 2065/66 it also negative ratio i.e.(-) 15.13%. FY 2066/67 it is positive ratio by 4.49%. Since average return on current assets was negative ratio by (-)4.27%

4.5 Major Findings of the Study

The major findings of the study as per objectives are as follows:

A) The main finale of the working capital management of dairy development corporation.

- The size of working capital largely affect by tradeoff between risk and profitability of the company.
- As studied the analysis net working capital of the DDC has over used by current assets.
- The structure of working capital is not satisfactory because it retains the high portion of cash and bank balances, which is unproductive.
- The growth of working capital was fluctuating in the study period.

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- The analysis clearly shows that the company has conservative working capital financing policy.
- From the analysis it is revealed that DDC kept excess amount of working capital can not be consider as the sign of inefficient management of the company.

B) The main termination of current assets investment policy of DDC

- The analysis shows the higher percentage of current assets in total assets and denote greater liquidity position of the company and lower risk of technical insolvency.
- The growth trend of current assets is higher than the total assets.
- The standard current ratio twice but the DDC's more than 4 times in all the year of study period which shows ability to pay current debt is high in DDC.
- Above analysis indicates that the DDC has not using long-term financing policy to its current assets.
- Downward return on current assets also predicts the decreasing productivity of the current assets of the DDC.

C) The main ending of evaluate the relationship between liquidity and profitability of DDC

- Liquidity ratio helps to analyzed the ability of DDC to meet current obligation.
- The above analysis there is negative correlation between liquidity and profitability.
- This condition meets the proposition that higher the liquidity lower the profitability.
- Generally 20 percent gross profit margin ratio is standard of manufacturing concern.
- The average gross margin ratio of DDC is around 14.82 percent for the

study period.

- So, the gross margin ratio of DDC is not satisfactory.
- DDC's Net profit decreasing after the FY. 2063/64, it affects the return on total assets which is fluctuating trend.
- So, the DDC has not efficiently using its assets and has not invested it's capital in efficient manner.

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CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter presents the summary and conclusion drawn from the analysis of the study and recommendation are also given to corrective aspects regarding improvement of working capital management of Dairy Development Corporation.

5.1 Summary

Nepal is a landlocked country situated between China and India. It is a developing country with an agriculture based economy. Most of its people are engaged in agriculture sector. In modern age, for economic development money subsection of the economy are identified in agriculture area of Nepal, for example: fishing, beekeeping, pastoral, grain production etc. Industrialization in a poverty stricken country like Nepal is an effective means of achieving economic developing but infrastructure development is most necessary for the industrialization. Dairy Corporation can be using as bridge between agriculture sector an industrialization.

In order to meet the growing demand of milk and milk product in Kathmandu the Dairy Development Board was converted to the Dairy Development Corporation (DDC) in 6 July 1969 under the corporation act of 1964.

Any organization invests a huge amount of its money in the form of working capital and decision regarding the working capital overall affects the company performance. Working capital is determined by different between current assets and current liabilities. Huge amount of current assets increase the cost and remain the capital whereas high volume of liabilities refers firms inability to pay debt in time and frequent interruption of production.

The main objective of this study is find out what technique have been applied by the DDC to manage its working capital and suggest using the scientific techniques to help to reduce cost and increase performance level. Data were collected from secondary sources and analyze the collected data using the quantitative and statistical tolls. After analyzing the data the researcher come to the point about the working capital management of DDC.

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In the part of analysis and presentation, all the collected data and analyzed on the basis of working capital management theory and with help of liquidity analysis, profitability analysis, turnover analysis, correlation analysis. To make certain type of decision regarding its working capital like financial, statistical tools available , the company has not applied any sort of techniques available for managing working capital.

After analyzing the working capital management of DDC, the researcher comes to the findings which were the objectives of the study. DDC has not properly maintaining its current assets in which debtors playing huge part of the current assets and total current assets is more than four times than the current liabilities. It has neither cure about the working capital financing policy nor working capital investment policy. It can clearly be said that there is no effective working capital management. The main problem of DDC is not use the scientific and proper use of working capital management.

