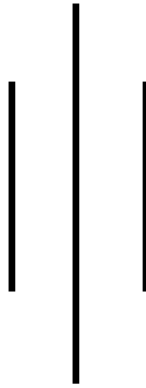


# **A CASH MANAGEMENT SYSTEM OF DAIRY DEVELOPMENT CORPORATION**



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# RECOMMENDATION

This is to certify that the thesis

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**A CASH MANAGEMENT SYSTEM OF DAIRY  
DEVELOPMENT CORPOTATION**

*has been prepared as approved by this Department in the prescribed format of the faculty of  
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And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for

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# DECLARATION

I hereby declare that the work reported in this thesis entitled “A **CASH MANAGEMENT SYSTEM OF DAIRY DEVELOPMENT CORPORATION**” submitted to Shankerdav Collage, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Master of Business Studies under the supervision of Mr. Joginder Goet and Mr. Binod Pandey Lecturer of Shanker Dev Campus.

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Top Prasad Bhattarai  
Shanker Dev Campus

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## LIST OF ABBREVIATIONS AND SYMBOLS

ACP	-	Average Collection Period
CA	-	Current assets
Co.	-	Company
CL	-	current liability
Contd.	-	Continued
DDC	-	Dairy Development Corporation
DTC	-	Depository Transfer Cheque
e.g.	-	For example
EDTC	-	Electronic Depository Transfer Cheque
ed	-	Edition
EDI	-	Electronic Data Interchange
EOQ	-	Economic Order quantity
Es	-	Enterprises
et al	-	And other
etc.	-	et- cetera
F.Y.	-	Fiscal year
GDP	-	Gross domestic product
Ltd.	-	Limited
mgmt.	-	Management
No.	-	Number
NPAT	-	Net Profit after tax
Rs.	-	Rupees
S.N	-	Serial Number
TA	-	Total assets
Viz.	-	Namely
Vs	-	Verses

# CHAPTER ONE

## INTRODUCTION

### 1.1 General Background

The cash management has better been termed as management of money position or assets. One of the major functions of cash is to meet operational requirement in day - to - day business. A business firm has to go on incurring small expenses with daily transactions so for that purpose Petty cash fund is necessary to be maintained.

There are three primary motives for holding cash; transaction motives; speculative motives and precautionary motives. Now compensating motives also included in holding motives of cash. (Pandey, 1999: 911).

In financial sense cash management refers to all money items and sources that are immediately available help to pay high liquid securities are treated into cash. Basically cash management includes planning and cash policies. Cash planning involves formulating of cash policies resulting for normal and abnormal requirements. While, the proportion of corporate assets held in the form of cash is very small often between 1 to 3 percent. So, its efficient management is crucial to the solvency of the business because in a very important sense, cash is the focal point of fund flow in a business. In view of its importance, it is generally referred as the life blood of a business enterprise.

Importance of cash management has increased since 1970s. When the high level of interest rate on short term investment raised the opportunity cost is raised of holding cash balance even with lower rates, so managing cash will remain important. (Western and Copland, 1999:567).

Cash management involves managing the money of the firm in order to maximize cash availability, other income and interest income on any idle funds (Van hone, 1991:394).

Cash is basic input needed to keep the business running on continue basis. It is also

the ultimate output expected to be realized by selling the service or product manufactured by the firm.

The firm always need to keep sufficient cash, neither more or nor less. Cash shortage will disturb the manufacturing activities of firm, while excessive cash will simply remain idle without contributing anything towards the firm's profitability. Thus a major function of the financial manager is to maintain optimum cash in the firm. Basically cash management is concerned with the following areas (Chandra 1994:282).

- Cash budgeting
- Long term cash forecasting
- Monitoring and control
- Investment of surplus funds

Financial manger, therefore, have developed techniques of cash collection and disbursement enabling them to optimize the availability of funds and to reduce the interest cost of outsourced financing.

Closely allied with the cash, management function is the management of marketable securities, the portfolio of high liquid, near cash assets that serves as a back up to the cash account.

For managing the cash, cash forecasting and budgeting is the first and key tool. The cash budget tells up the likely availability of cash with respect of both timing and magnitude (Van Horn, 1991:394).

It tells us how much we are likely to have when and for how long. Thus cash budget serves as a cash planning and control. Smooth flow of cash is geared with capital planning and control and other functions of business. The smoother and more repaid the flow of funds the more efficient is each rupee of working capital from the sense of proper management of cash. We can have following advantages with managing cash.

- Received trade discount
- Special cash given to the supplier
- To work smoothly on emergency period

- Purchase goods from supplier

For the manufacturing and non-manufacturing companies both of them need cash and cash is very crucial part. Manufacturing means converting raw materials to a complete product by mechanical, electronic or chemical process. The emphasis of this study is on manufacturing companies mainly Dairy Development Corporation, Lainchour. This corporation collects milk from milk producer and produces different kinds of dairy products and supplies fresh milk and milk product to domestic and international consumers.

## **1.2 General Background of Public Enterprises**

Today the government is not involved actively and directly setting up and management of economic and industrial enterprise. It is widely accepted now that the economic development of a country is directly related with its industrial growth. Expansion of industries leads to greater utilization of natural resources, production of goods and services, creation of employment opportunities and improvement of general standard of living, the doctrine of public sector emphasis on the principle of welfare state, where each and every activity of the government is expected to safeguard and to promote interest of public. For this, the state has to come forward to control and manage the national resources in public interest. This objective can be achieved either through intervention or an entrepreneurship.

Intervention affects the existing system of private sector while public sector is the outcome of state entrepreneurship. There can be several motives that influence the growth of state enterprise, political ideology, State of economy development and defense being prominent among the factor concerned. Public sector and private sector are generally taken as to mutually exclusive sectors of economy. But both are in reality, indispensable basis for growth and development. In fact, these are two wheels of the economy where in the public sector provides the base for development of private sector. Public sector and private sector both from integral parts of the national economy. The economy of Nepal is basically a mixed economy. Where the both public and the private sector operate freely in business except in case of defense. Public sector denotes a part of the government setup. Its budget gets incorporated with the government budget there by allowing it to get funds from the government and

hence it is required to deposit all its income in government treasury. The objectives of PES in Nepal have greatly facilitated economic growth in spite of the problems of capital investment long gestation period, low profitability and high risk. The government use PES for implementing their policies, tools for short term political benefits, creation of employment opportunities, economic and social developments to fill the gap of private capital, take over gain projects, price control, public welfare and national self presentation etc in this way we can say that public enterprises have contributed through various means in the development process of the country.

### **1.3 Introduction of Dairy Development Corporation (DDC)**

First five year plan was stressed upon the need of development modern dairy industry in public sector. The dairy development commission was formed in 1955 A.D. The dairy development sector was established in year B.S. 2010/011. As the demand of milk and milk product were gradually increasing. It was left necessary improvement of Dairy Development Centre. As a result of Dairy Development Centre was at Bhotahity on the same year B.S. 2010/11. This center started to distribute the collected milk with to the urban people in Kathmandu. The demand of milk and milk product increased day by day. Due to the inadequacy of space this center was shifted to Lainchour. In the space the dairy development commission was constituted to guide the dairy development section. At that time dairy experts were provided by Swiss Association for Technical Assistance. The dairy development commission was converted in to Dairy Development Board in B.S. 2009.

The main objectives of the corporation were to provide guaranteed market and fair price to the rural milk producers and to supply hygienic pasteurized milk and there standard dairy products to the urban consumers. Prior to the establishment of the corporation a separate dairy development board was constituted to carry out the task of dairy development in wider scale. The dairy development activities in Nepal started in Tusal village of Kavre district in B.S. 2009 on experimental basis with small scale milk processing plant under the department of agriculture. In the year B.S 2010/2011 at the initiative of Dairy Development Board, the central dairy plant was established and started milk collection processing and marketing activities from the year 2014 B.S. The third year plan provided potential market to the farmer. Who were far

distance and from remote areas to supply the homogenized and pasteurized milk and other milk products to the consumer of urban area and to ensure the improvement of life style of farmer, Dairy Development Corporation was totally owned by government. It was also financially supported by the foreign grants and loans at a rate of interest. World Food Program (WFP) has been supporting DDC since 2030/031. The New Zealand and Danish Government had contributed toward the establishment or milk processing plants.

At present USAID and Danish government are the major donors of Dairy development Corporation. Dairy Development Corporation provides quantitative milk and milk products to the consumer at national level. The Demand of milk is increasing day by day because of high quality and hygienic; Dairy Development Corporation buys milk at a reasonable price and sells them with reasonable price. Before establishment of dairy development corporation, there was no potential market to the farmers. To provide reasonable price to the milk producer of rural side and also availability of pasteurized milk to the consumers, to fulfill these objectives the Dairy Development Corporation has been working from its set up. The condition of farmers will improve if they get adequate price of milk at one side of the Dairy Development Corporation will continue its efforts to supply increasing demand of milk to the consumers of urban area. The demand of milk is increasing because of rapid increase in population; the Dairy Development Corporation is trying to make milk occupation attractive. For this Dairy Development Corporation has expanded its branch offices indifferent parts of the country such as Kathmandu, Hetauda, Pokhara, and Lumbini.

The objective of branch offices and projects is to provide suitable price of milk to producers of the people of rural area and also make them easier to sell milk. There should be co-ordination between milk production and the demand of milk due to backward economy.

Nepalese farmers are engaged in livestock farming customarily as a secondary occupation. To make full use of their skill, it was decided to set up a modern dairy industry so as also to provide the farmer with a secondary source of income recognizing its importance and prospects in the country. The following programs were decided to be under taken during the first plan period.

- To set up milk collection centers in Kathmandu valley.

- To set up sales depots for selling only hygienic milk.
- To set up cheese manufacturing units in hilly regions.
- To set up Ghee processing units at important place in Terai region etc.

#### **1.4 Area of the Study**

This study has mainly focused on the cash management system of Dairy Development Corporation. This study possesses some limitations of its own kind, which are presented below.

- There are many dairy corporation in Nepal but this study has been confined only DDC.
- This study is mainly based on secondary data gathered by the researcher. Primary data is also used as per need.
- The whole study is based on data from the fiscal year 2060/061 to 2064/065 and hence the conclusion drawn confines only to the above period.
- The study will be conducted for the partial fulfillment of MBS and has been conducted and submitted within the prescribed time.

#### **1.5 Statement of the Problem**

This corporation collects milk from different areas and produces some kinds of milk products for its local market and supply rest of the milk and milk products for international market. It has too many problems due to lack of capacity.

Cash management refers to the proper management of firm's cash position. It means that each paisa should be fully utilized. So, cash management in itself is a decision making area within the framework of overall current assets management. However the study of cash management has not received so much attention as in recent years. This study, therefore attempts to analyze the nature of improvement in cash management and the linkage between different components and their variables.

Cash management plays a vital role in management system of every manufacturing organization and non manufacturing organization. Milk is raw material, which should be kept very carefully. Inventory management also plays vital role. This branch is

facing some problems which are mentioned below:

- What is the major variable that affects the cash management of the organization?
- What is the structure and utilization of cash?
- What is the liquidity position of Dairy Development Corporation?
- Due to lack of adequate price of milk and milk product the firm is facing another problem.
- Is there need of taking corrective measures to improve cash management level of organization?

### **1.6 Objectives of the Study**

The main objective of the study is to examine cash management system of public enterprises in Nepal on the basis of case study of Dairy Development Corporation. It focuses on the investment decision of the company and in particular the cash management in short run business operation of the firm, i.e. management of the individual current assets like cash receivables and inventory in short run. In other word, this study deals with the management of cash or near cash assets such as marketable securities and time deposits in banks. Following are the main objectives of the study:

- To identify the major variables that affecting cash management.
- To determine the structure and utilization of cash.
- To estimate demand and supply of cash.
- To examine the liquidity position of Dairy Development Corporation.
- To examine the exiting cash management practices in DDC.
- To provide corrective suggestions and possible guidelines to improve the performance of DDC based on the major findings of the analysis.

### **1.7 Importance of Study**

Cash management is a very significant tool and technique which can be used in project planning of any organization. It is the foremost need in cash planning which cannot be ignored since it involves consideration of alternation course of action so as

to synchronize cash flows with the liquidity position of the firm. Profit planning is an important part of overall planning process of an organization and cash management is a major function of the profit planning. As stated in ninth plan, the financial situation of the government corporation as matter of fact is in a very poor condition. A part from other measure required improving their performance; Dairy Development Corporation may be expected to have been prospect with effective cash management. Focus of the study being on critical examination of cash management technique of Dairy Development Corporation.

### **1.8 Limitations of the Study**

Cash management system of dairy development corporation is main concern of the study and the study evaluates the cash management system. In order to make a study of cash management more fruitful, it is essential that weekly data and monthly data cannot be obtained and due to this, the study has been force to use the annual data, which is only published by related enterprises. As a student time and budgetary constraints cannot be ignored. The study depends upon secondary information. As the study cannot has not covered all the manufacturing enterprises. The limitations of the study are as follows:

- The study is mainly depending on secondary data.
- Primary data are used as per required.
- Only selected statistical and financial tools have been employed in this study.
- This study is limited to cash management of Dairy Development Corporation.
- The related review of literature mainly based on the materials related to cash management of central library of T.U. and library of Shanker Dev Campus.

### **1.9 Assumptions of the Study**

In order to accomplish the objectives of the above study, the following assumptions have been made.

- Assuming the cash and bank balance is the major variable that affecting the cash management.

## **1.10 Research Methodology**

The research methodology describes the method and process applied in the entire subject of the related study. The basic objective of this study is to explain or evaluate the cash management system of DDC and to provide the workable suggestion for better improvement. Research methodology is a way to solve the research problem systematically with the help of various tools. The forgoing topics will describe problem of the study, statement of the problem, objective of the study, need of the study, organization of the study etc. Research methodology describes the research design, sampling procedure, data collection procedure, data analysis methods techniques. The researcher has used the following methodology for the evaluation of cash management system of DDC.

### **Nature and Sources of Data**

Basically this study is based upon the secondary nature. The data are collected from the following sources.

- Trial balance etc.
- Profit and loss account
- Balance sheet

The company has not published last two years data so the researcher has used the data of year 2060 to 2065. The balance sheet and profit and loss account were obtained for the five years (i.e. fiscal year 2060/061 to 2064/065). To attain the objectives of the study, both primary and secondary data have been collected through interview, observation, contacts, visits and discussions with account, chief executive, and other related persons and annual reports etc.

### **Financial and Statistical Tools for Analysis of Data**

The main purpose of analyzing the data is to receive cash related information for smoothly running the business firm in present days and future. Analysis of data explains methods of organizing data by tabulation and then placing that data in presentable form by using figures and tables. The following major tools are used in analyzing the available data. These are mentioned below:

(i) Ratio Analysis

(ii) Regression Analysis

(iii) Statistical Tools

(iv) Cash Flow Analysis

### **1.11 Organization of the Study**

This study has been organized in to five different chapters. They are Introduction, Review of literature, Research methodology, Data presentation and analysis, Summary, Conclusion and Recommendation.

Chapter one includes the general background of the study, area of the study, statement of the problem, objective of the study, important of the study, limitation of the study, assumption/hypothesis of the study and organization of the study.

Chapter two includes the review of available literature. It includes the conceptual or theoretical review and review of related studies.

Chapter three includes the research methodology which includes research design, nature and sources of the data, data collection techniques, methods of data analysis and relevant to the study.

Chapter four includes the interpretation and analysis of the data, presentation of data (figures and tables) and major finding.

Chapter five states the summary, conclusions and recommendations of study.

Besides all these bibliography, some annexure have been used.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

#### **2.1 Conceptual Frame Work**

The basic concept of cash management has been searched into this section of literature review. Text books that have been prescribed under academic studies are the primary sources on the basic concept of cash management.

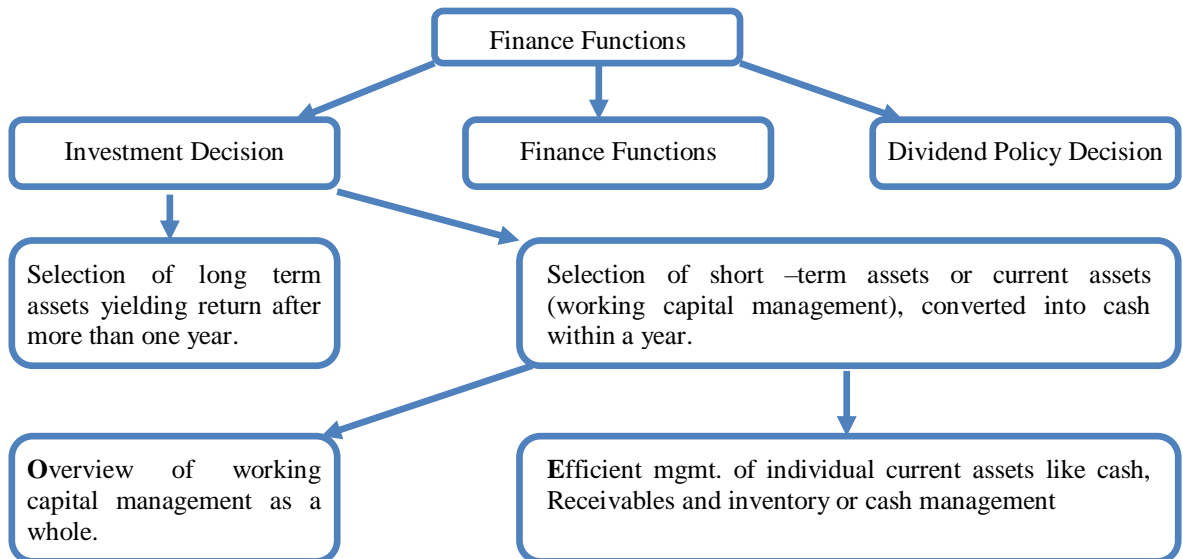
##### **2.1.1 Definition of Cash and Cash Management**

Cash is lifeblood of the business, which is the most important component of the working capital. It is the most liquid asset, have vital important to daily operation of the firm. Cash is the common denominator to which all current assets can be reduced because the other major liquid, that is receivable and inventory get eventually converted into cash (Khan and Jain, 1999:663).

This underlines the significance of cash management cash provides liquidity, but it doesn't pay interest; it is just one of the raw materials that you need to do business. It is expensive keeping your capital tied up in large inventories of raw materials when it could be earning interest (Brealey & Myers, 1999:884).

The term cash with reference to cash mgmt. is used in two senses. In a narrow sense it is used broadly to cover cash (currency) and generally accepted equivalents of cash such as cheques, drafts and demand deposits in bank. The broader view of cash also includes near cash assets, such as marketable securities and time deposits in the banks. The main characteristic of this is that they can be readily sold and converted into cash. They also provide a short-term investment outlet for excess cash and are also useful for meeting planned outflow of funds. We imply the term cash management in the broader sense. Irrespective of the form in which it is held a distinguished feature of cash, as an assets is that it has no earning power (Khan & Jain, 1986:663-664).

So simply starting, management of near cash assets, i.e. marketable securities, time deposits in bank, is called cash management. Broadly speaking, receivables and inventory is also termed as management of cash because receivables and inventory are also supposed to readily converting into cash.



According to modern approach financial management can be broken down into major decisions as function of finance, they are:

- Investment decision
- Financing decision
- Dividend policy decision

Investment decision refers to two major decisions.

- Selection of long term assets, which will yield a return over a return over a period of time in future, i.e. more than a year, and.
- Selection of short term assets or current assets which can generally be converted into cash with a year.

The latter decision function is also termed as working capital management, which is concerned with the management of current assets. The tow basic components of working capital management are:

- An overview of working capital management as a whole.
- Efficient management of the individual current assets like cash receivables and inventory.

Cash management deals with the second component of working capital management, the management of cash or near cash assets such as marketable securities and time deposits in banks, receivables and inventory.

### **Motives for holding cash**

Cash is the common denominator to which all other current assets can be converted into readily or in near future, and thus it is the most liquid current asset. Cash when held as an asset has no earning capacity. Nevertheless business firm have to hold cash for three different motives, they are: Transaction motive, Precautionary motive and Speculative motive.

- **Transaction motive**

Transaction motive refers to the need for cash to meet payments related to ordinary course of business transaction payments of purchases, labor takes and dividends. In day to day business transactions a firm necessarily requires cash to meet payments of its purchase, wages operating expenses. Financial charges like interests, taxes dividends etc. necessary to pay in the daily course of business transactions. Cash are generated from sale of goods or services and returns from outside investments etc. This receiving of cash is called cash inflow and the payments of cash are termed as cash outflow. In practice, cash inflow and outflow seldom coincides. Such requirement of cash to meet scheduled payments in course of daily business transaction is known as transaction motives.