5.2 Conclusion

While analyzing the management of working capital in DDC with the help of different ratio analysis or correlation in coefficient we have derived the following conclusion.

- The main problem of DDC is not use the scientific and proper use working capital.
- The corporation has huge current assets, so there was no problem of technical insolvency.
- There were more than sufficient current assets to meet the current obligation of the corporation which obviously is a sign of mismanagement of working capital.
- DDC, being a public utility, kept a large volume of liquid assets, which indicts the excess liquidity position.
- DDC, negative correlation between liquidity and profitability, which indicts “Higher the liquidity lower the profitability”.

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5.3 Recommendations

Those analysis of the balance sheets in all the possible angels of working capital management have revealed the excess liquidity position of DDC. Since, there seem to be serious in management of capital in DDC, the following recommendations have been made on the basis of foregoing analysis for further improvement of the existing working capital management of DDC. The need for improving investment on current assets, application of cash management techniques. The need for concentration on collection of outstanding bills and the need for decrease long term sources of fund to finance in current assets have been referred.

I)Applying of Spontaneous Sources of Financing

The company has been using its long term sources of funds of to finance its current assets hence it been applying conservative working capital policy. By the result, there is not expected rate of return on current assets due to losing its opportunity cost. Hence it is necessary to decrease the long-term sources of fund in current assets financing.

There are two major sources of spontaneous financing; they are trade credit and outstanding expenses which is non-interest bearing funds. In case of outstanding expenses, it has been using the company in satisfactory manner but there is very low utilization of trade credit. So, it is better for DDC to finance its current assets through trade credit as current liabilities which help to increase the rate of return.

II)Optimize Liquidity Position

DDC, being a production industry required higher liquidity position. Thus the company has been suggested to stabilize the current ratio more than 1:1. Large amount of fund tied up in the means of cash and debtors which may bypass the opportunity cost. So it is better for DDC to invest such excess amount in fixed amount in fixed assets to increase its capacity, product differentiation and higher productivity.

III)Application of Cash Management Techniques

A large volume of cash in dumping is quite useless. The amount of cash is almost double than its actual requirements. Thus, the company should estimate how much

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cash is needed for immediate use and the entire excess amount should be invested in marketable securities. Introducing concentration banking system and mobile collection centre may help to accelerate the collection of cash.

IV)Concentration on Collection of outstanding bills:

Credit terms and standard are too much liberal in DDC. Due to this very reason, the amount of doubtful is increasing in the every year. So, DDC should make appropriate decision regarding credit terms, credit standard and credit policy.

- Take immediate action to the non paying customers like stopping supply, black listing and taking legal action against willful defaulters so on.
- Providing attractive package like riveting to speed up the collection of bill. More authority and accountability should be attribute to the middle or lower level officers for collection of outstanding debt.
- Pre-paid facility and discounting certain percentage to advance payer.
- A separate cell should be established to monitor the collection of outstanding providing duties responsibility strictly.

V) Non Operating Expenses:

Since, correlation between gross profit and sales is positive however correlation between sales and net profit is negative which is quite awkward. Sales is increasing steady throughout the study period and net profit fluctuating though gross profit increasing that depicts the increase in non-operating expenses. So, DDC has to develop proper system to curb uncharacteristic expenses and control over administrative expenditure. It should withdraw the product which is not beneficial and branch with incurring losses.

VI) Miscellaneous:

The financial performance should be timely assessed through financial experts in to know the financial strengths and weaknesses.

- Long/mid term planning and control system of account, receivable and cash budget also should be prepared.

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- The corporation should be provided more autonomy and a business culture should be established. The senior management should be more professional instead of bureaucratic culture.
- In order to maximize the sales and minimize the operating cost, DDC should utilize its full capacity of fixed assets and should have fixed the policy to overcome problem of milk holiday and proper storage facility.
- Research works should be carried out periodically on market possibility, consumer's capacity and supply reliability.
- Proper methods should be followed for sufficient supply of milk and milk product on the occasion of festivals like Dashain, Tihar etc.