- **Precautionary motive**

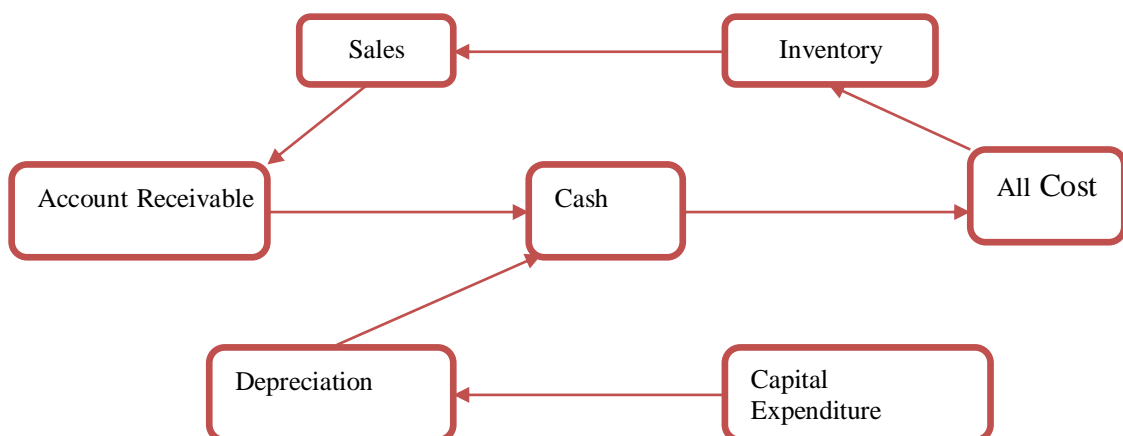
Precautionary motive for holding cash is the need for cash to maintain a cushion to meet unexpected contingencies, such as the situation of natural calamities like earth quake, floods, strikes, etc. Sharp increase in raw material cost dramatic showdown in collection of accounts receivables, unexpected cancellation of order for goods owing to dissatisfaction of customers etc.

- **Speculative motive**

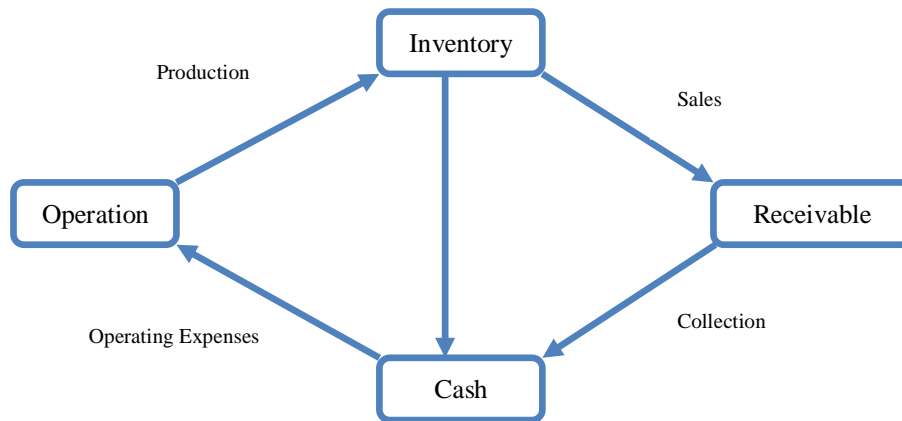
Speculative motive refers to the holding of cash by the Firms to take advantage of opportunities when the firm would face unexpected situations and which are typically out of course of business. Precautionary motive is defensive in nature; to put it differently, the purpose for holding cash under precautionary motives lies in fulfilling cash requirements should any unexpected opportunities such as to purchase raw materials at a reduced price on instant payment, buying securities when interest rates are speculated to decline, etc.

- **Compensation motive**

Compensation motive refers to the holding of cash balance to compensate banks for providing certain services and loans to the firm such as clearance of cheque, supply of credit information, transfer of funds, etc. For the services provided by the bank as stated above, the clients are required to maintain a minimum balance of cash at bank, which cannot be utilized by the clients. Since the proportion of this cash balance cannot be utilized in firm for the transaction purposes the bank they can use the money to earn some return. Such balances held by banks for the services they provide to their clients are called compensating balance likewise under some sort of loan agreements between a bank and its customers. Compensating balance is required as a condition precedent to the grant of loan, when the supply of credit is restricted and interest rates are rising (Van Horn, 1991:394).



Out of the four motives for holding cash, the most important ones are transaction motive and the compensation motive. This is because precautionary balances can be met by short term borrowings and business firms normally do not speculate and thus doesn't require speculative balances.



Business with regular gross income in the form of cash payments for goods or services need relatively small cash working balances. If the company with its sign 'pay as you enter' cannot meet demand for cash, the trouble is not with the working capital but with the whole business. To the extent that either regulating of income or cash term is taking the supply of cash funds should be increased; forecasting is the calculation of all reasonable probabilities about the business future.

### **2.1.2 Area of Cash Management**

Area of cash management includes basically cash planning and forecasting strategic of cash mgmt techniques, optimum cash balance and investing the excess cash on marketable securities.

#### **(i) Cash planning and forecasting (cash budget)**

Cash planning is a technique to plan and control the use of cash. It protects the financial condition of the firm by developing a projected cash statement. Cash budget is a summary statement of the firm's expected cash inflows and out flows over a projected time period. It gives information on the timing and magnitude of expected

cash flow and cash balance over the projected period. This information helps the financial manager to determine the future cash needs firm, plan for the financing of these needs and exercise control over the cash and liquidity of the firm. (Van Horn, 1996:396)

Cash budget serves two purposes. The first is the budget alerts the financial manager to future cash needs, second the cash flood forecasts provide a standard or budget, against which subsequent performance can be judged (Brealey and Myers, 1999:885).

Thus, cash budget is arrived as through a projection of future cash receipt and cash disbursements of the firm over various intervals of time there the cash budget refers the short term cash forecasts. So, one of the significant role of the short term forecast is to pinpoint when the money will be needed and when it can be repaid. Another use of cash forecasts is to help in managing the investment of surplus cash in marketable securities. There are two most commonly used methods of short term cash forecasting and control.

- **Receipt and Disbursement method**

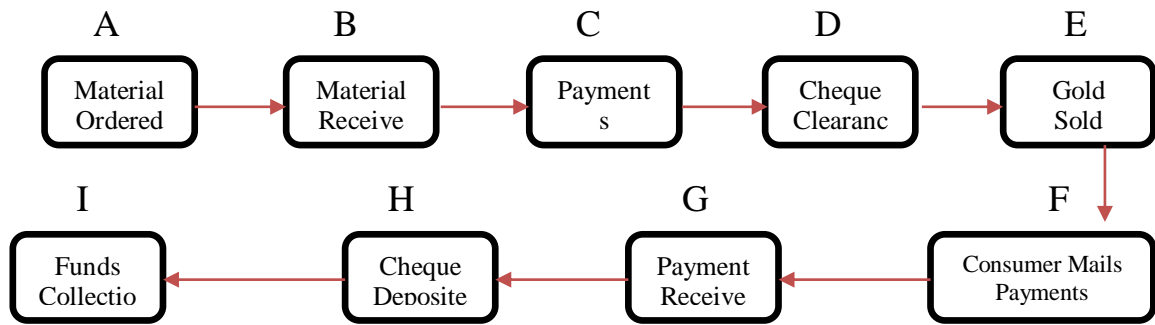
In this method involves forecasting for each terms of receipts and payments. The prime aim of receipt and disbursements forecasts is to summarize these flows during a predetermined period.

- **Adjusted net income method**

It is sometimes called the source and uses approach. Mainly, it has three sections: source of cash, uses of cash and the adjusted cash balance. This procedure will help in adjusting estimated earning on an accrual basis to a cash basis. It also helps in anticipating the working capital movements.

**(ii) Basic strategy of cash management/cash cycle**

The broad cash management strategies are essentially related to the cash turnover process that is the cycle refers to the process by which cash is used to purchase materials from which are produced goods, which are then sold to customers who later pay the bills. The cash cycle involves several steps among the way as funds flow from the firm's accounts as shown in below.



A firm has no control over the time involved between stages A and B. The lag between D and E is determined by the production process and inventory policy. The time between stages E and F is determined by credit terms and the payments policy of customers.

### **Minimum operating cash**

The higher the cash turnover, the less is the cash a firm requires. A firm should, therefore try to maximize the turnover. But it must maintain a minimum amount of operating cash balance so that it does not run out of cash. The minimum level of operating cash is determined by dividing the total operating annual outlays by the cash turnover rate. Cash management strategies are intended to minimize the operating cash balance requirement.

### **2.1.3 Cash Management Techniques/Processes**

The efficiency of cash management techniques means speedy cash collection and delaying payment on account payable.

#### **A. Managing cash collection**

In managing cash efficiently, the cash inflow process can be accelerated through systematic planning and refined techniques. Some techniques of speedy cash collection practiced by various business firms are given below.

##### **1. Concentration banking**

In this techniques of decentralized collection of account receivable, large branches as collection centers for receiving payment from customers. Instead of all the payments being collected at the head office the firm, the cheques for a certain geographical area

are collected at a specified local collection center. Concentration banking, as a system of decentralized billing and multiple collection points, is a useful technique to expedite the collection of account receivable. It reduces the time needed in the collection process by mailing time.

## **2. Lock box system**

Concentration banking system of collection of account receivable, processing for purpose of internal accounting is involved, that is some time elapses before a cheque is deposited by the local collection centre in account. The lock box system cures this kind of problem, a part from effecting economy in mailing and clearance times. Under this system firms hire a post office lock-box at important collection centers. The customer is required to remit payments to the post office lock box. The main advantage of a lock box system is that cheques are deposited at banks sooner and become collected branches sooner than if they were processed by the company prior to deposit. In other words, the lag between the time cheques are received by the company and the time they actually are deposited at the bank is eliminated; but it is more costly (Van Horn, 1996:398).

## **3. Transferring funds**

A transfer mechanism is a system for moving funds between accounts at different banks. The three main transfer mechanisms are:

- **Wire transfer:**

It is the faster way to move cash between banks, eliminating transit float. Wire transfer are typically initiated on a standing order basis company head quarters will make a written authorization to a local depository bank to transfer funds to the firm's concentration bank when the amount exceeds some target level

- **Depository Transfer Cheque (DTC):**

DTCs use a cheque restricted for deposit at a particular bank. DTCs provide a means for moving funds from local depository bank into concentration banks. DTCs may also be initiated by central company management in response to deposit reports from local office and lock box banks, or on a prearranged schedule.

- **Electronic Depository Transfer Cheque (EDTC):**

EDTC is a paperless electronic image transfer via the automated clearing house (ACH) network developed. The EDTC avoids the use of the mails and has a uniform one-business-day clearing time. EDTC is generally initially initiated by central company management.

## **B. Managing Disbursements**

Effective controls of disbursements can also result in more availability of cash. The objective in disbursements is to slow them down as much as possible. The combination of fast collection and slow disbursements will result in maximum availability of funds.

- **Using float**

One way of maximizing cash availability is 'playing the float' for disbursement, float is the difference between the total money amount of cheques drawn on a bank account and the balance shown on the bank's book. It is possible of course for a company to have a negative balance on its books. A positive bank balance, because cheques outstanding are drawn. If the size of float can be estimated accurately, bank balances can be reduced and the funds invested to earn a positive return. For using float a company should pay from a distant bank or scientific cheque cashing analysis.

- **Centralized disbursement**

In this system all the payments should be made by the head office from a centralized disbursement account. Such an arrangement would enable a firm to delay payments and conserve cash for several reasons. First, it involves an increase in transit time. Second, since the firm has a centralized bank account a relatively smaller total cash balance will be needed. Third, schedules can be tightly controlled and disbursement made exactly on the right day.

- **Avoidance of early payments**

According to the terms of credit, a firm is required to make a payment within a stipulated period. It entitles a firm to cash discounts. If payments are delayed beyond the due date, the credit standing may be adversely affected, so that the firm would

find it difficult to secure trade credit later. But if the firm pays its accounts payable before the due date it has no special advantage.

- **Accruals**

Accruals are defined as current by not yet paid for such as remuneration to employees, payment of taxes, payment of rent, who render service in advance and receive payments later. The longer the period after which payment is made the greater is the amount of free financing consequently and the smaller is the amount of cash balance required.

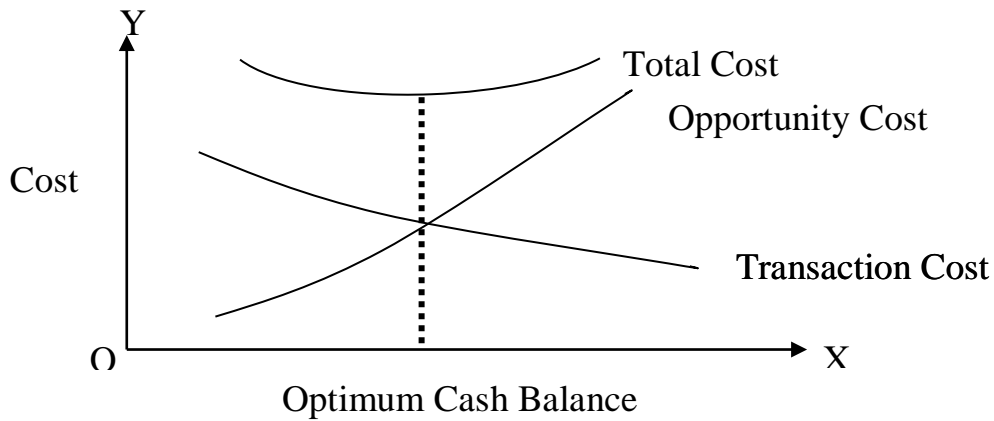
### **C. Electronic fund transfer**

Now a day, computer is widely used for transfusing the funds that regulating changes have been emitted greater competition among financial Institutions. Another aspect of changing environment is the increased satisfaction in computer application to cash management and in electronic fund transfer. With such system a customer's cheque is scanned electronically and verified by computer.

The increased use of electronic system is moving the economy towards Electronic Data Interchange (EDI). EDI's efforts in float management: it will be possible to forecast the timing of cash flows with greater accuracy. Traditional practices in areas such as credit terms based on paper/ mail/ manual procuring are likely to be subject to change. Most money movement today is in the form of electronic funds transfers (EFTS) a practically all financial records are stored in computer memories and not on paper.

#### **2.1.4 Determining the Optimal Cash Balance**

Basically, cash balance is maintained for transactions purpose and on additional amount may be maintained as a buffer or safely stock. When the firm has needs additional cash, either firm sell marketable securities or borrow. This moves transaction cost. On the other hand, if the firm maintains a high level of cash, it will have sound position of cash but loss of opportunity to earn the interest. Thus firm should maintain the optimum cash balance.



To find out the optimal cash balance the transaction cost and opportunity cost of holding cash is consider. Opportunity cost includes different types of cost related to transaction and Transaction cost includes transaction related cost. Optimum cash balance is determining with the help of Transaction cost and Opportunity cost. Above figure shows this trade off graphically. There are some models determining the optimum level of cash. Basically these are.

- Inventory model developed by Baumol (1952)
- Stochastic model developed by miller and Orr (1966) both models are presented in details on the topic of review of empirical studies.
- Orgler's models
- Cash Management Models etc.

▪ **Baumol model**

Boumol model is one of the famous models, which can be used for maximizing the return on the available funds, the cash balance should be maintainer at a minimum level and the funds not required from immediate use to be invested in the marketable securities.

It is simple inventory model that tells something about the management of cash balance. This model is specially based on the following assumption that the cash is used at a constant rate. The periodic cash requirement is more or less and there are some costs such as opportunity costs that increase and other costs such as transaction cost that decrease the cash balance.

$$\text{Optimal cash balance } \left( Q = \sqrt{\frac{2AC}{I}} \right)$$

Where,

Q= Optimal cash balance

A= Annual cash disbursement

C= Cost per sales of securities Treasury bill

I = Interest rate

In Baumol model, increasing the interest rate reduces the optimal cash balance. In general, when interest rate become so high, the small average of cash is to be holding on other hand when it becomes low, the large average of cash balance to be hold.

Numerically, the optimal size of cash transfer from investment accounts or line of credit, where optimal size of cash is determined by using following formula.

$$O = \sqrt{\frac{2FR}{R}}$$

Where,

O = Optimal Size of Cash.

F = Fixed transaction cost per transaction

R= Requirement of cash per period

K= Opportunity cost of holding cash or interest rate on borrowing.

The average cash balance (c) is calculated as follows:

$$C = \frac{E}{2} + M$$

Where,

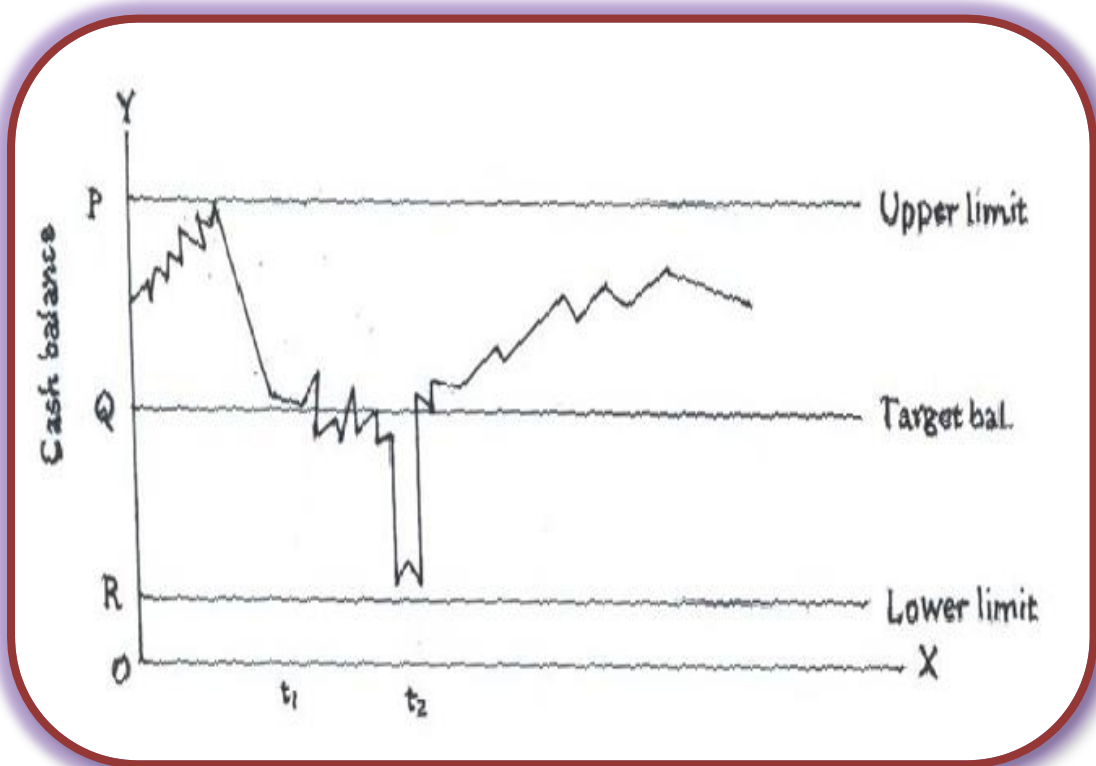
M= Minimum balance of cash for precautionary purpose.

#### ▪ Miller Orr model

Miller and Orr expanded the Baumol in 1966 by incorporating a stochastic generating process for periodic changes in cash balances so that the cash pattern resembles that

shown in figures. In contrast to the completely deterministic assumptions of the Baumol model, Miller Orr assume that net cash flows behave that changes in cash balance over a given period are random in both size and direction and that they form a normal distribution as the number of periods observed increase. The model allows for a prior knowledge. However, those changes at a certain time have a greater probability of being either positive or negative (Miller and Orr 1966:678).

This model is based on the assumption that the daily net cash flows are random in sizes as well as in the negative or positive flows and are normally distributed in the long- run .the models sets a range of high and low units within when the cash balance in between these two units. This model is designed to determine the time and size of transfers between on investment account and the cash account according to decision process illustrated in the following figure.



Numerically the model is set as follows:

$$A = \left( \frac{3F\sigma^2}{4i} \right)^{1/2} + L$$

And average cash balance is computed as follows:

$$C = \frac{4Z - L}{3}$$

Similarly, upper limit is computed by

$$U = 3Z$$

Where,

Z = Target cash balance                       $\sigma^2$  = Variance of net daily cash flows

F = Fixed cost for transactions              i = daily interest

L = Lower unit

### ▪ **Orgler's Model**

Orgler expnd this model in 1970.this model basically used one year planning horizon with twelve monthly periods because of its simplicity. It has four basic sets of decision variables which influence cash management of a firm and which must be corporate into the linear programming of the firm. These are:

- Payment Schedule
- Short- term financing
- Purchase and sale of marketable securities
- Cash balance it.

According to this model, an optimal cash management strategy can be determined through the use of a multiple linear programming model. The constriction of the model comprises three sectors:

- Selection of an appropriate planning horizon.
- Selection of the appropriate decision variables.
- Formulation of the cash management strategy itself.

The advantage of linear programming model is that it enables coordination of the optimal cash management strategy with the other operations of the firm such as production and with less restriction on working capital balances. Under the formulation of the model requires that the financial manager first specify an objective function and then specify a set of constrains. Orgler's objective function is to

minimize the horizon value of the net revenues from the cash budget over the entire planning period. Using the assumption that all revenue generated is immediately re-invested and that any cost is immediately financed, the objective function represents the value of the net income from the cash budget at the horizon.

This the objective function recognizes each operation of the firm that generates cash inflow or cash outflow as adding or subtracting profit opportunities for the firms cash management operations. In the objective function decision variables which cause inflows, such as payment of receivables, have positive co-efficient, while decision variables which generate cash outflows, such as interest on short- term borrowings have negative co-efficient. The purchase of marketable securities would, for example produce revenue and thus have a positive co-efficient white the sale of those securities would in out conversion cast and have a negative co-efficient the constraints of the model could be.

(i) Institutional constraints

(ii) Policy constraints

The institutional constraints are those imposed by external factors. For example bank requires compensative balance. Policy constraints are imposed on cash management by the firm itself. For instance, the financial manager may be prohibited from selling securities before maturity. An example of the linear programming model is as follows:

Objective function:  $\text{Max } P = a_1x_1 + a_2x_2$

Subject to constraints:

$B_1X_1 \leq \text{Production}$

$B_2X_2 \leq \text{Constraint}$

$C_1 X_1 + C_2 C_2 > \text{Current asses requirement constructs}$

$(x_1x_2, c_2+c_2, b_1b_2: \text{Non negative constraints})$

The main important feature of the model is that it allows the financial management to integrate cash management with production and other of the firm (khan and Jain, 1999).

Again Baumol added some clues about optimal cash Balance' at 1996. He said the

interest rates should not also influence significantly the magnitude of these cash holdings. These are all question of good management. Cash is kept not for its own sake but because it helps the consumer and the businessman.

From the above empirical studies, it is clear that different types of theorist and authors regarding in their related discipline, like as financial experts, management scientist, economic analyst & practicing business executives have played important role towards either developing theories or models or fact funding as well. Those studies have improved and enriched the available literature on the related area of cash management.

### **2.1.5 Cash Management Models**

In cash management model, it is assumed that the firm on average is growing and is a net user of cash. Marketable securities represent a buffer stocks between episodes of external financing, which is drawn as required periodically. Ordering cost is represented by the clerical and transactions cost of making transfers between the investment portfolio and the cash account. The holding cost is the interest foregone on cash balance held. Assuming that expenditure occurs evenly over time and that cash replenishments come in jump sums at periodic intervals, the optimal size of the cash transfer is formulated as follows:

$$C = \sqrt{\frac{2bT}{i}}$$

Where,

c= the optimal for the period of time involved.

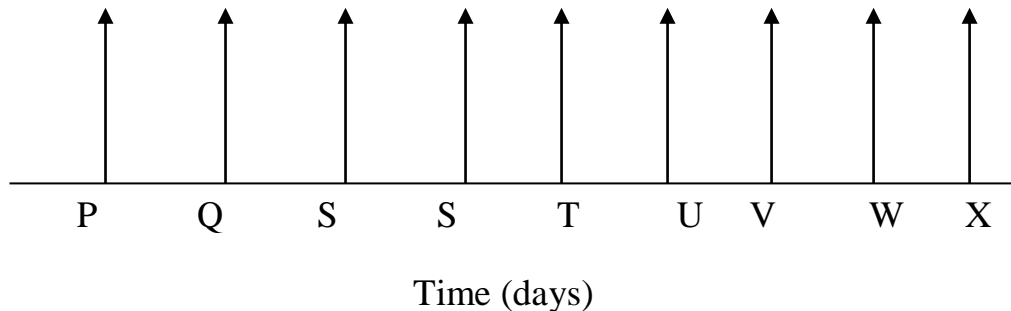
b= the cost of the transaction in the purchase or sale of marketable securities

i= the applicable interest rate on marketable securities.

### **Cash cycle**

They refer to the process by which cash is used to purchase material from which are produced goods, which are then sold to customers who later pay bills. Thus

opportunities to improve cash cycle help in best management of cash. The cash cycle involves several steps along the way as found flow from the firm accounts as shown as below.



(Source: Ezra Soloman and John J. Pringle: An introduction to financial Management)

P = Material order

Q= Material received

R= Payment

S= Cheque clearance

T= Good sold

U= Customer's mails payment

V= Payment received

X= Funds collected.

The financial needs of corporation is affected by the total time lag from point P to 'X' showing from the above cash cycle figure we are concerned with the time period involved in stages QRS and UVWX. It may be mentioned that a firm has no control over time involved between stage Q and R and similarly S and T and So on is determined by production company needs a certain period (i.e. weeks/months) to collect fund from beginning to ends of material ordered to have ultimate cash. Different shop has their different during period to go for further steps. In this way after going through all steps, the funds will be collected. In short, cash cycle plays a vital role in the business operation activities and such cycle can be repeated in time to time as circulating blood of human body. This is applicable only for direct selling of customer goods but in a manufacturing concern, the time lag may be still greater.

## 2.2 Review of Books

In this section an attempt has been made to review some books on financial management which deal with the management of cash.

The conceptual finding of their studies provides sound knowledge and guidance for the future studies on the field of management. Cash management in any enterprises and naturally on this study as well. They explain in the following the motives for holding cash specific advantage of adequate cash, synchronization of cash flows, cost of cash management, determining the minimum cash balance, compensating balances, overdraft system cash management, marketable securities substitute for cash criteria for selecting securities investment alternatives. Management of account receivable, credit policy, evaluating changes in credit policy.

The researcher also received some theoretical concept on the component of cash management from van Horne books. He has categorized the various component of cash management. These are the functions of cash management, managing collection transferring funds concentration banking lock box system and other procedures, control of cash disbursements payroll and dividend disbursement, zero balancing account, electronic fund transfer, balancing cash and marketable securities, compensating balance and fees, model for determining optimal cash inventory model stochastic model. A management a well known Indian professor I.M. Pandey has described some conceptual ingredients, which are based on his various research studies. We can learn lesson from it and also helpful for this study indeed. Fact of cash management, motives for holding cash, cash planning, cash forecasting the budgeting, managing the cash flows controlling disbursement, determining optimum cash balance.

From the book entitled financial management written by M.K. Khan and P.K. Jain Cash management is one of the key areas of working capital management. A part from the fact that it is the most liquid current assets, cash is the common denominator to which all current asset can be reduced because the other major liquid assets that is receivable and inventory get eventually converted in the cash. This underlines the significance of cash management.

While cash situation is unique, the one common thread that runs through all corporations in crisis is a lack of liquidity. Current assets which consists cash balance, inventory, account receivable and other short term assets during the operating cycle as expected not more one year must be efficiently utilized to match the inflow and outflow of cash. However it is expected fact that too much investment in current

assets are not derivable as there is a constant danger of losing the opportunity cost in the form of forgone earnings.

The relationship between sales growth and need to finance current assets is closed and direct. The growth of sales means generation of more funds provided such sale constitute cash sales and this enables corporations to be self, supporting without any need to tap additional funds for current assets. But if there are more credit sales, the size of account receivables raises that for the short period corporations have to manage funds either through effective credit policy to have quick collection or arranging a bank loan for short period. The amount of earning also decide how much to invest in current assets as more earning lead to more inflow of cash enabling corporations to meet cost of operation easily.

But decline in earning put burden of liquidity and additional investment in current assets. The highly developed money market and efficient banking services make early availability of credit at any time when it is needed and in such situation corporation can avoid maintenance of higher cash balance and also can easily discount accounts receivable. But lack of these services Compel Corporation to follow precautionary policy of holding more current assets. The turnover of corporations is equally important to be considered as quick turnover which means ability of corporation to have fast process of conversion makes burden of liquidity and thereby helping to undertake further production expansion, but prospect of business have much to do in the overall evaluation of current assets. During the peak seasons, corporation has to keep more stock of commodities readily available to meet increasing demand and it can generate cash quickly. However during to condition of recession, the current assets should be converted in to cash.

The Taxation policy and other subsequent developments that take place within a given cycle also affect management of current assets. In view of the consideration of the above factors, current assets management involves a common set of problem concerned with the size of investment required in those assets.

In this section of the review of thesis relating to cash management have been considered. In this regard the study on working capital management of Bansbari leather and shoes factory, the researcher suggested the factory to operate with setting

certain sales target and make regular inspection to find out the excess or deficit of current assets and to adopt suitable credit policy with responsible discount and should have appropriate cash balance and working capital.

Cash is the important aspect of working capital. Cash is the basic input needed to keep the business running on continuous basis so the cash should be managed efficiently in order to keep the firm sufficient liquid and to use excess cash in some profitable way. The firm should hold sufficient cash, neither more nor less. Cash shortage will disrupt the firm's operation, while excessive cash will simply remain idle, without contributing anything towards the firm's profitability. Thus major function of the financial manager is to maintain a sound cash position.

Corporate must adopt such a policy that makes optimum cash management possible for improving the efficiency of cash management effective method of collection and disbursement should be adopted. However in a developing country operation has given not much attention in assessing the time value of money so certain method the time value of money so certain method of efficient cash management practical by corporations is developed countries may not be viable in view of either the deficiency of knowledge or lack of consciousness among corporate managers of developing country to calculate the interest lost or fund lost if cash is not collected promptly.

Liquidity is the lifeblood a corporation and a want of cash is the only factor which may free it out of business. Cash flow in the corporation by direct cash sales of assets. It flows out in direct purchase and payment to creditors, wages and other costs. Cash also flows in the purchase of capital equipments. In the payment of cheques and interests on borrowing money and dividends to shareholders. The way corporation manage current assets has an important bearing on the overall liquidity position and failure of maintaining sufficient degree of liquidity may cause the interruption of regular operations besides making corporate manager unable to pay obligation in time. While each situation is unique, the one common thread that runs through all corporate in crises is a lack of liquidity.

In a type of firm the financial manager should not only attend towards the aspect of profitability but he should also turn towards ensuring the liquidity of the corporation. Since every business is constant debtors an enterprise borrows funds from financial

institution and purchase merchandise on credit, thereby is less obligation to the government. Thus every enterprises owns abilities unless the payment is made at the maturity of the particular debt the reputation of the firm is tarnished at worst the creditor may force the firm to terminate its business.

It was observed that the goal of working capital is to manage each of the firm current assets efficiently in order to maintain the firm's liquidity while not keeping any assets at to high level. Cash is most liquid assets if the common denominator al can be reduced because the major liquid assets i.e. receivable and inventories get eventually converted in to cash. There are three motives for holding cash, they, are: transaction motives, precautionary motives and speculative motives to take advantage for profitable business.

The cash balance of a firm is influenced by credit position of the firm states of firms receivable and investment nature of business enterprises. Management attitude towards risk and size of sales in relation to mixed asset. Besides there factors cash balance is also influenced by availability of short terms credit money market rate and variations in cash flow for effective management of cash, it is very much necessary that management should make every effort to speed up cash inflow and delay cash outflow. It is also not necessary that management should not fail to meet its obligations, while delaying the outflow of cash.

A cash budget shows the planned cash inflows outflows, and ending position by interim period for a specific time span most companies should develop both long-term and short term plans about their cash flows. The short term cash budget is included in the annual profit plan. A cash budget basically includes two parts

- (i) The planned cash receipt
- (ii) Planned cash disbursement.

Planning cash inflow and out flow gives the planned beginning the ending cash position for the budget period planning the cash inflows and out flows will include. Need for financing probable cash deficit or the need for investment planning to put excess cash to probable uses.

### **2.3 Review of Previous Research Works**

**Pradhan (1997)** has conducted a research topic *A study of cash management of salt trading corporation ltd* as partial fulfillment of the requirements for the degree of masters of business administration. The thesis was based on the secondary data of the company for the past six years and it analyzed the major aspects of cash management such as analysis of liquidity position, cash management system and account receivable through various financial ratio analyses.

#### **His major objectives:**

- To examine the cash management.
- Examine the liquidity position.
- To examine the credit policy system.
- Examine the use of cash balance prudently.
- Determine the structure and utilization of cash.

#### **His major findings:**

- Management has taken liberal credit policy to sales of goods. Hence the cash and bank balance of the study period is Minimum of account receivable.
- Salt Trading Corporation limited (STCL) could not make the best use of available cash balance prudently.
- The cash collection efficiency in this corporation is very low.
- Management of cash collection efficiency in this corporation is very low.
- Optimum cash balance not maintained. The cash & bank balance with respect to current assets has been in fluctuating trend. Similar is the cash with respect to the total assets.

#### **His major recommendations:**

- Maintain optimum cash balance.
- Efficient management of cash.
- Preparation of cash budget.
- Invest in marketable securities.
- Invest surplus cash in profitable opportunities.
- Design effective account receivables management.

- Preparation of monthly trail balance cash fund flow statements and financial reports.
- Adaptation of effective credit policy.

Some short coming has been identified in this thesis which is presented as below:

- Cash budget analysis has been missing. This analysis also holds particular significance for it assesses efficiency of a firm in speculating cash deficit and surplus in future.
- Analysis of cash flow statement has been found missing. This analysis is important because it analysis movement of cash, internal financing management and success or failure of planning.
- Acid test ration and current ratio has not been included in analysis liquidity position. These ratios have been considered the most effective tools for analyzing liquidity position of an enterprise.
- Inadequate use of financial and statistical tools.
- Profitability rates have not been worked out and thus major portion of the study, i.e. analysis of relation between liquidity with profitability has been found missing. This analysis holds significance because of conflicting nature of liquidity and profitability... If firm does not have adequate working capital, i.e. it does not invest sufficient funds in current assets, it may become illiquid and consequently may not have the ability to meet is current obligations and thus invest the risk of bankrupted. If the current assets are too large, the profitability is adverts affected. The key strategies and considerations in ensuring a tradeoff between profitability and liquidity is one major dimension of working capital (Khan and Jain 1986:7-8).

**Suinju** (2008), has conducted a research topic *A Study on Cash Management in Public Manufacturing Enterprises of Nepal*, A case study of Royal Drugs Ltd.

**His major objectives:**

- To examine and critically analyses the cash mgmt practices in RDL.
- To examine the liquidity position of Royal Drugs Ltd.
- To examine the cash flow statement of Royal Drugs Ltd.
- To analyze the cash budgeting practice of Royal Drugs Ltd.

- To recommend viable suggestions to cope up with cash management short coming in Royal Drugs Ltd etc.

**His major findings:**

- RDL doesn't have any definite policy reading how much of cash balance to hold each fiscal year.
- RDL has not been forecasting cash balance taking in to consideration on the sales volume.
- RDL fails to maintain on adequate proportion of cash in its current assets.
- Cross analysis related that RDL fails to collect receivables from its sundry debtors timely.
- RDL has not been precisely meeting its current liabilities indicate that for some fees such cash and bank balance held is excessively high whereas for some other FYS such cash and bank balance is extremely low.
- Overall the liquidity position of the firm has been found moderately dissatisfactory.
- Overall clearly cash inflow and out flow in R.D.L is not in properly managed. Surplus cash has not been properly employed to earn returns by investing in short term investment opportunities.

**His major recommendations:**

- It will be suggested to improve overall liquidity position.
- Cash balance taking in to consideration on the sales volume.
- Improve the cash balance holding period.
- It suggested that the managed cash inflow and outflow in R.D.L properly.

**Kunwar** (2008) has conducted a research topic *A study on working capital management of pharmaceutical industry of Nepal with special reference to Royal Drugs Ltd.* Much of the findings were computed on the basis of financial and statistical ratio analysis of secondary data such as profit and loss account and balance sheet. Whereas, concerning primary data, a questionnaire was distributed to extract qualitative information. Overall, through the study was of its own kind, it was not at all focused on the cash management aspect of the organization.

**Bhattarai (2009)**, *A study of financial performance analysis of NMB Bank Limited* as a partial fulfillment of the requirements for the degree of business studies. The research reports were based on secondary data.

**His major objectives:**

- To examine the financial statement of the bank.
- To examine the liquidity position of the bank.
- To examine the profitability situation of the bank.
- To examine the value of total deposit, loan and advance, net profit and loan loss provision of the bank.
- To provide corrective suggestions and possible guidelines to improve the performance of NMB based on the major findings of the analysis.

**His major findings:**

- Liquidity ratios as seen able of the bank to meet its current obligations out of its short term resources.
- The degree of efficiency in assets is seen well.
- Bank is utilizing fixed deposit efficiently time to time.
- The efficiency of the bank is declining every year which will properly drag the institution towards boom.
- EPS ratio has been seen increase and decreased. The EPS ratio has comparatively fluctuate but the last year it has increased.

**His major recommendations:**

- Liquidity ratios measure ability of the bank to meet its current obligations out of its short term resources.
- Analysis of activity ratio reveals that bank has been able to utilize its resource properly.
- The equity ratio analysis shows the efficiency of the bank has improved because at the last year the ratio has increased. The return on total deposit ratio is satisfactory.
- The liquidity position is better of the view point of liquidity.
- The bank faces the more competition thus the bank's profitability position is affected to its competition.
- The bank should try to collect more non-interest bearing deposits.

- The bank should add better training to staff and research department, so that they should be able to study different aspect of management and supply practical suggestion for the development and operation of bank.

## **2.4 Research Gap**

The review of above relevant literature has contributed to enhance the fundamental understanding and knowledge, which is required to make study meaningful and purposive. There has been lots of article published related to cash management of Nepalese enterprises. There are various researches conducted on cash management and policy of different enterprises. While reviewing other studies on cash management analysis related to similar corporation, the researcher found that the ratios are not properly analyzed, actually the ratios indicate are not clear. So, this study has tried to analyze the different ratios in order to make fruitful analysis on the cash management of Dairy Development Corporations.

Some short coming has been identified in this research which is presented as below:

- Cash flow statement has been found missing. This analysis is important because it analysis movement of cash, internal financing management and success or failure of planning.
- Inadequate use of financial and statistical tools.
- Acid test ratio and current ratio has not been included in analysis liquidity position. These ratios have been considered the most effective tools for analyzing liquidity position of an enterprise.
- We found previous researcher has not prepared ratio related cash flow statement.

There are very limited studies conducted on accounts cash management in the context of Nepal. These few studies conducted earlier have now become old and not given the real picture of recent practices. Many studies and developed theories after completing those early studies in Nepal.

The previous research works are giving such recommendations which are not appropriate in the present situation because present is the very competitive and broad.

This study will be fruitful to those interested person, parties, scholars, professor, students, businessman and government for academically as well as policy perspective. Hope this study will help to others in future in the related field.

# **CHAPTER THREE**

## **RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter highlights the role and relevance of research in cash management. There are several reasons. Professional managers and business studies should be knowledgeable about research and research methods. Research is a part of organizational reality that helps managers to continuously improve. This chapter will therefore deal with the cash management research methods and process.

Stated simply, research means to search again. We study the social problem again and again to find out something more about the phenomenon. The first look may not always be adequate. It may be prone to error. Therefore, we look into the phenomena again and again and study the problem differently and again is known as research. This research is searching the answers to questions.

Research is a systematic and organized effort to investigate specific problem that needs a solution. This process of investigation involves a series of well thought out activities of gathering, recording, analyzing and interpreting the data with the purpose of finding answers to the problem. Thus, the entire process by which we attempt to solve problems is called research. There are different management research methods.

- (i) Policy research
- (ii) Managerial research
- (iii) Action research
- (iv) Evaluation research

Research methodology is a systematic way to solve the research problems and it may be understood as a science of studying how research is done scientifically (Kothari 2001:10) Research methodology describes the method and process applied in the entire aspects of the study or in this chapter focus is made on Research design, the

population and sample, nature and sources of data and processing procedure tools and techniques which can be use to analyze and describe the data.

### **3.2 Research Design**

Research design is a plan, structure and the strategy of investigation conceived so as to obtain answers to research questions and to control variance (Kerlinger, 2000) like that research design is the arrangement of conditions for collection a analysis of data in a manner that aims to combine relevance to the research purpose with economy procedure (Selltize, Marie and At. el 1962). There are two purposes of the research design, the classical research design, and the elements that need to be included in the research design for a thesis project. The last section of this chapter discusses the collection of data. This is done by discussing four different techniques for collection data, the application of each of these techniques in data collection and their limitations.

The data is selected based upon mainly the availability of information. To conduct the study descriptive vs. analytical approach has been adopted. The aim of this approach is conceptualize of problems and analyze the relationship among cash management and related variance.

At present there are total of 38 public enterprises in Nepal (according to economy survey 2005). DDC is one of them. Now public enterprises are going to privatize day by day most public enterprises are running in loss due to weak management policy, all of them DDC also running in loss. This researcher is going to write thesis about the cash management system of DDC.

It is most likely to represent all other public manufacturing enterprise, particularly the dairy development corporation of the country. However, this is a case study and thus the findings could not be extensively generalized to all other public manufacturing enterprises.

### **3.3 Nature and Sources of Data**

Basically this study is based upon the secondary nature. The data are collected from the following scores.