While look into the realm of working capital management in DDC in the present study. Many an interesting new field of investigation has been fund out. Some of the major areas are recommended for the further study.

- Account receivable management in public utilities in Nepal
- Management of cash in public enterprises in Nepal
- Capital structure management in public enterprises in Nepal

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Appendix-I

Dairy Development Corporation, Kathmandu

Balance Sheet as on 2062/63 to 2066/67 (In Rs. "000")

Particular	2062/63	2063/64	2064/65	2065/66	2066/67
Capital and liabilities:					
Corporation capital	550,803	550,803	550,824	670,080	670,080
Donation fund from donor countries	1,545	1,545	1,545	1,545	1,545
Total capital and liabilities (A)	552,348	55,2348	552,369	671,625	671,625
Long-term loan	85,202	84,252	83,301	85,301	87,022
Total long term loan (B)	85,202	84,252	83,301	85,301	87,022
Current liabilities and provision:					
Outstanding interest and tax	40,812	44,540	45,789	46,089	36,654
Outstanding for milk and porter wages	45,542	50,713	47,872	55,641	68,583
Collateral	12,411	10,896	11,491	12,043	13,025
Other outstanding	29,561	21,709	26,582	24,143	29,234
Other reserve	228,284	224,717	289,671	301,265	305,632
Provision for tax	2,530	2,700	-	-	9,934
Current liabilities sand provision (C)	359,140	355,275	421,351	439,181	463,062
Assets					
Fixed assets before depreciation.	794,406	701,794	728,562	750,365	730,215
(-) Depreciation	451,055	438,874	468,970	498,266	522,255
Fixed assets after depreciation	263,351	262,920	259,592	252,099	207,960
Utilized or …. fixed assets	11,321	8,772	4,180	4,057	4,454
Total fixed assets (A)	274,672	271,692	263,772	256,156	212,414
Investment and stock	1,545	1,545	1,545	1,545	1,545
Current assets					
Cash and bank balance	299,342	274,412	304,258	230,378	188,010
Stocks (milk and milk product)	42,315	98,325	104,212	123,091	173,109
Stock (other than milk and milk product)	64,250	71,438	63,325	99,081	95,426
Debtors and prepaid exp.	91,235	98,372	87,541	111,821	10,1229
Total current assets (B)	496,571	541,547	558,336	563,371	557,770

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Appendix-II

Dairy Development Corporation, Kathmandu

Income Statement from the Year 2062/63 to 2066/67 (In Rs.”000”)

Particular	2062/63	2063/64	2064/65	2065/66	2066/67
Income:					
Sales of milk and milk products	1,604,363	1,618,224	1,800,500	2,193,895	2,628,845
Miscellaneous income	14,957	17,025	19,378	19,535	20,124
Total income	1,619,320	1,635,249	1,819,878	2,213,430	2,648,969
Cost of sales:					
Milk collection expenditure	1,137,002	1,141,706	1,146,429	1,653,854	1,868,578
milk processing expenditure	259,472	273,320	287,905	339,004	627, 154
Add: O/S of finished goods	41,183	51,365	56,845	65,823	67,324
Less: C/S of finished goods	(51,365)	(56,845)	(65,823)	(67,324)	(69,725)
Total cost of goods sold	1,386,292	1,09,545	1,425,357	1,991,357	2,493,331
Contribution margin	233,028	255,704	394,521	222,073	355,638
Other expenditure					
Administrative expenditure	110,456	120,708	221,780	153,352	153,572
Depreciation expenditure	29,406	28,830	28,266	27,712	25,543
Sales expenditure	35,965	44,174	175,325	80,235	90,157
Provision for gratuity	42,456	41,023	33,456	44,457	45,437
Interest on loan expenditure	4,319	4,522	4,734	4,956	5,`189
Total other expenditure	279,102	239,257	463,561	310,712	319,898
Total profit or loss	13,926	16,447	(79,040)	(88,439)	35,740
Provision for tax	2,530	2,400	-	-	9,934
Net profit and loss	11,396	13,747	(79,040)	(88,439)	25,806