- Trial Balance
- Profit and loss account
- Balance sheet

The company does not published last two years data so the researcher used the data of year 2060 to 2065. The balance sheet and profit and loss account were obtained for the five years (i.e. fiscal year 2060/061 to 2064/065). To attain the objectives of the study both primary and secondary data have been collected through interview, observation, contacts visits and discussions with account, chief executive, and other related persons and annual reports etc.

### **3.4 Financial and Statistical Tools for Analysis of Data**

The main purpose of analyzing the data is to change it from an understandable presentation. Analysis of data explains methods of organizing data by tabulation and then placing that data in presentable form by using figures and tables. The methods of analysis employed in this study include.

- (i) Ratio analysis
- (ii) Regression analysis
- (iii) Statistical tools
- (iv) Cash flow analysis

#### **i) Ratio analysis**

Ratio analysis is a powerful tool of financial analysis. A ratio is defined as "the indicated quotient of two mathematical expressions" and as the relationship between two or more things. (I.M. Pandey, 1999). In this study various ratios are observed which are related to cash management. There are

##### **(1) Current ratio**

The current ratio is calculated by dividing current assets by current liabilities;

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

## **(2) Quick ratio**

The quick Ratio is found out by dividing the total of the quick assets by total current liabilities.

$$\text{Quick Ratio} = \frac{\text{Current asset} - \text{inventories}}{\text{Current liabilities}}$$

## **(3) Cash and bank balance to current liabilities ratio**

It indicates how much cash is available to pay current obligation it is stated as:

$$CCL = \frac{\text{Cash and Bank Balance}}{\text{Current Liabilities}}$$

The ratio shows whether the level of cash maintained by the organization is greater or less than the current liabilities.

## **(4) Cash to total assets (CTA)**

This ratio shows what percentage of total assets is in the form of cash which can be calculated by using this formula.

$$\text{Cash Total Assets} = \frac{\text{Cash}}{\text{Total Assets}}$$

## **(5) Cash and bank balance to current assets**

It states what percentage of current assets inform of cash that is

$$\text{Cash Current Assets} = \frac{\text{Cash}}{\text{Current Assets}}$$

Result higher the ratio, there is more liquidity

## **(6) Cash turnover ratio**

Cash Turnover Ratio shows the number of time the average cash balance is turnover;

$$\text{Cash Turnover ratio} = \frac{\text{Total Assets}}{\text{Cash in hand and bank}}$$

### **(7) Cash to quick assets**

Cash to Quick asset states what portion of quick assets in the form of cash this can be calculated as under

$$\text{Cash to quick assets} = \frac{\text{Cash}}{\text{Quick Assets}}$$

Result higher the ratio indicates higher position of liquid or cash

### **(8) Average collection period (ACP)**

In fact, average collection period is not exactly ratio. But it is conversion time between receivable to cash which is:

$$\text{ACP} = \frac{\text{Receivables}}{\text{Total sales in credit}} \times \text{Days in a year}$$

Result the declining from indicate efficiency of cash management

### **(9) Cash conversion period**

It is conversion time for raw materials to sales, credit payable and receivable collection it is calculated as:

$$\text{CCP} = \frac{\text{Sales}}{\text{Cash}} \times 365$$

### **(10) Net profit margin ratio**

This ratio is computed to analyze profitability position of a firm. Higher ratio indicates high profitability and vice versa. In simple terms, this ratio gives the percent of profit or loss with respect to its sales.

$$\text{Net profit margin ratio} = \frac{\text{Net profit after tax}}{\text{Sales}}$$

### **(11) Return on working capital ratio**

This is yet another ratio to examine profitability of a firm. The ratio is aimed at analyzing the proportion of current assets employed to earn the profit amount, higher

ratio is favorable and vice versa. This ratio is calculated by using the following Formulae:

$$\text{Return on working capital ratio} = \frac{\text{Net profit after tax}}{\text{Current assets}}$$

### **(12) Net profit after tax to quick assets ratio**

This ratio also examines profitability of a firm analyses proportion of quick assets (i.e. current assets - inventory) in earning the profit amount.

It is calculated by using the formula below:

$$\text{Net profit after tax to quick assets ratio} = \frac{\text{Net profit after tax}}{\text{Quick assets}}$$

There are several ratios, calculated from the accounting data can be grouped into various classes according to the financial activities or function to be evaluated. As stated earlier, the parties which generally undertake financial analysis are short and long - term or creditor owners and management short term creditor's main interest is in the liquidity position or the short term solvency of the firm long term creditors on the other hand are more interested in the long term solvency and profitability of the firm. Similarly, owners concentrate on firm's profitability and the analysis of the firm's financial conditions. Management is interest in evaluating every aspect of the firm's performance. They have to protect the interest of all parties and see that the firm grows profitably. In a view of requirement of various users of ratio, we may classify them in to the following four important categories.

- (1) Liquidity Ratio
- (2) Leverage Ratio
- (3) Activity Ratio
- (4) Profitability Ratio

Mainly the related ratios with cash management have been used to analyze the financial condition of the firm which is mentioned above.

## ii) Statistical Tools

Following statistical tools & methods have been used to analyze the data:

### 1. The least square method

The least square method is one of the time series analyzes which gives on the time value of money which forecasts future events of a variable over a regular interval of time based on the past trend of the variable. In this method, a trend line,  $Y_c = a + bx$ , is fitted to the given data such that.

$$\Sigma y - \gamma c = 0 \text{ / Or } \Sigma (y - \gamma c)^2 \text{ is least.}$$

Where, Y = Actual value of Y

$Y_c$  = Computed values of Y

a= Constant which is the computed Y – value when X=0

b= Constraint which is the change in Y corresponding to the change in X by one unit and X = Time in case of time series analysis.

The value of ‘a’ and ‘b’ can be found out of using following normal equations:

$$\Sigma Y = Na + b\Sigma X$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2$$

Where, N is the number of years or any period for which the data are given.

The normal equations are obtained by using tow conditions and some mathematical manipulations.

To simplify the calculation of mid point in time is taken as origin, so that  $\Sigma X = 0$  .

Then, the above two normal equation will be reduced to

$$X - \Sigma Y = Na$$

$$\therefore a = \frac{\Sigma Y}{N}$$

$$\Sigma XY = b\Sigma X^2$$

$$\therefore b = \frac{\Sigma XY}{\Sigma X^2}$$

## 2. Standard Deviation (S.D)

Standard Deviation measures scatter spread or variation and provide idea of homogeneity or heterogeneity of the distribution. Out of various method of studying dispersion such as Range, integrative range and quartile deviation, mean deviation, standard deviation and variance, Lorenz Curve, the most popular method is the standard deviation (S.D) and variance method standard Deviation is represented by the symbol sigma i.e.  $\sigma$  and is calculated by applying following formula.

$$\sigma = \sqrt{\frac{\Sigma d^2}{N}}$$

Where,  $x = X - \bar{X}$

N= Number of observation, or time period

$\bar{X}$  = Mean actual

It can also be computed as follows:

$$\sigma = \sqrt{\frac{\Sigma d^2}{N} - \left(\frac{\Sigma d}{N}\right)^2}$$

Where,  $d = X - a$  &  $a =$  Assumed mean

In this dissertation or thesis work while computing standard deviations, the above formula has been employed only once manually. For rest of the computations, Microsoft excel work sell too has been employed directly from computer. In conjunction with standard deviation, coefficient of variance (CV) is also computed which is the relative measure based on standard deviation and is defined as the ratio of the standard deviation to the mean expressed in percent.

Coefficient of variation (CV) is computed by using following formula:

$$CV = \frac{\sigma}{X} \times 100\%$$

The ratio  $\frac{\sigma}{X}$  is called the coefficient of standard deviation. CV has no units.

Distribution with lower C.V is said to less variable (or more consistent or more uniformity) and the distribution with higher C.V is indicative of more variable or less consistent or less uniformity.

The limitation of using C.V is that when the distributions beings compared have negative observation it provide unreliable way to compare variability's across data sets.

### **3. Lorenz curve**

Lorenz curve is a graphic method studying dispersion in a distribution. Dr Lorenz introduced for the first time this method of measuring in the distribution of income and wealth between different countries for different time periods. Lorenz curve is obtained by plotting the cumulative percents of variables values e.g. wealth profit etc. on y-axis and the cumulative percents of the correspond frequencies on x-axis.

### **iii) Regression analysis and regression line**

In correlation analysis, the closeness of relationship between two variables is established. In regression analysis is the statistical method for determine the nature of relationship that Exist among two or more variables and then using that relationship to make estimates or predictions. The relationship between two variables, more accurate estimated value.

The unknown variable is to estimated is called dependent variable and the know variable is called in dependent variable (explained variable and explanatory variable).

Noteworthy here is that correlation analysis indicates to what degree the variables are related that the regression analysis indicates how the variables are related.

Regression line of X variable on y variable is given by:

$$X - \bar{X} = r \frac{\sigma_x}{\sigma_y} (y - \bar{y})$$

Where,  $\bar{X}$  = mean of X variable

$\bar{Y}$  = mean of y variable

$\sigma_x$  = Standard deviation of X variable

$\sigma_y$  = Standard deviation of y variable

r = Karl Pearson's coefficient of correlation

Likewise, the regression line of y variable y on X variable is given by

$$Y - \bar{Y} = r \frac{\sigma_y}{\sigma_x} (X - \bar{X})$$

### **Correlation coefficient**

In the word of A.M Tuttle, "Correlation is an analysis of the co-variation between two or more variables."

According to Craxton and Cowden, "When the relationship of a quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing in a brief formula is known as correlation."

W.A. Neiswanger defined as, "Correlation analysis contributes to the understanding of economic behavior aids in locating the critically important variables on which others depends, may reveal to the economist the connection by which disturbances spread and suggest to him the paths through which establishing forces may become effective."

"The effect of correlation is to reduce the range of uncertainty of our prediction." In order to test the significance of the relationship in between tow variables during the period of the study, Karl Pearson's correlation coefficient (r) is used.

### **Karl Pearson's correlation coefficient (r)**

Karl Pearson's correlation coefficient know as Pearson an correlation coefficient between two variables (series) x and y, usually denoted by r (x, y) or rxy or simply r is

numerical measure of liner relationship between them and is defined as the ratio of the covariance between x and y, written as covariance (x, y) to the product of the standard deviations of x and y.

Karl Pearson's correlation coefficient (r) is calculated as

$$r = \frac{\sum d \times \sum dy}{N} - \frac{\sum d \times \sum dy}{N}$$

$$\sqrt{\left( \sum dx^2 - \frac{(\sum dx)^2}{N} \right) \left( \sum dy^2 - \frac{(\sum dy)^2}{N} \right)}$$

Where,

X = the first variable

Y = the next variable

N = No, of years (observations)

dx = deviation from assumed mean of first variable

dy = deviation from assumed mean of first variable

dy = deviation from assumed mean of second variable

Probable error: (P.E)

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

If r is less than its P.E, it is not at all significant if r vs more than P.E there is correlation; if r is greater than 6 than it PE and greater than + 0.5 than it is considered significant.

The all above ratio and significant test are done in the next chapter.

If two variable X and Y were change in one accompanies the said to be correlated. Such correlations are said to be positively correlated if increase in x result increase in y and decrease in x follows decrease in y – like wise, such correlations are said to be

negatively correlated if increase in y results decrease in y and decrease in x follows increase in y.

Correlation analysis refers to the statistical technique, which measures the degree of relationship or association between the variables. To put it differently, it helps in analyzing the co-variation of two or more variables. It is to be noted that a high degree of correlation between two variables doesn't necessarily imply causation while causation always implies correlation out of several methods of computing correlation Karl Pearson's coefficient of correlation is one of the best and popular methods. Karl Pearson's coefficient of correlation (r) measures the degree of association between the two variables noted x and y variables given by

$$r = \frac{\Sigma UV}{\sqrt{\Sigma U^2 \Sigma V^2}}$$

Where,

r = Karl parsons coefficient of correlation

$$U = X - \bar{X}$$

$$V = Y - \bar{Y}$$

$$\bar{Y} = \frac{\Sigma Y}{N}$$

N= Number of time period or years.

However, in this work, while computing correlation coefficient, the above formula has been used only one manually. For rest of the computations Microsoft excels worksheet tool has been employed directly from the computer. The value of r lies between +1 to -1.

Value of + 1 refers to highly positive correlation between the variables i.e. one variable is directly proportional to another, or in other words, increases in one variable lead to decrease in another variable and vice- versa.

Likewise, value is nearing to zero' o refers to existence of no correlation between the variables, i.e. increase or decrease in one variable result no impact on another variable and vice – versa. Together with Karl Pearson's coefficient of correlation, probable error (PE) of the correlation coefficient is also computed. This probable error of the correlation coefficient is the basis for the interpretation of its value it is given by:

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

Where,

P.E. = Probable error of correlation coefficient

N = Number of pair of observations

r = correlation coefficient

When  $r < P.E$ , the value of r is not statistically significant at all, i.e. there is no evidence of correlation.

When,  $r > 6 (PE)$ , the value of r is certain.

When,  $P.E \leq r < 6 (P.E)$  the value of r is inconclusive as to statistically significant/insignificant correlation.

The upper and lower limits which the correlation coefficient is expected to lie are given by

$r + P.E$  upper limit

$r - P.E$  lower limit respectively.

But when 'r' is negative value i.e.  $-1 \leq r < 0$  in order to compare r with P.E which is always in positive value, r modulus /r/ is calculated /r/ is nothing but it is the positive value of /r/ itself.

For instance, if r is calculated as

$r = - 0.5$  then

$(r) = 0.5$

This positive value of is compared with P.E and 6 (P.E) to derive to a conclusion of practically significant/insignificant correlation.

#### **iv) Cash flow analysis**

Cash flows explain the change in cash position from one balance sheet date to next balance sheet date. Thus it provides information about the inflow and outflow of cash and cash equivalent of a firm in an accounting period. Cash and cash equivalent include currency, coins and highly liquid short-term investment etc.

The objective of preparing a cash flow statement is to understand the relationship between accrual accounting events and their cash impact. Another important goal is to classify cash flows among operating, financing and investing activities as required by accounting standards. The main objectives of a statement of cash flows are to convey information about the cash receipts and cash payments of a firm during the accounting period.

### **3.5 Define Key Terms**

It is better to define some key terms to avoiding misunderstanding. Annual reports of general audit of Government and securities board punish its own format of financial data. They have more or less uniformity to record these financial records. Here these key terms are briefly described.

#### **Sales**

Sales includes only trading sales, not of sales of assets.

#### **Current assets**

Current Assets include cash in hand or bank receivable, inventories and miscellaneous current assets.

#### **Current liabilities**

This term includes accounting reserve and provision created for specific purpose that ignore general reserve and reserve for contingencies.

**Equity**

Equity capital includes, common share, equity share and reserve and surplus.

**Capital**

This term includes equity item plus long term debt.

In to the cash, cash in hand, cash at bank and cash in transit are included,

**Working capital**

The term working capital here refers to the gross working capital it induces the total value of current assets which are discussed on point one net working capital:

**Fixed assets**

Consist of the assets of the company like site development, land, building, plant and machinery furniture and fixture, water supply systems office equipments, computer, vehicles etc.

**Total assets**

In includes the total of current assets, net fixed assets and miscellaneous assets. This includes the capital expenditure in progress.

**Receivables**

It includes the sales debtors & other debtors.

**Inventory**

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

**Net worth**

It includes the pain up capital general reserve, reserve and retained earnings of the capital

# **CHAPTER FOUR**

## **DATA PRESENTATION AND ANALYSIS**

### **4.1 Introduction**

For the achievement of the pre-mentioned objective about the cash management of DDC, this study is starting in this chapter the analysis for the study are current assets composition, investment in current assets, current assets relationship with fixed assets, turnover position, liquidity position and profitability position are done.

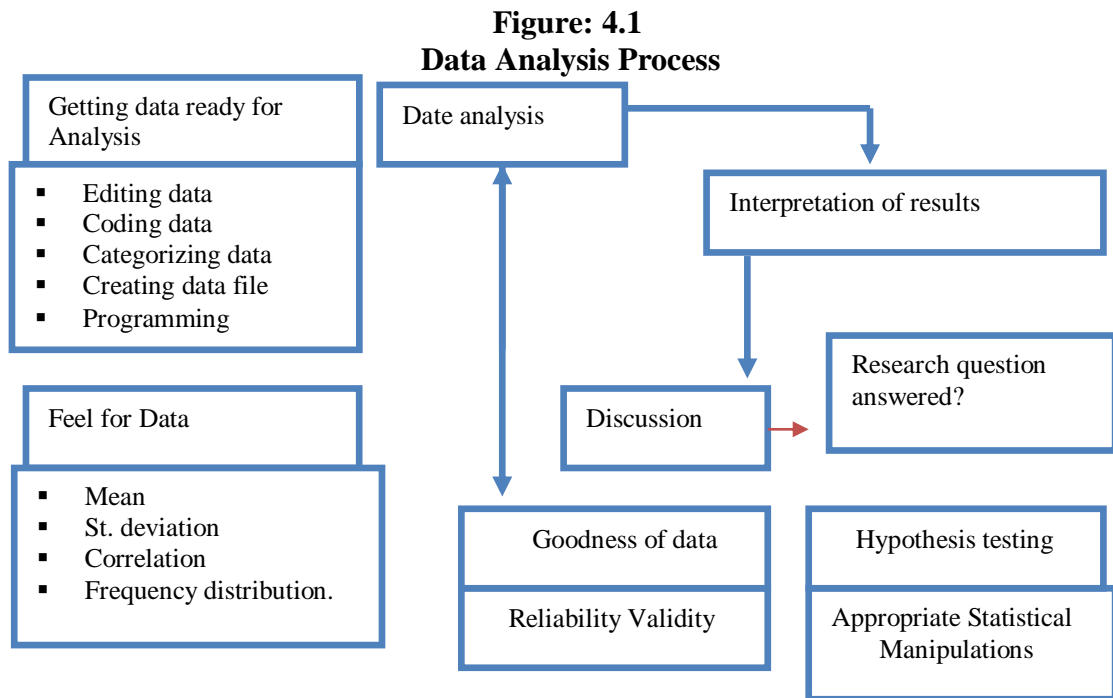
The chapter first explains methods of organizing data by tabulation and then placing that data in presentable form by using figures and tables. To meet the aforesaid objectives, in this chapter following financial and statistical tools level has been used. Following is the general picture of this chapter;

It is true that cash is an integral part of working capital management. The effectiveness of cash management practices and policies has both direct and indirect bearing on various aspects of liquid solvency and the management of current assets and current liabilities these tools are indicator of short term as well as long term state of financial health. Attempt has therefore been made to appraise the effectiveness of cash management by using the technique of ratio analysis on the basis of accounting data by keeping view in dairy development corporation and according to available data from dairy development corporation this researcher tries to analyze about cash management system of this organization.

### **4.2 Presentation of Data**

The presentation of data is the basic organization and classification of the data for analysis. After data collection is completed the data will be in what researchers call "The Raw Form" the data will still be on questionnaires, data collection forms, and note cards. It is necessary to arrange the data so that is makes some note cards. Different types of data require different methods of summary and presentation. There are a number of methods which can be used to simplify the data. The easiest way to understand data is by examining it in charts, graphs and tables. But even before one

can arrange data in tables, it is necessary to rearrange the raw data. The data analysis process is shown in the following figure:



A skill building approach Singapore: John Wiley P. 275

#### 4.2.1 Position of Current Assets

In order to operate smoothly the business organization, different kinds of assets are needed such as fixed assets, current assets, tangible and intangible assets. Basically, current assets are the main parts which are required to run day to day business activities and the total of which is known as working capital as per the gross concept. Its position has become needful to study. Business organization requires some amount of working capital and its requirement different according to the size of the organization.

A company needs cash to purchase raw materials pay expenses it is because of not perfect matching between cash inflow and outflow. Cash may also be operated to meet the future expenses. The stock of raw materials is kept in order to ensure smooth production and to protect the risk of non-availability of raw materials. Cash is needed to meet the obligation. Basically, any business organization aims to maximize return, in order to accomplish this target the business organization should earn sufficient return for its operations.

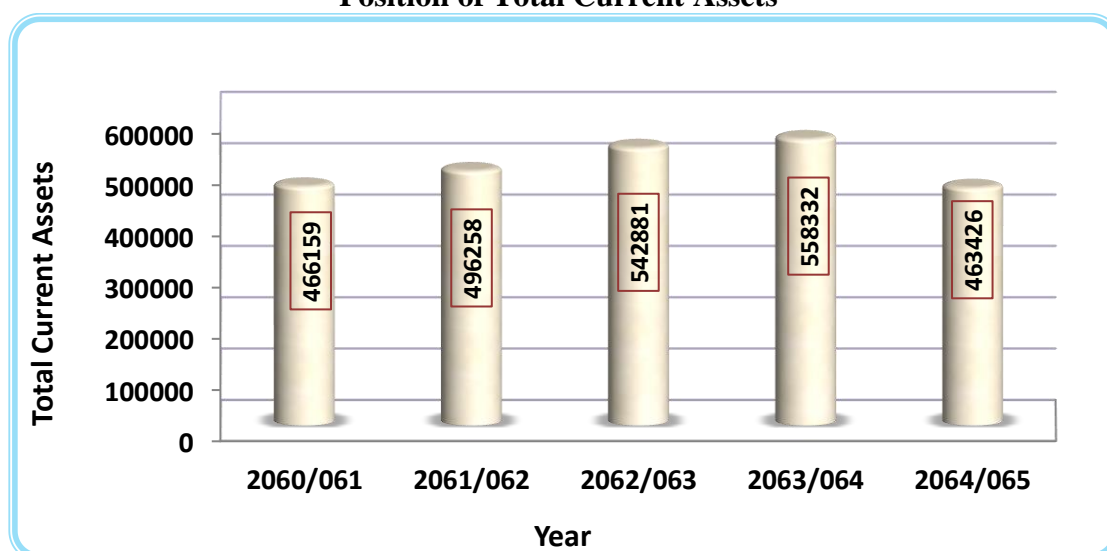
**Table: 4.1**  
**Composition of Current Assets**

Year	Cash & Bank	Sunday Debtors	Inventory	Other C.A	Total C.A
2060/061	192744	104195	45188	124027	466159
2061/062	300468	90961	41184	63648	496261
2062/063	273990	98145	98249	70951	542881
2063/064	301441	88098	93793	75000	558332
2064/065	229159	111076	58190	65000	463426
<b>Total</b>	1297802	492475	336604	398626	2527059
<b>Average</b>	<b>259560</b>	<b>98495</b>	<b>67320.8</b>	<b>79725.2</b>	<b>505411.8</b>

**Sources:** Balance sheet of DDC for the relevant year

The table 4.1 represents the current assets position of dairy development corporation. The table represents the investment pattern of DDC in current assets and their fluctuation in years as per than overall other CA items. The table shows in the following figure.

**Figure: 4.2**  
**Position of Total Current Assets**



Given figure depicts that the total current assets position of the DDC. The current asset has raised 2060/061 to 063/064 and the current asset has decreased on 2064/065.

The efficient and proper management of current assets is necessary for completeness part of overall financial management and has the greater impact on maximization of owner's capital in this context. It is necessary to have proper analysis for current assets management. The proper analysis of current assets of concern affects the nature

of performance and operation of its management. Therefore, the overall current assets are firstly analyzed.

#### 4.2.2 Analysis of Cash and Bank Balance

Management of cash plays on significant role in current assets of DDC. The total cash includes cash in hand, cash at bank and cash in transit. His chapter shows the cash position of the company during the period under study.

Only by giving focus on cash & bank balance, the analysis of cash and bank balance has been presented in the following Table.

**Table: 4.2**  
**Analysis of Cash and Bank Balance** in thousands

Fiscal year	Cash and bank balance	Increase / decrease	
		In Rs.	In %
2060/061	192744	-	-
2061/062	300467	107723	0.36
2062/063	273990	-26477	-0.10
2063/064	301440	27450	0.09
2064/065	229159	-72281	-0.32

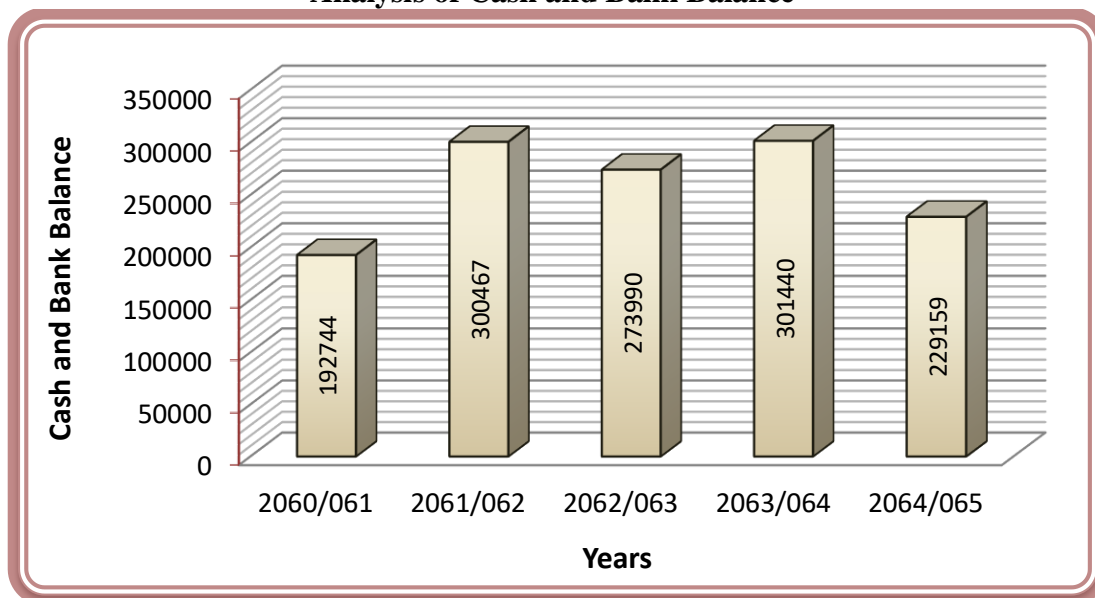
**Sources:** Balance sheet of DDC for the relevant year

The cash holding of the corporation shows increasing trend as it increased by 0.36% in 2061/062 as compared to 2060/061, and in 2062/063 declined by 10 % as compared to cash balance of 2061/062. But having strong change, in fact, this visualizes that the corporation could not make best use of these available cash balance prudently. There are increase of cash balance up to -10 % from 0.09 % in the year 062/063 and 063/064 and then after the cash balance is also decreasing position. The whole these figures shows no any definite policy of cash management while in some years it has negligible cash balances while in other years it has excessive maintained of cash balance. Moreover the corporation has not planned cash inflow and out flow forecasts. It is of crucial importance for the corporation to keep careful watch over the cash movements of determine how cash throw offs become available and also to investigate the opportunities for the use of cash.

Cash turnover ratio represents how quickly the cash is received from its sale be formulates to find out. Higher turnover is the signal of good liquidity and vice versa.

This shows that cash turnover is power on this corporation. From the above calculation it is observed that the cash collection efficiency in DDC is very loose. Following figure can present the variations in cash balance of dairy development corporation by annual basis.

**Figure: 4.3**  
**Analysis of Cash and Bank Balance**



**A) Analysis of Dispersion in Cash and Bank Balance**

Standard deviation and coefficient of variation (C.V) has been calculated by using following table.

**Table: 4.3**  
**Computation of standard deviation in cash and bank balance** in thousand

F.Y	Cash & Bank balance (x)	X= X - $\bar{x}$	X <sup>2</sup>
2060/061	192744	(66816)	4464377856
2061/062	300467	40907	1673382649
2062/063	273990	14430	208224900
2063/064	301440	41880	1753934400
2064/065	229159	(30401)	924220801
<b>N = 5</b>	<b>1297800</b>		<b><math>\Sigma X^2 = 9024140606</math></b>

**Sources:** Balance sheet of DDC for the relevant year

$$\text{Mean } \left( \bar{x} \right) = \frac{\Sigma X}{N} = \frac{1297800}{5} = 259560$$

Standard Deviation or variance

$$\begin{aligned}(\sigma) &= \sqrt{\frac{\sum x^2}{N}} - \sqrt{\frac{\sum(x - \bar{x})^2}{N}} \\ &= \sqrt{\frac{9024140606}{5}} \\ &= \text{Rs.}42483.27 \text{ Thousand}\end{aligned}$$

Measures of dispersion in cash and bank balance of DDC shows that DDC has been haphazardly holding cash & bank balance without having speculation. The cash and bank balance held by DDC are sometimes so high and sometimes so low computed standard deviation has been found Rs. 42483.27 Thousand which indicates there is no normal condition of uniformity in holding cash balance in each fiscal year.

Coefficient of variation (CV) also can be computed further test whether the uniformity or homogeneity of cash balance is poor good or excellent or not.

Coefficient of variation (C.V) can be computed by using formula.

$$\begin{aligned}CV &= \frac{\sigma}{\bar{X}} \times 100 \\ &= \frac{42483.27}{259560} \times 100 \\ &= 16.37 \% \text{ i.e.}\end{aligned}$$

Coefficient of Variation 16.37 % or 0.1637

Lower value of coefficient of variation shows the favorable condition or lower C.V indicates higher consistency or higher homogeneity or highly stable cash balances. But the higher value of coefficient of variation indicates just opposite situation i.e. lower homogeneity or lower stable cash and bank balance.

## **B) Lorenz Curve Analysis of Cash and Bank Balance**

Lorenz curve is graphic method of studying measure of dispersion in a normal distribution. This method is used to measure in equalities in the distribution of income and wealth between different yearly other basis.

**Table: 4.4**  
**Calculation of cumulative percentage**

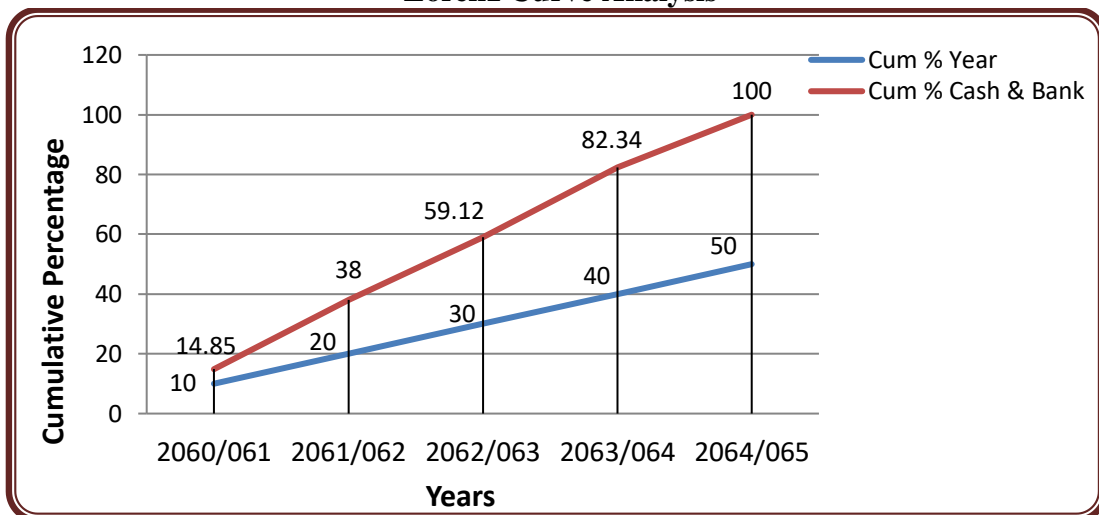
in thousand

F.Y	Cum Year	Cum % Year	Cash & bank Balance	Cum. Cash Bank Balance	Cum % Cash & Bank
2060/061	1	10	192744	192744	14.85
2061/062	2	20	300467	493211	38
2062/063	3	30	273990	767201	59.12
2063/064	4	40	301440	1068641	82.34
2064/065	5	50	229159	1297800	100

**Sources:** Balance sheet of DDC for the relevant year

Lorenz curve is a graphic system of finding dispersion. The variability of cash and bank balance can easily be computed on the basis of above cumulative table Lorenz curve has been drawn as following ways.

**Figure: 4.4**  
**Lorenz Curve Analysis**



The distance of the curve of cumulated percentages from the line of equal distribution indicates the measure of variability of distribution of cash and balance, points of the curve (i.e. cash variability curve) lying approximately near to the line of equal distribution indicating minutely variability in distribution of cash i.e. is a small percentage of dispersion in cash and bank balance and vice versa.

### C) Percentage of Cash and Bank Balance to Current Assets

Cash is one of the most liquid elements of the working capital. It plays a vital role to achieve effective management of working capital in all business organization whether

they are manufacturing or non manufacturing. The business organization needs cash for day to day operation smoothly of the concern. The main reasons for holding the cash is for transaction motive, precautionary motive, and speculative motive, so to meet the daily business requirement such as payment of bills purchase of raw materials, payment of debt the cash balance has to be maintained. The table presented below shows the proportion of cash to current assets.

**Table: 4.5**  
**Analysis of Cash and Bank Balance to Current Assets** in thousand

Year	Cash and Bank	Current Assets	Ratio %	% Change
<b>2060/061</b>	192744	466154	41.35	-
<b>2061/062</b>	300467	496261	60.55	19.2
<b>2062/063</b>	273990	541335	50.61	9.94
<b>2063/064</b>	301440	558332	53.99	3.38
<b>2064/065</b>	229159	463426	49.45	4.54
<b>Total</b>	1297800	2525508		
<b>Average</b>	<b>259560</b>	<b>505101.6</b>	<b>51.19</b>	

**Sources:** Balance sheet of DDC for the relevant year

$$\% \text{ of cash \& bank on C.A} = \frac{\text{Cash and Bank}}{\text{Total Current Assets}} \times 100$$

The table reveals that the cash and bank balance with respect to current assets has increasing and decreasing ratios both. In year 2060/61 is 41.35 % which is lowest and highest in the F.Y 061/62 that is 60.55 % on average. The cash hold by the company in the fiscal year 2060/61 is Rs. 192744 thousand and it is 41.35 % of its current assets some as cash hold by the firm in the 2061/62 is Rs. 300467 thousand which is 60.55% of its corresponding current assets. The proportion is the fiscal year of this study period is 51.19 %. The higher ratio indicates the inefficient might and will certainly loses the profits and cash balance is inadequate or minimum it may push the company in liquidation.

#### **D) Percentage Cash and of Bank Balance to Total Assets**

The problem of liquid cash in comparison to total assets shows the investment in cash out total assets. Higher ratio decrease the risk and provide more working capital but the excess cash earns nothing the profitability would decrease the following table

showing the percentage of cash and bank balance to total assets.

**Table: 4.6**  
**Analysis of Cash and Bank Balance to Total Assets** in thousand

Year	Cash and Bank	Total Assets	Ratio %	% Change
2060/061	192744	984227	19.58	-
2061/062	300467	993939	30.23	10.65
2062/063	273990	1060653	25.83	4.40
2063/064	301440	1064593	28.32	2.49
2064/065	229159	1042952	21.97	6.35
<b>Total</b>	1297800	4085711		-
<b>Average</b>	<b>259560</b>	<b>817142.2</b>	<b>25.19</b>	

**Sources:** Balance sheet of DDC for the relevant year

$$\text{Cash to total assets} = \frac{\text{Cash and Bank}}{\text{Total Assets}}$$

Total assets = Fixed assets + total current assets

The given table depicts that the investment in cash out of its total assets in DDC during the period of study of five years. The ratio is 19.58% percent in the F/Y 2060/061 and it is increased by 10.65 % in the fiscal year 2061/062 and thereafter it is decreased by 4.40% of 3062/063. In the 063/064 the ratio increased by 2.49% and again falls down by 6.35% in the 2064/065. The table shows that the management attitude towards the risk. During the overall period the average ratio is found to be 25.19 percent.

### 4.2.3 Analysis of Cash Turnover Ratio

Cash turnover measures the relationship between level of cash and volume of sales over a period of times; it is one of the main parts of current asset which has greater value to meet the current obligations occurred in the business. The greater the sales volume the better the cash turnover would be provided the cash balance is maintained at a desirable level. The following table shows the cash turnover position of DDC during the period of study.

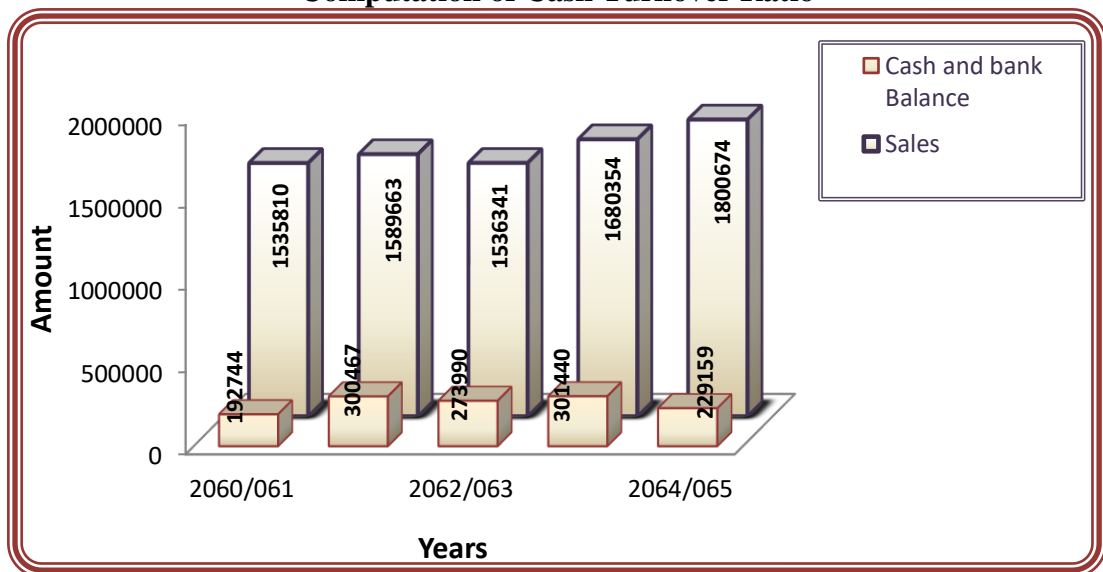
**Table: 4.7**  
**Computation of Cash Turnover Ratio**

Year	Sales	Cash and Bank Balance	Ratio (times)
2060/061	1535810	192744	7.97
2061/062	1589663	300467	5.29
2062/063	1536341	273990	5.61
2063/064	1680354	301440	5.57
2064/065	1800674	229159	7.86
<b>Total</b>	<b>8142842</b>	<b>1297800</b>	<b>32.30</b>
<b>Average</b>	<b>1628568</b>	<b>259560</b>	<b>6.46</b>

Sources: Balance sheet of DDC for the relevant year

$$\text{Formula: Cash turnover} = \frac{\text{Sales}}{\text{Cash Balance}}$$

**Figure: 4.5**  
**Computation of Cash Turnover Ratio**



The table and figure shows that the cash turnover ratio is a wide variation during the study period of DDC. Cash turnover reached peak of 7.97 times in the F.Y 2060/061 and 7.86 in F.Y. 2064/65. This there is no rational relationship between sales volume and cash balance in the sense that increased sales possessed decreased cash balance and vice versa. However, the overall cash turnover are higher than standard and indicate good management of cash while think that there might be sufficient cash balance in the company and there is not liquidity crisis. Where, the company has maintained only Rs. 259560 thousand average cash balance. So the average turnover position has found 6.46 times. It is due to fluctuating amount of sales volume. Following figure also depicts that the computation of cash turnover ratio clearly.

#### 4.2.4 Analysis of Account Receivable to Cash and Bank Balance

The corporation sells its products to its customers. Cash and Bank balance measures the relationship between level of cash and bank and account receivable over a period of time. The greater the account receivable the better the cash turnover would be provided that cash and bank balance can be maintained at a desirable level. The following table shows the relationship of A/R to cash and bank balance.

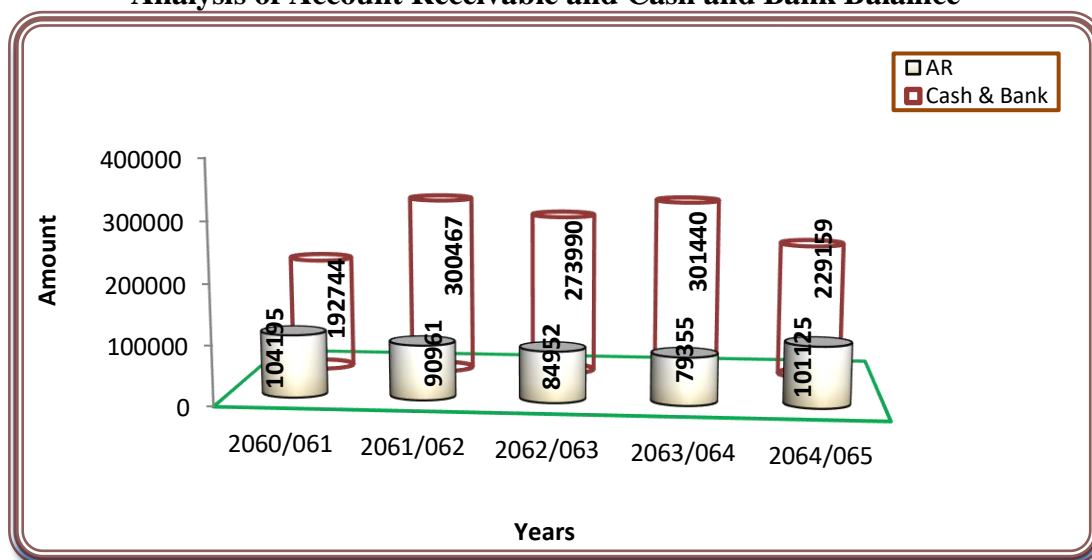
**Table: 4.8**  
**A /R to Cash and Bank Balance of DDC** in thousand

Year	A/R	Cash and Bank	% of A/R
2060/061	104195	192744	54.05
2061/062	90961	300467	30.27
2062/063	98145	273990	35.82
2063/064	88098	301440	29.23
2064/065	111076	229159	48.47

**Sources:** Balance sheet of DDC for the relevant year

The table depicts that the increase and decrease of cash and bank balance in every year. The cash and bank balance is maximum when the account receivable is minimum and vice versa. That management is less covered to speed up of collections of A/R. This situation corporation is suffered the deficit of cash balance to meet its current liabilities and also shows the management has taken liberal credit policy to sale of goods.

**Figure: 4.6**  
**Analysis of Account Receivable and Cash and Bank Balance**



Evaluating this situation, cash and bank balance is not satisfactory in corporation to A/R this can be said that higher, A/R caused lower cash balance and vice versa. Maybe this ought to follow stringent credit policy to increase cash balance to maintain at a desired level of cash balance. Above figure shows that the relation of account receivable and cash and bank balance is clearly.

#### 4.2.5 Analysis of Investment in Cash and Bank Balance on C.A. & T.A.

Among the components of current assets, cash and bank balance hold the minimum proportion. Cash is required for day to day business operation. Cash shortage of firm means firm is not able to invest in golden opportunities. From the personal contact with the divisional manager, it is known that it is due to improper management of cash of corporation. The table depicts that the relation between cash and bank balance to total assets.

**Table: 4.9**  
**Analysis of Investment Decision** in thousand

Year	Cash & Bank	C.A	F.A	Total Assets (CA+FA)	% of cash & Bank to T.A.
2060/061	192744	466154	304865	771019	25%
2061/062	300467	496261	273618	769879	39.03
2062/063	273990	541335	270316	811651	33.76
2063/064	301440	558332	260172	818504	36.83
2064/065	229159	463426	243646	707072	32.41
<b>Total</b>	1297800			3878125	
<b>Average</b>	<b>259560</b>			<b>775625</b>	<b>33.41</b>

**Sources:** Balance sheet of DDC for the relevant year

The table indicates that the cash and bank balance with respect to current assets has fluctuating trend. During the study period it is the lower 25% for the year 2060/061 and the highest 39.03% for the year 2061/062 on an average the projection of cash and bank balance to current the projection of cash and bank balance to current assets for the study period 33.41% while composing with the average, it is found that the percentage of cash and bank balance to C.A for the year expect. 32.41% lower. This can be said that the cash position of DDC is not good. Due to lack of good cash management system, DDC should face this type of situation.

The cash and bank balance with respect to total assets has also fluctuating trend. The volume of cash and bank balance is fluctuating in every year. While at the same time

fixed assets are in increasing trend on the average it is 33.41% during the study period, which is less than the years 2064/065.

Among the components of current assets, cash and bank balance hold the minimum proportion. Cash is required for day to day business operation. Cash shortage of firm means firm is not able to invest in golden opportunities. From the personal contact with the divisional manager, it is known that it is due to improper management of cash of corporation.

#### 4.2.6 Analysis of Cash and Bank to Current Liabilities

Among the technique of measuring corporate liquidity the ratio of cash to current liabilities may also be as an index of cash management. This ratio indicates the amount of cash (in %) available to pay the current obligations of the firm. In general a low percentage of cash to current liabilities may be regarded as favorable indicates. However, a very low ratio is also not desirable as it may lead to corporate insolvency. The table shows the level of cash's in relation to current liabilities of DDC.

**Table: 4.10**  
**Analysis of Cash and Bank to Current Liabilities of DDC** in thousand

Year	Cash & Bank	C.L	Ratio (Time)
2060/061	192744	347113	0.56:1
2061/062	300467	358689	0.84:1
2062/063	273990	425004	0.64:1
2063/064	301440	431440	0.70:1
2064/065	229159	413123	0.55:1
<b>Total</b>	1297800	1975369	
<b>Average</b>	<b>259560</b>	<b>395073.6</b>	<b>0.66:1</b>

**Sources:** Balance sheet of DDC for the relevant year

The table reveal that the relation of cash and bank to current liabilities. Table shows the lower ratio i.e. 0.55:1 for the year 2064/065 and higher rate i.e. 0.84:1 for the year 2061/062. The ratio is highly fluctuating in the last year. This can be said that DDC has faced the problem of cash management.

#### 4.2.7 Analysis of Liquidity Position

The analysis and measurement of liquidity is an integral part of operational financial planning. The financial viability becomes meaningful only if it is empirically tested

regarding how far and to what extent DDC has been able to accomplish the objective liquidity. Since, this is the aspect vitally related to current assets to current liabilities. C.L includes cash & bank balance, inventory, receivables and other miscellaneous Current assets. The current liabilities include creditor's provision for taxation, unclaimed dividend and other miscellaneous current liabilities. The most important objective of adopting appropriate cash management policy is to maintain appropriate and optimum liquidity in order to enable the corporation to meet current or short those obligations when they become due for payment. So, liquidity position shows the ability to pay the bills since, the study is focused on working capital management of the corporation. It is appropriate to study the liquidity position of the corporation. Here, the current ratio and quick ratio of the DDC, living the year's period of study are observed.

### (A) Current Ratio

The current ratio shows the ability to payment of total debt from current assets. It measures the liquidity position of the corporation. The current assets include cash and bank balance inventory, receivables and other current assets. The C.L includes creditors, cash credit taken, provision for taxation, unclaimed dividend and others. Current liabilities the C.R of DDC for the period of study is calculated in table which is presented below:

**Table: 4.11**  
**Computation of current ratio**

Year	C.A	C.L	Ratio (Time)
<b>2060/061</b>	466154	347113	1.34:1
<b>2061/062</b>	496261	358689	1.38:1
<b>2062/063</b>	541335	425004	1.27:1
<b>2063/064</b>	558332	431440	1.29:1
<b>2064/065</b>	463426	413123	1.12:1
<b>Total</b>	2525508	1975368	
<b>Average</b>	<b>505101.6</b>	<b>395073.6</b>	<b>1.28:1</b>

**Sources:** Balance sheet of DDC for the relevant year

$$\text{Formula: C.R} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The table depicts that the current ratio of DDC. In the year 2060/061 has 1.34:1 and it is increased to 1.38:1 in the year of 2061/062. The year of 2062/063 the ratio is

decreased by 1.27:1 and again the ratio increased by 1.29:1 in the year of 2063/064. Similarly the ratio also decreased by 1.12:1 and reached up to 1.12:1 in the year of 3064/065. In the year 2064/065 the current ratio of fire is highest liquidity position maintained by the company during the study period. The average current ratio of DDC is fund 1.28:1 is not satisfactory. The current ratio is considered as perfect when it comes 2:1 higher current ratio indicate higher liquidity maintained by the company or lower risk of technical insolvency. Hence, a relatively high level of current ratio is consider as an indication that the company is liquid and has the ability to pay its obligations/ bills. On the other hand, a relatively low value of current ratio is considered as an indication that the company will find difficult in paying the bills. The higher the current ratio greater the margin of safety, the large the amount of current assets is relation to current liabilities the more, the company ability to meet its obligations and string working capital position. The company with less than 2:1 current ratio may be doing well, while companies with 2:1 or even more/higher current ratio may be finding great difficulties in paying bills. This is because the current ratio is a paying their bills quality. In brief, net working capital, as a measure of liquidity, is useful for purpose of internal control. In overall the current ratio of DDC has not found to be satisfactory.

### **(B) Quick Ratio or Acid /Test Ratio**

Quick ratio or acid test ratio is the relationship between quick assets and current liabilities. This ratio is measure of liquidity designed to overall the defect of current ratio. It is measurement of firm's ability to convert its current assets quickly into cash in order to meet its current liabilities. Higher current ratio is better the ability to dangerous current obligations. As period out earlier, current ratio may be misleading, in spite of a favorable current ratio, company may not be able to pay off its creditors in time due to large proportion of stock in current assets. In such a case, quick or acid test ratio is more reliable for the company. The quick ratio of acid test ratio of DDC, during the period of study is presented in the following table.

**Table: 4.12**  
**Computation of Quick or Acid Test Ratio** in thousand

Year	Quick Assets	Current Liabilities	Ratio (Time)
2060/061	420966	347113	1.21:1
2061/062	455077	358689	1.27:1
2062/063	443086	425004	1.04:1
2063/064	464539	431440	1.08:1
2064/065	406236	413123	0.98:1
<b>Total</b>	2189904	1975369	
<b>Average</b>	<b>437980.8</b>	<b>395074</b>	<b>1.12:1</b>

**Sources:** Balance sheet of DDC for the relevant year

$$\text{Formula quick ratio} = \frac{\text{Quick Assets}}{\text{Current Liabilities}}$$

Quick Assets = Current assets - inventory

Quick ratio is commonly held that quick ratio should be 1:1. Liquid assets are less than current liabilities the financial position of the corporation shall be deemed to be unsound and real cash will have to be provided for the payment of liabilities, on other hand. If the ratio is more than 1:1 it can be surmised that the financial condition of the company is sound and good. In the case of DDC, the quick ratio is increasing and decreasing trend. The average quick ratio under the period of observation is found 1.12:1. In the table comparing the ratios with standard norm 1.1 it is success to meet the standards in the year of 2060/061 to 2063/064. If the ratio is less than 1:1 this is not good for the company. In last year's the quick ratio of the company is not good. The liquidity position of DDC varied widely over a period of time. Working capital is greatly affected by quick assets and current liabilities because. If these are higher quick assets the move will be working capital and less the quick assets result will be vice versa. Then if current liabilities exceed quick assets the company may suffer from liquidity problem. So the quick ratio of DDC is not seems favorable.

### **(C) Fitting the Straight Line Trend by Least Square Method for Variation in Cash Balance**

Fitting the straight line trend by least square method is one of the time series analyses, where future, events of variables (s) are forecasted over a regular interval of time

based on the past events of the variables (s). Here, an effort has been made to forecast the cash balances of DDC in future F.Y. based on its past trends.

**Table: 4.13**  
**Fitting straight line trend**

Year		Cash & Bank Balance (Y)	Deviation from (X)	X <sup>2</sup>	XY
2060/061	1	192744	-2	4	-385488
2061/062	2	300468	-1	1	-300468
2062/063	3	273990	0	0	0
2063/064	4	301441	1	1	301441
2064/065	5	229159	2	4	458318
N= 5		Σ y= 1297802	Σx = 0	Σx <sup>2</sup> = 10	Σxy = 73803

**Sources:** Balance sheet of DDC for the relevant year

X = No. of observation time

Y = Cash balance

$$\bar{X} = \frac{\sum x}{n}$$

Straight line trend  $yc = a + bx$

To find the value of 'a' and b we should solve the following equations.

Where,

$$\sum y = na + b\sum x \quad \text{i.e. } 1297802 = 5a \dots\dots\dots (i)$$

$$\sum xy = a\sum x + b\sum x^2 \quad \text{i.e. } 73803 = 10b \dots\dots\dots(ii)$$

Therefore, a = 259560 and b = 7380.3

$$yc = 259560 + 7380.3x$$

The trend line shows positive figure of cash balance in future. The annual rate of increment in cash balance has been calculated.

In this case when x = 6 (i.e. FY 2065/066)

$$Yc = 259560 + 7380.3 \times 6 = \text{Rs. } 303841.8 \text{ thousand}$$

Likewise,

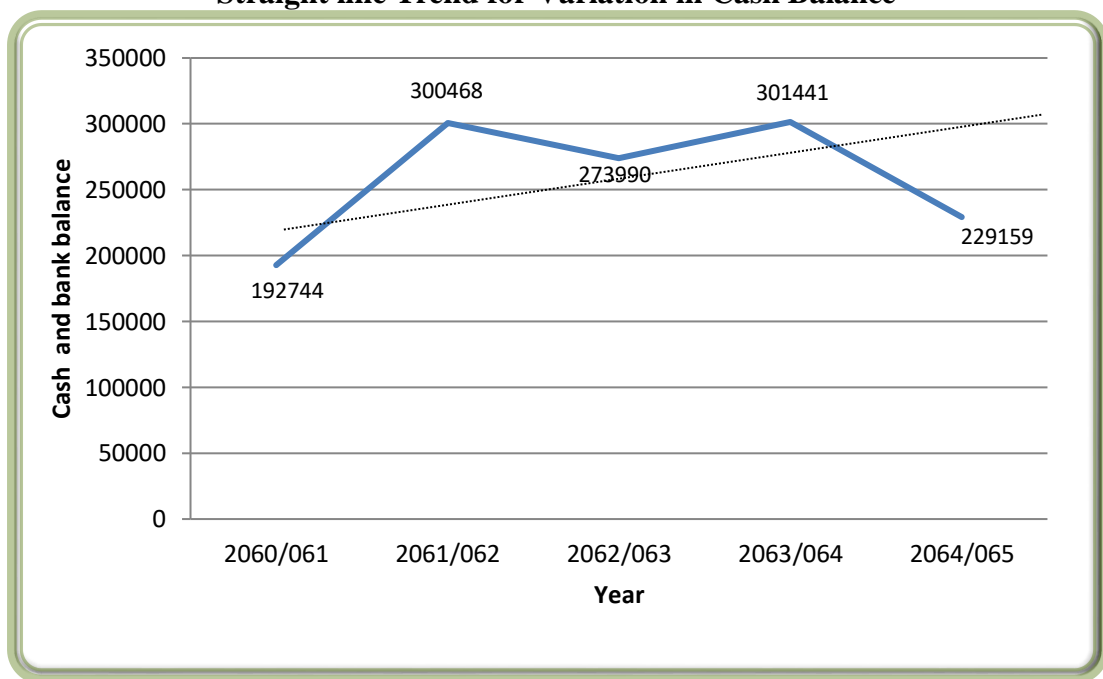
When,

$x = 7$  (i.e. FY 2066/067)

$Y_c = 259560 + 7380.3 \times 7 = \text{Rs. } 311222.1$  thousand

Hence, expected cash balance in FY 065/066 is 303841.8 thousand and in FY 066/067 will be Rs. 311222.1 thousand. In FY 066/067 cash balance will be increased by 7380.3 thousand compared to the preceding year. This the trends shows that the cash balance is expected to increase by Rs. 7380.3 thousand every year.

**Figure: 4.7**  
**Straight line Trend for Variation in Cash Balance**



By expediting the trend line in graph with scale, Cash and bank balance could be plotted for subsequent FY conversely by using the straight line is plotted for respective FY and the straight line could be drawn. This trend line shows then positive figure of cash balance for future.

#### **4.2.8 Analysis of Turnover Position**

By analyzing the current assets, net working capital, cash, receivables and inventory turnover ratios the firms turnovers position i.e. how many times they are turned in terms of sales are calculated. Here only cash turnover ratio sales to cash and bank balance ratio is mentioned.

### (a) Cash Conversion Cycle

Cash turnover measures the relationship between level of cash and volume of sales over a period of times. It is one of the main parts of current assets which have greater value to meet the current obligations occurred in the business. The greater the sales volume the better the cash turnover would be provided that cash balance is maintained at a desirable level. The following table shows the cash turnover position of DDC, during the period of study.

**Table: 4.14**  
**Computation of Cash Turnover** in thousand

Year	Sales	Cash & Bank Balance	Ratio (times) cash	Conversion days
2060/061	1535810	192744	7.97	58
2061/062	1589663	300467	5.29	40
2062/063	1536341	273990	5.61	43
2063/064	1680354	301440	5.57	41
2064/065	1800674	229159	7.86	55
<b>Total</b>	8142842	1297800		
<b>Average</b>	<b>1628568.4</b>	<b>259560</b>	<b>6.50</b>	<b>47.4</b>

**Sources:** Balance sheet of DDC for the relevant year

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

Table depicts that the cash turnover ratio variations during the study period of DDC. Cash turnover ratio is peak in the year 2060/2061. Thus there is no rational relationship between sales volume and cash balance in the sense that increased sales possessed decreased cash balance and vice versa. However, the overall cash turnover are averaged of the standard and indicate good management of cash while looking at the cash turnover are higher than standard and indicate good management of cash while looking at the cash turnover, everyone would think that there might be sufficient cash balance in the corporation and there is not liquidity crisis. The corporation has able to make 7.86 times turnover in the year of 2064/065 and it has also peak position. The average turnover position has found 6.50 times it is due to the fluctuating amount of sales volume. Where, the corporation has in maintained only Rs. 259560 thousand of cash balance.

**(b) Analysis of Correlation between Sales and Cash & Bank Balance**

To find out the correlation between sales and cash and bank balance, Karl Pearson's co-efficient of correlation (r) is determined. For this purpose actual sales (x) are assumed to be dependent variables and cash and Bank Balance (y) are assumed to be independent variable. It is assumed that the actual sales will increase. It is assumed that the actual sales will increase as cash balance will increase or vice-versa. It means there should be positive correlation between cash balance and actual sales. Significance of correlation (r) is tested with probable error of r.

**Table: 4.15**  
**Analysis of Karl Pearson's Coefficient of Correlation** in thousand

Fiscal Year	Actual Sales (x)	Cash Balance(y)	$U = x - \bar{x}$	$V = y - \bar{y}$	$U^2$	$V^2$	UV
2060/061	1535810	192744	-92758.4	-66816	8604120771	4464377856	6197745254
2061/062	1589663	300467	-38905.4	40907	1513630149	1673382649	-1591503198
2062/063	1536341	273990	-92227.4	14430	8505893311	208224900	-1330841382
2063/064	1680354	301440	51785.6	41880	2681748367	1753934400	2168780928
2064/065	1800674	229159	172105.6	-30401	29620337551	924220801	-5232182346
n=5	$\Sigma X =$ 8142842	$\Sigma y =$ 129780	$\Sigma U = 0$	$\Sigma V = 0$	50925730149	9024140606	211999257

**Sources:** Balance sheet of DDC for the relevant year

$$\bar{X} = \frac{\Sigma X}{N} = \frac{8142842}{5} = 1628568.4$$

$$\bar{Y} = \frac{\Sigma Y}{N} = \frac{1297800}{5} = 259560$$

Where, Mean  $\bar{X} = \frac{\Sigma X}{n}$  and Mean  $\bar{Y} = \frac{\Sigma Y}{n}$

$$\therefore \text{Karl Pearson's coefficient of correlation (r)} = \frac{\Sigma UV}{\sqrt{\Sigma U^2 \Sigma V^2}}$$

$$r = \frac{\Sigma (X - \bar{X})(Y - \bar{Y})}{\sqrt{\Sigma (X - \bar{X})^2 \cdot \Sigma (Y - \bar{Y})^2}} = \frac{211999257}{\sqrt{50925730149 \times 9024140606}} = 0.00989$$

Above calculation show that there is positive correlation between sales volume and cash and bank balance which means the test of significant of the value of r shows that there is a significant relationships between sales and bank balance.

To test the significance of their variable probable error has been calculated by using following formula:

$$\begin{aligned} \text{Probable Error (P.E)} &= \frac{0.6745(1-r^2)}{\sqrt{n}} \\ &= \frac{0.6745(1-(0.00989)^2)}{\sqrt{5}} \\ &= 0.3016 \end{aligned}$$

Since, coefficient correlation (r) < 6 P.E of r the value of r is not significant so there is doubt that whether cash balance.

The upper and lower limits within which the correlation coefficient is expected to lie are given by:

$$\text{Upper limit} = r + \text{PE} = 0.00989 + 0.3016 = 0.31149$$

$$\text{Lower limit} = r - \text{PE} = 0.00989 - 0.3016 = -0.2917$$

In this way coefficient of correlation is expected to lie between upper & lower limit i.e. 0.31149 and -0.2917 respectively.

### (c) Regression Analysis

A regression line also can be fitted to show the degree of relationship between actual sales and cash and bank balance. Cash balance can be forecasted by the value of actual sales for this purpose cash and bank balance and actual sales have been assumed Intestate economic variables so the regression line of sales (x) on cash and bank balance (y).

$$\text{Where, } \bar{X} = \text{mean sales i.e.} = \frac{\sum X}{N} = \frac{8142842}{5} = 1628568.4$$

$$\bar{Y} = \text{Mean cash and bank balance i.e.} = \frac{\sum Y}{N} = \frac{1297800}{5} = 259560$$

$\sigma_x$  = S.D of sales.

$$\sigma_x = \sqrt{\frac{\Sigma(X - \bar{X})^2}{n}} = \sqrt{\frac{50925730149}{5}} = 100921.48$$

$$\sigma_y = \sqrt{\frac{\Sigma(Y - \bar{Y})^2}{n}} = \sqrt{\frac{9024140606}{5}} = 42483.27$$

$r$  = Karl persons coefficient of correlation = 0.00989

$$\therefore X - \bar{X} = r \frac{\sigma_x}{\sigma_y} (Y - \bar{Y})$$

$$X - 1628568.4 = 0.00989 \frac{100921.48}{42483.27} (Y - 259560)$$

$$X - 1628568.4 = 0.02349 Y - 6098.17$$

$$\therefore X = 1622470.22 + 0.02349Y$$

This on the assumption that cash balance is function of sales achieved unit Increase in the cash balance sales by 42483 units. Time element is also an Important factor with the passage of time the sales achievements and account receivable changes which can be expressed by the component of time series. A straight line trend by the method of least square will show the relationship between years (time) and ratio in time of account receivable and sales.

Likewise, regression Line of cash balance (y) and sales x can be computed as follows:

$$Y - \bar{Y} = r \frac{\sigma_y}{\sigma_x} (X - \bar{X})$$

After putting the value of each variable, only result of value of y will be shown here (by using above some procedure)

$$\therefore Y = 252720 + 0.0042X$$

This shows that cash balance is estimated to Increase by 0.0042/unit of per unit in sales volume.

#### 4.2.9 Analysis of Profitability Position

Profit earning is the main objective of every business concern to earn maximum profit or get maximum return on investment. An ability to earn maximum profit for optimum use of available resources by the business organization is known as profitability. Profitability is a measure of efficiency and the search for it provides an incentive to achieve efficiency. The profitability position of a company can be measured by its profitability ratios such as gross profit margin net profit margin, operating ratio return on assets and net worth, return on working capital etc. Among their main profitability measure has analyzed to indicate the profitability position of D.D.C during the period of study.

##### a) Gross Profit Margin to Sales

Gross profit ratio indicates the relationship between gross profit margin and sales. It is the profit which is excluding the reduction of operating expenses and income tax. The gross profit is obtained by deducting cost of goods sold from net sales which explains the percentage return of gross profit out of total sales. This ratio measures the efficiency of the company and soundness of the management. Higher ratio is a sign of the better efficiency and good management. A low gross profit may reflect higher cost of goods sold due to the company's inability to purchase of favorable terms. The following table presented below shows the relationship between gross profits earned by the corporation during the study period with its sales.

**Table: 4.16**  
**Computation of gross profit margin ratio** in thousand

<b>Fiscal Year</b>	<b>Gross Profit</b>	<b>Sales</b>	<b>Ratio (%)</b>
<b>2060/061</b>	275820	1535810	17.96
<b>2061/062</b>	107015	1589663	6.73
<b>2062/063</b>	164525	1536341	10.71
<b>2063/064</b>	182969	1680354	10.89
<b>2064/065</b>	171509	1800674	9.53
<b>Total</b>	901838	8142842	
<b>Average</b>	<b>180367.6</b>	<b>1628568.4</b>	<b>11.08%</b>

**Sources:** Balance sheet of DDC for the relevant year

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

The above table shows the gross profit margin ratio is during year and in the fiscal year 2061/062 it is slightly decrease to 6.73%. Higher operating costs bring low gross profit margin a higher gross profit margin is preferable them lower gross profit margin. If the margin is very low, it may be an indicator of lower poor profitability during the period of the study in F.Y. 2061/062.

So, the average gross profit margin of the study is found to be 11.08 percent. The low margin is dangerous for the working capital or cash management of the corporation.

#### b) Net Profit Margin to Sales

Net profit is the profit which comes after deducting operating expenses and income tax from gross profit. This ratio is the relationship on net profit after tax to sales. This ratio indicates the management ability to operate the business with sufficient success. The ratio of net profit to sales essentially expresses the cost price effectiveness of the operation. The operation expenses mainly affect the net profit of the company.

**Table: 4.17**  
**Computation of Net profit margin Ratio** in thousand

Fiscal Year	Net profit after tax	Sales	Ratio (%)
2060/061	10589	1535810	0.69%
2061/062	7368	1589663	0.46
2062/063	(25541)	1536341	(1.66)
2063/064	14702	1680354	0.88
2064/065	(89790)	1800674	(4.99)
<b>Total</b>	<b>(82672)</b>	<b>8142842</b>	
<b>Average</b>	<b>(16534.4)</b>	<b>1628568.4</b>	<b>(1.02)%</b>

Sources: Balance sheet of DDC for the relevant year

$$\text{Net profit margin} = \frac{\text{Net Profit After Tax}}{\text{Sales}} \times 100$$

Net profit margin ratio indicates the 'management's ability' to operate the business with sufficient success not only to recover from profit of the period, the cost of services expenses of operating the business and the cost of borrow funds but also to

leave margin of reasonable compensation to the owners for providing their capital at risk.

The above table shows the net profit margin ratio in decreasing condition or the company is suffering in loss except F.Y 2060/061, 61/62, 63/64 other in all the year's net profit margin is negative and overall which has found loss is 16534.8 thousands which has found 1.02%.

#### 4.2.10 Operating Ratio

The operating ratio measures the efficiency of the company as regards to minimizing cost. The operating ratio establishes the relationship between total operating expenses and sales volume. It is an important ratio that explains the change in the net profit margin ratio. Operating ratio is an indicator of operational efficiency. The following table presented below shows the operating ratio of DDC during the period of study.

**Table: 4.18**  
**Computation of operating ratio of DDC**

Fiscal Year	Cost of goods sold & operating expenses	Sales	in thousand
			Ratio (%)
2060/061	1,381,042 + 39303 = 1420354	1535810	92.48%
2061/062	1,482,647 + 41093 = 1523740	1589663	95.85
2062/063	1,371,815 + 42681 = 1414496	1536341	92.07
2063/064	1,497,385 + 46437 = 1543822	1680354	91.87
2064/065	1,629,165 + 62355 = 1691520	1800674	93.94
<b>Total</b>	7593932	8142842	93.26
<b>Average</b>	<b>1518786</b>	<b>1628568</b>	<b>93.26</b>

**Sources:** Balance sheet of DDC for the relevant year

$$\text{Operating ratio} = \frac{\text{Cost fo Goods Sold + Operating Expenses}}{\text{Sales}} \times 100$$

The table shows that the operating ratio of dairy development corporation in fiscal year 2060/061 up to 2064/065 has found 92.48%, 95.85%, 92.07%, 91.87%, and 93.94% respectively. Overall operating ratio is 93.26% where as overall cast of goods sold with operating expenses is 1518786 in average and sales is 1628568 in average.

#### 4.2.11 Analysis of Return of Working Capital (CA)

This is the ratio of return on current assets or working capital employed by the corporation. Return on current assets measures the profit with respect to its total current assets. It provides the utilization of current assets effectiveness. The table presented below the relationship during the period of study.

**Table: 4.19**  
**Computation of return of assent assets (WC)** in thousand

<b>F.Y</b>	<b>Net profit after tax</b>	<b>Current assets</b>	<b>% Ratio</b>
<b>2060/061</b>	10588	466154	2.27
<b>2061/062</b>	7368	496261	1.48
<b>2062/063</b>	(25541)	541335	(4.72)
<b>2063/064</b>	14702	558332	2.63
<b>2064/065</b>	(89790)	463426	(19.38)
<b>Total</b>	<b>(82672)</b>	<b>2525508</b>	
<b>Average</b>	<b>(16534.4)</b>	<b>505101.6</b>	<b>(3.54%)</b>

**Sources:** Balance sheet of DDC for the relevant year

Above table shows that DDC has not been utilizing its current assets effectively in earning profit. Noticeably in the FY 2064/065 which calls for serious attention. Besides, the overall ratio is dissatisfying. Indicating loss in each fiscal year except FY 2063/064 during this year has significant positive return on working capital with 2.63%. In an average, overall working capital is disappointing indicating drastic downfall of the company. The average return on working capital has been founded 3.54% negatively.

#### 4.2.12 Analysis of Net Profit after Tax to Quick Assets

We can compute this by dividing net profit after tax (net loss) by quick assets. Higher ratio indicates higher utilization of quick assets in earning profits and vice-versa.

**Table: 4.20**  
**Analysis of NAPT to Quick Assets Ratio**

in thousand

<b>F.Y</b>	<b>Net profit after tax</b>	<b>Quick assets</b>	<b>% Ratio</b>
<b>2060/061</b>	10588	420966	2.52
<b>2061/062</b>	7368	455077	1.62
<b>2062/063</b>	(25541)	443086	(5.76)
<b>2063/064</b>	14702	464539	3.16
<b>2064/065</b>	(89790)	406236	(22.10)
<b>Total</b>	<b>(82672)</b>	<b>2189904</b>	
<b>Average</b>	<b>(16534.4)</b>	<b>43798.8</b>	<b>-4.17</b>

**Sources:** Balance sheet of DDC for the relevant year

$$\text{Net profit after tax to quick assets ratio} = \frac{\text{Net Profit After Tax}}{\text{Quick Assets}} \times 100$$

From the above analysis of working capital ratio, it has found that the ratio has also been found dangerous. The table clearly indicates that utilized quick assets have not been earning profit in each of the year. Significant positive ratio has been observed in fiscal year 2060/062 and 2061/062 with declining ratio and 2063/064 it is also positive ratio and others all years the firm has suffering in loss. In the year 2064/065 the ratio is in going to loss at 22.10%.

### **4.3 Existing Cash Management System in D.D.C.**

Dairy Development is a public Enterprise which is formed according to Co. Act. 2021 completely owned by government. In order to study about the proper cash management system DDC, observation method has been used for definite purpose, so that it can be easier to know about the actual figure of cash management practice in DDC. There are different types of important questions concerning to know about the existing cash management system in Dairy Development Corporation. During the data collection period, said one of the employee. He gives me very much information which is useful to cash management that means there is no significance in reaction from those respondents as per the requirement of each questions. In short, this analysis entirely depends upon the answer of those respondents because they are authorized person having complete knowledge about the financial activities of DDC.

By analyzing their views, following result about existing cash management practices in DDC has been found.

DDC doesn't prepare actual typical name of budget separately but the fundamental concept of cash budget has been undertaken only inside the annual budget. Informally which is used to prepare? An annual basis, under annual budget as per the views of those respondents. In this way because of the absence of actual amount of cash inflow and outflow during the year perhaps DDC doesn't flow the appropriate method to forecast the cash requirement in DDC which is not effective.

Similarly cash planning also plays the vital role in the organization for proper cash management. Thus, for making such planning, outside experienced agencies are not appointed since its establishment. In addition to this accountants are employed in DDC have been helping for cash planning that entirely depends upon their speculation for the future. The sales trend of DDC is only in Cash, in other words, besides cash sales there is a very low amount of account receivable, which is the lowest amount in comparison to the huge amount of cash sales. However, DDC has no definite policy about credit sales. So, very few amounts of credit sales have been found that indicates better signal of DDC.

Mostly, DDC rarely takes any advantage of cash discount offered by the supplier and supplier provides 15 days with respect to delay in payments to the DDC. One thing is better which is in favor of DDC that, this corporation is really capable to discharge all short term liabilities and loans on due dates and next thing is that perhaps DDC doesn't face any shortage of cash up to now. In spite of there is rare chances of incurring costs and losses which DDC associates with cash shortage, but the proper cash management practices in DDC is not effective. DDC has some extent of further practices of holding excess cash and bank balance in current accounts in excess of requirement and having a little practice of checking the adequacy of cash balance as per the requirement of DDC, but there is not found of investing excess cash on profitable opportunity for short term period. Similarly, determining the minimum level of cash balance is the important part of efficient cash management. There are different techniques to determine certain minimum level of cash balance.

From which DDC take a little bit helps by means of cash budget as a nominal approach for determining minimum level of cash balance. The next thing regarding

cash management is that DDC has never got any advice from banker with regards to the opportunity of investing its excess cash. Similarly DDC uses specially mail transfer for moving funds and it has no expressed "Zero- balance" account system with its bank account.

The strongest point of DDC concerning efficient cash management system is that DDC prepares financial performance report timely. And at last DDC utilizes its excess cash by depositing only in bank accounts with obtaining few interests and doesn't pay attention towards investing excess cash on profitable sector.

At last by analyzing its existing cash management system we can say that its existing cash management system is very poor. Due to this DDC has suffering from loss and this is the existing cash management system but now computerized system also launched.

#### **4.4 Analysis of Cash Flow Statement**

Cash flow statement is an important financial tool for the management. It is useful internally to management and externally to investors and creditors. It helps the management to assess the liquidity of business, to determine dividend policy, to evaluate the policies regarding investment and financing, etc. similarly, this statement is useful for investors and creditors in assessing the company's ability to manage cash flows, to generate positive future cash flows, to pay dividend and interest etc.

- Cash flow statement is helpful to a firm for planning and co-ordinating financial operation properly.
- The statement can provide the concerned organization the necessary assistance for the effective steps to strengthen the internal financial position.
- It is also helpful in planning the repayment of loan, replacement of fixed assets and other long term cash planning.
- It is evaluate the financial policies of the company.

The statement of cash flows gives the major sources and uses of cash. It explains how cash was generated and how it was used during a period. It is a report listing cash inflows and outflows by meaningful categories and explains the changes in cash during the period. As such it is widely used as a tool for assessing the financial health of organization. it ends with closing cash and cash equivalent balance that will have

place in balance sheet. If the cash inflow is less than cash outflows there will be negative cash flows. Cash flow information is increasingly valuable to the investors and creditors for assessing a firm's liquidity and risk.

**Table: 4.21**  
**Cash Flow Statement** in thousand

Details	2060/061	2061/062	2062/063	2063/064	2064/065
<b>A: Cash from Operating</b>					
<b>Activities:</b>					
<b><u>Cash form sales and</u></b>					
<b><u>receivables:</u></b>					
Sales Revenue	1535810	1589663	1536341	1680354	1800674
Add, A/R first year	97285	104195	90961	98145	88097
Less, current year A/R	104195	90961	98145	88097	111076
<b>Total collection from customer</b>	<b>1528900</b>	<b>1602897</b>	<b>1529157</b>	<b>1690402</b>	<b>1777695</b>
<b><u>Payment to supplier:</u></b>					
Cost of goods sold for materials	1381042	1482647	1371815	1497386	1359166
Add, closing inventory	45188	41184	98249	82342	63245
Add, current year other inventory	124027	63648	70951	86452	59946
Less opening inventory	64732	45188	41184	98249	82342
Less last year other inventory	98321	124027	63648	70951	86452
<b>Cash paid to supplier</b>	<b>1387204</b>	<b>1418264</b>	<b>1436183</b>	<b>1496980</b>	<b>1313563</b>
<b><u>Payment to employees &amp; other</u></b>					
<b><u>exp:</u></b>					
Selling expenses	39303	41093	42681	46437	62355
Production expenses	17450	3531	53753	16258	55387
Outstanding expenses	2826	2827	600	-	-
	<b>59579</b>	<b>47451</b>	<b>97034</b>	<b>62695</b>	<b>117742</b>
Add, last year outstanding wages	36459	39392	45924	50783	55326
Add last year other expenses	20524	21043	30190	22349	21456
Add last year other provision	224832	224717	224717	289671	288732
Add last year advances	10598	12410	10896	11491	10959
Less current year outstanding wages	39392	45924	50783	55326	56432
Less current year other expenses	21043	30190	22349	21456	20352
Less current year other provision	228284	228284	289671	288732	272459
Less current year advances	12410	10896	11491	10959	10243

<b>Payment to employee and other exp.</b>	50863	36853	34467	60516	134729
<b><u>Interest payment:</u></b>					
Interest expenses	4319	4522	4664	3615	3213
Add, accrued of first year	35237	36783	41049	44797	45567
Less accrued of current year	36783	41049	44797	45567	44237
<b>Interest payment</b>	<b>2773</b>	<b>256</b>	<b>916</b>	<b>2845</b>	<b>4543</b>
<b><u>Income tax payment:</u></b>					
Income tax expenses	3529	2383	-	3675	-
Add: accrued of first year	6000	9200	5913	5913	9500
Less accrued of current year	9200	5913	5913	9500	9500
<b>Income tax payment</b>	<b>329</b>	<b>5670</b>	<b>0</b>	<b>88</b>	<b>0</b>
<b>A: Total cash flow from operating activities:</b>	<b>87731</b>	<b>141854</b>	<b>57591</b>	<b>129973</b>	<b>324860</b>
<b>B: Cash From Investing Activities:</b>					
Inflow: Sales of plant	-	-	768	20171	318115
Outflow: Purchase of plant	7648	50122	-	-	-
<b>Net cash flow from investing activities</b>	<b>(7648)</b>	<b>(50122)</b>	<b>768</b>	<b>20171</b>	<b>318115</b>
<b>C: Cash from Financing Activities:</b>					
Borrowing of long-term loan	<b>85202</b>	<b>84252</b>	<b>83301</b>	<b>82351</b>	<b>79027</b>
<b>Total cash flows (A-B-C)</b>	<b>10177</b>	<b>107724</b>	<b>(26478)</b>	<b>27451</b>	<b>(72282)</b>
Add, opening balance of cash	182567	192744	300468	273990	301441
<b>Closing Balance of Cash</b>	<b>192744</b>	<b>300468</b>	<b>273990</b>	<b>301441</b>	<b>229159</b>

**Sources:** Balance sheet of DDC for the relevant year

**Some important ratios are presented below:**

- Quality income ratio = 
$$\frac{\text{Cash from operation} + \text{Interest paid}}{\text{Net income} + \text{Interest expenses} + \text{Depression}}$$

<b>Fiscal year</b>		
<b>2060/061</b>	$\frac{87331 + 2773}{14118 + 2773 + 29994}$	1.93 times
<b>2061/062</b>	$\frac{141854 + 256}{7368 + 256 + 29406}$	3.84 times
<b>2062/063</b>	$\frac{57591 + 916}{-25541 + 916 + 31779}$	8.18 times
<b>2063/064</b>	$\frac{129973 + 2845}{14702 + 2845 + 34210}$	2.57 times
<b>2064/065</b>	$\frac{324860 + 4543}{-89790 + 4543 + 36436}$	6.75 times

Overlay cash flow form operation and interest is seen in 1.93 times, 3.84, 8.18, 2.57, and 6.75 times in 2060/61 to 2064/65 respectively the net income interest depreciation. It indicates the satisfactory or just comfortable positions.

- Investing – inflow ratio =  $\frac{\text{Cash flow form investing activities}}{\text{CF form investing} + \text{CF form financing}}$

<b>Fiscal year</b>		
<b>2060/061</b>	$\frac{7648}{-7648 + 85202}$	9.86%
<b>2061/062</b>	$\frac{50122}{-50122 + 84252}$	146%
<b>2062/063</b>	$\frac{768}{768 + 83301}$	0.91%
<b>2063/064</b>	$\frac{20171}{20171 + 82351}$	19.67%
<b>2064/065</b>	$\frac{318115}{318115 + 79027}$	80.10%

The ratios indicates that cash outflow or used in investing activities as seen in satisfactory both cash flow from investing and financing activities. That means there are no problems for financing for expansion and growth in the corporation.

- Cash from operation to cash from investing ratio =  $\frac{\text{cash flow form operation}}{\text{cash flow form investing}}$

<b>Fiscal year</b>		
<b>2060/061</b>	87731 / -7648	11.47 times
<b>2061/062</b>	141854 / -50122	2.83
<b>2062/063</b>	5791 / 768	74.99
<b>2063/064</b>	129973 / 20171	6.44
<b>2064/065</b>	324860 / 318115	1.02

The operating cash flow to investing cash outflow indicates that the operating cash flows are more than sufficient to support the expansion and the growth program of the company at this time.

- Turnover to cash ratio =  $\frac{\text{Sales for period}}{\text{Initial cash balance}}$

<b>Fiscal year</b>		
<b>2060/061</b>	1535510 / 182567	8.41 times
<b>2061/062</b>	1589663 / 192744	8.25 times
<b>2062/063</b>	1536341 / 300468	5.11 times
<b>2063/064</b>	1680354 / 273990	6.13 times
<b>2064/065</b>	1800674 / 301441	5.97 times

In this calculation, sales comes to 8.41, 8.25, 5.11, 6.13, and 5.97 which are in FY 2060/061 to 2064/065 respectively. The initial cash balance now that remained in the company. This shows that the DDC keep sufficient cash balanced to meet the need of the corporation.

- Ending cash to sales ratio =  $\frac{\text{Ending cash and cash equivalent}}{\text{Sales}}$

<b>Fiscal year</b>		
<b>2060/061</b>	192744 / 1535810	0.13 times
<b>2061/062</b>	300468 / 1589663	0.19 times
<b>2062/063</b>	273990 / 1536341	0.18 times
<b>2063/064</b>	302442 / 1680354	0.18 times
<b>2064/065</b>	229259 / 1800674	0.13 times

The ending cash and cash equivalent is less than the value of sale. This indicates that the corporation is using efficiently. The cash in hand is less than the sales value of the period.

The operating cash flow is positive. Positive substantial cash flow permits the company to make additional payment of long-term debts. It also helps to continue to finance for future growth form owns cash flow without raising debt/equity finance or selling stock. The investing cash flow is negative. However, the company invests in plant and investment seems too satisfactory. Cash flow from financing ratios are positive borrowing with long term debt.

#### **4.5 Major Findings**

The major findings of this study during the study period in dairy development corporation from the analysis are summarized below:

- The major components of current assets in DDC are cash and bank balance, sundry debtor's inventory and other current assets. It is found that the current assets, inventory holds the largest portion followed by cash and bank balance other assets sundry debtors and inventory respectively.
- Current assets is normally increasing trend. In 2060/061 it is Rs. 466159 and it increased by Rs. 496261, 542881, 558332 in fiscal year 2061/062, 2062/063, 2063/064 respectively. In fiscal year 2064/065 the current assets has decreased by Rs. 563426.

- The balance of cash and bank has found increasing and decreasing trend. It seems 0.36%, and -0.10% in fiscal year 2061/062 and 2062/063 respectively. And it is increased by 0.09% in year 063/064 and year 2064/065 it has decreased by -0.32% which indicates the DDC has maintain cash balance in fluctuating trend.
- The cash and bank balance has not define policy of cash management, some years it has negligible cash balances while in other years it has excessive maintained of cash balance.
- The standard deviation has found Rs. 42483.27 thousand which indicates there is no normal condition of uniformity in holding cash balance in each fiscal year. The coefficient of variation has 16.37%.
- DDC has been haphazardly holding cash and bank balance without having speculation.
- Dairy Development Corporation doesn't have any definite policy regarding to utilize the cash and maintain cash balance for the year.
- Dairy Development Corporation maintain about near to half proportion of current asset is cash and bank balance. It has found decreasing trend, in fiscal year 2061/062 the change in cash and bank to total current assets is 19.2 which is higher than other fiscal year. After 2061/062 the change in ratio is decreasing trend.
- No optimum cash balance is maintained. The cash and bank balance with respect to current asset has been fluctuating trend. Similar the case with respect to the total assets. It doesn't prepare cash flow statement and accurate cash budget.
- DDC has not been forecasting cash balance but little bit taking into consideration to sales revenue which means in some time cash and bank balance has been holding accordance the sales of DDC.
- The balance of cash and bank has been found in decreasing trend in the all fiscal years which indicates the DDC has not maintain its cash balance because it seems to be decreasing trend.
- The management is less covered to speed up of collections of account receivable. This situation corporation is suffered the deficit of cash balance to meet its current

liabilities and also shows the management has taken liberal credit policy to sale of goods.

- The ratio of account receivable and cash and bank balance is fluctuating trend. The receivable management of the DDC has been observed to be lightly satisfactory. In the year 2060/061 it has 54.05% than it is decreased. The fiscal year 2064/065 it has 48.47% which is increased than 2063/065 the ratio is 29.23%.
- Management of cash is an effective and importance function for every organization to achieve the goals and objectives but in DDC the management committee has not paid necessary attention toward the proper management of cash.
- The current ratio measures the liquidity position of the corporation. The current ratio of DDC has not found to be satisfactory. In year 2061/062 the ratio has 1.38:1 which is the higher value than after it is decreasing trend. In the year 064/065 the current ratio is 1.12:1.
- The correlation between sales volume and cash and bank balance is seen positive correlation. The test of significant of the value of r is 0.00989 which shows that there is a significant relationship between sales and bank balance.
- Coefficient correlation ( $r$ ) < 6 P.E of r the value of r is not significant so there is doubt that whether cash balance. In this way coefficient of correlation is expected to lie between upper & lower limit i.e. 0.31149 and -0.2917 respectively.
- Cash flow form operation and interest is seen in 1.93 times, 3.84, 8.18, 2.57 and 6.75 time s in year of 2060/061 to 2064/065 respectively. It indicates the satisfactory or just comfortable position.
- The investing-inflow ratio indicates that cash outflow or used in investing activities as seen in satisfactory both investing and financing activities. The ratio has 9086%, 146%, 0.91%, 19.67%, and 80.10% in the fiscal year 2060/061 to 2064/065 respectively.
- The sales to initial cash balance ratio has found 8.41, 8025, 5.11, 6.13 and 5.97 in the fiscal year 2060/065 to 2064/065 respectively. This shows that the DDC keep sufficient cash balance to meet the need of the corporation.

- Management of cash is an effective and importance function for every organization to achieve the goals and objectives but in DDC the management committee has not paid necessary attention toward the proper management of cash.
- DDC does not maintain the cash flow statement and cash budget. The cash flows and the cash budget is important to prepare to complete accounting management.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Summary**

The main objectives of the study are to determine structure and utilization of cash, to estimate the demand of cash and to determine average level of cash.

This study is based upon secondary data and as per needed primary data. It covers five fiscal years from 2060/061 to 2064/065 has been taken. The first chapter of this study includes general back ground, introduction of DDC statement of the problem focus of the study, objectives of the study, importance of the study, limitations of the study, organization of the study etc. also included. Lastly the scheme of the chapter are presented according to the chapters are planned.

The second chapter i.e. reviews of literatures gives the concept of cash management, where different views of different books, writers are reviewed. Then the journals are articles published by different management experts who are available also reviewed in order to fulfill the basic need of the study. Further the available dissertations in the context of cash management from various researchers are reviewed where the major findings and conclusion, tools used for analysis and recommendations made are accordingly included.

The corporation is suffering from missing requests of financial planning to the extent that its ability to manage cash is found to be not satisfactory and encouraging, so here the researcher has endeavored to make study on cash management system of dairy development corporation.

It is already mentioned that the major objectives of this study is to examine the management of cash in DDC. To fulfill this objective and other specific objectives as described in chapter one, an appropriate research methodology has developed which include the ratio analysis as a financial tools and correlation coefficient as a statistical tools. The major ratio analysis consists of the current Ratio, Quick Ratio, cash to current assets ratio, cash to current liabilities ratio, cash to total assets ratio, cash

turnover ratio profitability ratio etc or in short it consist liquidity ratio, leverage ratio, activity ratio.

In order to test the relationship between the various components of cash management, the necessary data are derived from the balance sheet and profit and loss account of the dairy development corporation with the help of methodology described in chapter three; these data are presented and analyzed in chapter four. Now in this chapter an attempt has been made for dairy development corporation and summary, conclusion and recommendations.

DDC has not optimum cash balance is maintained. The cash and bank balance with respect to current asset has been fluctuating trend. The Similar case repeat on respect of the total assets. It doesn't prepare cash flow statement and accurate cash budget.

All the above study we can saying it can be concluded that the DDC has been facing problem of cash management system. Management of cash is an effective and important function for every organization to achieve the goals and objectives but in DDC the management committee has not paid necessary attention toward the proper management of cash.

DDC has not been forecasting cash balance but a little bit taking into consideration to sales revenue which means in sometime cash and bank balance has been holding according to the sales of DDC.

DDC plays an important role in upgrading the Nepalese milk products. In the present the corporation is leading company of the dairy product. It covers a significant market. The corporation is facing competitions with other dairy company in Nepal. So the corporation must best dairy performance in order to maintain its reputation in future as well.

## **5.2 Conclusions**

In conclusion, it can be said that cash management is an important part of financial decision making variable because it help us to determine optimum cash balance. Many factors or determinant such as nature of business, level of sales, credit terms quality of customers, economic conditions directly and indirectly affect cash cycle so

these factor to be considered in cash management. A part from that level of purchase, method of creating cash management establish of credit terms, types of credit policy motives for holding cash, efficiency of cash management. Different techniques of cash management cash cycle etc. are to be considered.

Due to lack of good cash management system DDC did not provide budget sheet of each inflow and out flows in the corporation. Corporation much prepare cash budget to plan for the control cash flow.

While analyzing the management of cash in DDC some issues and constraints have been noticed which may be described as follow.

- Absence of forecast plan: It is observed that the cash budget management is least concerned to forecast of cash for the coming period. Cash forecasting is completely lacking in the corporation. The fluctuating trend of cash deficit reveals the act clearly.
- The lack of accurate and proper sales forecast is one of the important constraints that affect the financial performance of the corporation. If the corporation forecasts the expected sales accurately. It can manage the various activities accordingly. For example, it can plan for capital, investment, requirement of current expenses and inventories etc.
- The quality of management itself is a scarce factor in DDC. The performance of DDC exhibits that the management lacks basic knowledge of financial management.
- Due to certain constraints in management, DDC denied to provide information except balance sheet and profit and loss A/C of F.Y. 2060/061 and F.Y 2064/065 which are not sufficient for analysis of cash management.

**Major conclusions from the findings:**

- The cash and bank balance has not define policy of cash management, some years it has negligible cash balances while in other years it has excessive maintained of cash balance.
- The balance of cash and bank has found increasing and decreasing trend. It seems 0.36% and -0.10% in fiscal year 2061/062 and 2062/063 respectively.

And it is increased by 0.09% in year 063/064 and year 2064/065 it has decreased by -0.32% which indicates the DDC has maintain cash balance in fluctuating trend.

- The balance of cash and bank has been found in decreasing trend in the all fiscal years which indicates the DDC has not maintain its cash balance because it seems to be decreasing trend.
- The standard deviation has found Rs. 42483.27 thousand which indicates there is no normal condition of uniformity in holding cash balance in each fiscal year. The coefficient of variation has 16.37%.
- DDC has not been forecasting cash balance but a little bit taking into consideration to sales revenue which means in some time cash and bank balance has been holding accordance the sales of DDC.
- Dairy Development Corporation maintain about near to half proportion of current asset is cash and bank balance. It has found decreasing trend, in fiscal year 2061/062 the change in cash and bank to total current assets is 19.2 which is higher than other fiscal year. After 2061/062 the change in ratio is decreasing trend.
- No optimum cash balance is maintained. The cash and bank balance with respect to current asset has been fluctuating trend. Similar the case with respect to the total assets. It doesn't prepare cash flow statement and accurate cash budget.
- The management is less covered to speed up of collections of account receivable. This situation corporation is suffered the deficit of cash balance to meet its current liabilities and also shows the management has taken liberal credit policy to sale of goods.
- The ratio of account receivable and cash and bank balance is fluctuating trend. The receivable management of the DDC has been observed to be lightly satisfactory.
- Current ratio measures the liquidity position of the corporation. The current ratio of DDC has not found to be satisfactory. In year 2061/062 the ratio has

1.38:1 which is the higher value than after it is decreasing trend. In the year 064/065 the current ratio is 1.12:1.

- The correlation between sales volume and cash and bank balance is seen positive correlation. The test of significant of the value of r is 0.00989 which shows that there is a significant relationship between sales and bank balance.
- Coefficient correlation ( $r$ ) < 6 P.E of r the value of r is not significant so there is doubt that whether cash balance. In this way coefficient of correlation is expected to lie between upper & lower limit i.e. 0.31149 and -0.2917 respectively.
- Management of cash is an effective and importance function for every organization to achieve the goals and objectives but in DDC the management committee has not paid necessary attention toward the proper management of cash.
- DDC does not maintain the cash flow statement and cash budget. The cash flows and the cash budget is important to prepare to complete accounting management.

### **5.3 Recommendations**

Based on the findings of the analysis and the issues and constraints mentioned above, some practicable recommendations have been recommended to improve cash management in DDC. In the following ways:

- DDC should have proper cash planning to estimate the cash receipts and payments. It helps to minimize the problem of excess or deficit cash balance.
- Corporation should first identify the cash needs for operation. For this corporation should consider the various expenses it has to insure such as, purchase of commodities, payments to be made for ways, salaries rent, power etc.
- The corporation needs to operate in a pepper way therefore; it can have lesser operating cost which further maximizes its profitability.

- The corporation needs to adopt the match cash management policy instead of adopting conservative cash management policy, the corporation can improve its profitability in the short run as well as in the long run.
- The cash and bank balance has not define policy of cash management, some years it has negligible cash balances while in other years it has excessive maintained of cash balance.
- DDC has not been forecasting cash balance but little bit taking into consideration to sales revenue which means in some time cash and bank balance has been holding accordance the sales of DDC.
- Effective inventory techniques should be introduced in order to maintain good inventory position statistical tools or mathematical tools like inventory ratio must be used in determining the stock to be required in future end to see the position of inventory in the corporation.
- The working capital should be arranged in such a way that it should generate maximum turnover. The working capital and net working capital are not fully utilized it should be try to utilized them to have a sound turnover position.
- DDC has not maintained optimum cash balance. The DDC should take all those situations in to the consideration while determining optimum cash balance not only surplus and deficit, during the peak period while in the production phase the corporation should hold more cash to make huge purchase for the fulfillment of domestic as well as international demand.
- Surplus should be invested in profitable opportunities. Corporation should manage its cash affairs in such a way as to keep balance at a minimum level and to invest the surplus cash funds in profitable opportunities.
- Management of cash is an effective and importance function for every organization to achieve the goals and objectives but in DDC the management committee has not paid necessary attention toward the proper management of cash.
- The balance sheet presents the financial picture of the firm at a point of time and also shows the changes about what it owns and what is owes over the two balance sheets data and does not detail changes due to movement of cash. It provides information on the cash flow related to operating, investing or financing activities.
- Cash flow statement provides information for the balance sheet. It ends with closing cash and cash equivalent balance that will have place in balance sheet.

Therefore, cash flow statement is essential along with balance sheet preparation. So, the DDC will prepare to the cash flow statement.

- Cash flows analysis will indicate the purposes to which management choose to commit funds, where it reduced investment, the source form which it derived additional cash, and to what extent it reduced claims against the enterprise. Such an analysis will also show the disposition of earnings as well as how management reinvested the internal cash inflow over which it had discretion.
- Management of cash is an effective and importance function for every organization to achieve the goals and objectives but in DDC the management of cash.
- Firm needs to prepare cash flow statement and cash budget for supplies future required cash and additional sales and to pay operating expenses.
- Profit is major sustainable factor of every business organization. So necessary to utilize required source optimum manner in DDC.
- The components of the cash from operations figure hold important clues to the stability of the source of cash. So the preparation of cash flow is important to DDC.

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## Income statement for 2060 and 2061

Particular	2060	2061
<b>Income</b>		
Sales Revenue	1595907	1535810
Miscellaneous income	13551	11546
Closing Stock	64732	45188
<b>Total Income</b> (A)	1674190	1592545
<b>Operating expenses</b>		
Opening Stock	38870	64732
Collection expenses	1198482	1127653
Refining expenses	271313	233845
Selling expenses	40905	39303
Total operating cost	1549570	1465533
<b>Administrative Expenses</b>		
Administrative expenses	69349	58305
Provision for outstanding expenses	-	2826
Depreciation	29429	29994
Provision for production expenses	5324	17450
Interest on loan expenses	11584	4319
<b>Total Administrative Expenses</b>	115686	112894
<b>Total Expenses</b> (B)	1665256	1578427
Profit before Tax (A – B)	8934	14118
Income from sale of assets	-	-
Income tax	-	3529
Net profit after tax	8934	10589

## Income statement for 2062 and 2063

Particular	2062	2063
<b>Income</b>		
Sales Revenue	1589663	15536341
Miscellaneous income	13141	16939
Closing Stock	41184	98249
<b>Total Income</b> (A)	1643988	1651529

<b>Operating expenses</b>		
Opening Stock	45188	41184
Collection expenses	1132318	1144708
Refining expenses	346325	284172
Selling expenses	41093	42681
<b>Total operating cost</b>	<b>1564924</b>	<b>1512745</b>
<b>Administrative Expenses</b>		
Administrative expenses	76693	73529
Provision for outstanding expenses	2827	600
Depreciation	29406	31779
Provision for production expenses	3531	53753
Interest on loan expenses	4522	4664
<b>Total Administrative Expenses</b>	<b>116979</b>	<b>164325</b>
<b>Total Expenses (B)</b>	<b>1681903</b>	<b>1677070</b>
Profit before Tax (A – B)	(37915)	(25541)
Income from sale of assets	47666	-
Income tax	2383	-
<b>Net profit after tax</b>	<b>7368</b>	<b>(25552)</b>

ANNEX-C

## Income statement for 2064 and 2065

Particular	2064	2065
<b>Income</b>		
Sales Revenue	1680354	1800674
Miscellaneous income	12463	13756
Closing Stock	93793	58190
<b>Total Income (A)</b>	<b>1786610</b>	<b>1872620</b>
<b>Operating expenses</b>		
Opening Stock	98249	93793
Collection expenses	1492930	1593563
Refining expenses	-	-
Selling expenses	46437	62355
<b>Total operating cost</b>	<b>1637616</b>	<b>1749711</b>
<b>Administrative Expenses</b>		
Administrative expenses	80209	117665
Provision for outstanding expenses	-	-
Depreciation	34210	36434
Provision for production expenses	16258	55387
Interest on loan expenses	3615	3213
<b>Total Administrative Expenses</b>	<b>134292</b>	<b>212699</b>

<b>Total Expenses</b> (B)	1771908	1962410
Profit before Tax (A – B)	14702	(89790)
Income from sale of assets	-	-
Income tax	-	-
Net profit after tax	14702	(89790)

ANNEX-D

## Balance Sheet

Details	2061	2062
<b><u>Capital and Liabilities</u></b>		
<b>1. Capital</b>		
Paid of capital	549453	549452
Foreign grant	1545	1545
Can revolving fund	914	-
Liabilities	-	-
Other fund	-	-
<b>Total capital</b> (A)	551912	550997
<b>2. Debt</b>		
Short term loan	-	-
Long Term Debt	85202	84252
<b>Total Debt</b> (B)	85202	84252
<b>3. Current Liabilities</b>		
Outstanding interest and tax expense	36783	41049
Outstanding wages	39392	45924
Advances	12410	10896
Other outstanding expense	21043	30190
Other provisions	228284	224717
Income tax provision	9200	5913
<b>Total Current Liabilities</b> (C)	347113	358689
<b>Total Capital and liabilities(A + B + C)</b>	984227	993939
<b><u>Assets</u></b>		
<b>1. Fixed assets</b>		
Depreciation	744406	701794
Remaining price of FA	451055	438874
Fixed assets but not used	293351	262920
	11513	106978
<b>Total fixed assets</b> (A)	304865	273618

2. Subsidies fund deposit	1545	1545
<b>3. Current assets</b>		
Cash and bank balance	192744	300468
Inventory (milk and milk products)	45188	41184
Other inventory	124027	63648
Account receivable	104195	90961
<b>Total current assets (B)</b>	466159	496261
<b>4. Others</b>		
Balance transfer form P/L A/C	208237	221915
Provision from contingency expense	3427	6000
<b>Total (C)</b>	211664	222515
<b>Total Assets (A + B + C)</b>	984227	993939

ANNEX-E

## Balance Sheet

Details	2063	2064
<b><u>Capital and Liabilities</u></b>		
<b>4. Capital</b>		
Paid of capital	127140	127140
Foreign grant	332916	331371
Can revolving fund	-	-
Liabilities	-	86299
Other fund	92291	5992
<b>Total capital (A)</b>	552347	550802
<b>5. Debt</b>		
Short term loan	-	-
Long Term Debt	83301	82351
<b>Total Debt (B)</b>	83301	82351
<b>6. Current Liabilities</b>		
Outstanding interest and tax expense	44797	45567
Outstanding wages	50783	55326
Advances	11491	10959
Other outstanding expense	22349	21456
Other provisions	289671	288732
Income tax provision	5913	9500
<b>Total Current Liabilities (C)</b>	425004	431440
<b>Total Capital and liabilities(A + B + C)</b>	1060653	1064593
<b><u>Assets</u></b>		
<b>5. Fixed assets</b>		
Depreciation	728562	757323
Remaining price of FA	468970	503179
Fixed assets but not used	259592	254143
Fixed assets but not used	10724	6029
<b>Total fixed assets (A)</b>	270316	260172
6. Subsidies fund deposit	1545	-
<b>7. Current assets</b>		
Cash and bank balance	273990	301441
Inventory (milk and milk products)	98249	82342
Other inventory	70951	86452
Account receivable	98145	88097

<b>Total current assets</b> (B)	542881	558332
<b>8. Others</b>		
Balance transfer form P/L A/C	247456	246089
Provision from contingency expense	-	-
<b>Total</b> (C)	247456	246089
<b>Total Assets (A + B + C)</b>	1060653	1064593

ANNEX-F

## Balance Sheet

Details	2065
<b><u>Capital and Liabilities</u></b>	
<b>7. Capital</b>	
Paid of capital	127140
Foreign grant	331371
Can revolving fund	-
Liabilities	86299
Other fund	5992
<b>Total capital</b> (A)	550802
<b>8. Debt</b>	
Short term loan	-
Long Term Debt	79027
<b>Total Debt</b> (B)	79027
<b>9. Current Liabilities</b>	
Outstanding interest and tax expense	44237
Outstanding wages	56432
Advances	10243
Other outstanding expense	20352
Other provisions	272459
Income tax provision	9500
<b>Total Current Liabilities</b> (C)	413123
<b>Total Capital and liabilities(A + B + C)</b>	1042952
<b><u>Assets</u></b>	
<b>9. Fixed assets</b>	773785
Depreciation	539469
Remaining price of FA	234316
Fixed assets but not used	9330
<b>Total fixed assets</b> (A)	243646
10. Subsidies fund deposit	-
<b>11. Current assets</b>	
Cash and bank balance	229159
Inventory (milk and milk products)	63245
Other inventory	59946
Account receivable	111076
<b>Total current assets</b> (B)	463426
<b>12. Others</b>	
Balance transfer form P/L A/C	335880
Provision from contingency expense	-
<b>Total</b> (C)	335880

<b>Total Assets (A + B + C)</b>	1042952
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