

CHAPTER- I

INTRODUCTION

1.1 Background of the Study

Nepal is bordered between the two most popular countries of the world India in the east, south and west and China in the North. Nepal is one of the least developed countries in the world lying as sandwiched between the two big countries, China and India. Poverty is wide spread and necessities of many have not been fulfilled. The annual per capita GDP of Nepal is estimated to be just \$388 by ADB (Nepal in figure;2008). Economic growth of the country has not improved substantially over time to overtake population growth. Low economic growth rate, growing unemployment and poverty etc. are main problems of the country. These problems can be reduced through mobilizing all kinds of available resources. Nepal has adopted mixed economy to develop nation through participation of both private as well as public sector. Nepalese main source of income is agriculture sector. More than 80% of the total population depends on the agriculture sector. Economic development of the country is easy through development of this agriculture sector (Ghimire, 2004; 187).Most of people are living in the rural areas and are below the line of poverty. Though agriculture is main stay of Nepalese economy, only this sector is handicapped, so the nation should also emphasize other industrial and commercial areas. Like other developing countries in the world, the government of Nepal has also taken public enterprises as a means of economic development of the country, after the introduction of first plan in 1956. The rationale behind the establishment of such enterprises is to carry the programs set in the economic plan for economic development, which makes the country self sufficient ultimately. Due to lack of infrastructure, lack of skilled man power, investment problem, unwillingness to bear the risk of private sector, unbalance development of the country were the reasons behind the emergence of public sector.

Introduction of Nepalese Pharmaceutical Enterprises

Owing to geographical diversity ranging from the coldest Himalayas to the hottest Terai, Nepal is rich in several kinds of medicinal plants. However, the concept of producing modern medicines locally in the country flourished only since 1955 A.D,

when the then His Majesty's Government drafted a master plan for the utilization of medicinal plants and implemented in 1961 AD. As per the plan, Royal Drugs Research Laboratory (RDRL) was established in 1964 AD, which besides various research activities, started manufacturing modern pharmaceutical drugs from 1968 A.D. And thus the manufacturing unit of RDRL was converted into Royal Drugs Limited (RDL) in 1972 AD for commercial production and sales of modern drugs. And obviously Royal Drugs Limited becomes the pioneer of Nepalese pharmaceutical companies.

The establishment of Royal Drugs Limited was an encouragement for individuals willing to initiate new pharmaceutical industries. After its establishment, a private pharmaceutical company namely 'Nepal pharmaceutical works Pvt. Ltd' emerged at Godavari, Lalitpur, but turned out unsuccessful. Likewise, initially chemidrug industries also produced modern ayurvedic drugs but later engaged in production of allopathic drugs. However, due to lack of adequate information and technical deficiency, pharmaceutical industries couldn't improve in the decade of 1970s. Five factories were established in late seventies but were inefficient by early eighties.

A suitable environment for drug industry was created when 'Department of Drug Administration' (DDA) was established in 1979 in accordance with Drug Act, 1978. Therefore, many drug industries were established during this time. In 1993, in order to give special focus, Royal Drugs Research Laboratory (RDRL), established in 1964, which was previously under Ministry of Forest and Soil was transferred to Ministry of Health.

Then His Majesty's Government of Nepal introduced National Drugs Policy (NDP) in 1995, with objectives to maintain and safeguard the health of the people by making the country self-reliant in drug production ensuring availability of safe, effective and quality drugs at reasonable price to fulfill the need of every nook and corner of the country. In the ninth plan, HMG has emphasized the necessity of implementation, and the monitoring of NDP and a new list of essential drugs was also published. And recently, the government has also come out with long-term twenty years health plan urging serious attention in its implementation.

With reference to the figure of 1996, it is revealed that Nepal imports medicines worth approximately 2,650 million rupees during the time. The demand of the medicine has been increasing proportionately with the increase of population and also with the growing health and hygiene awareness among the public. 80 percent of this demand is met by importing medicines from India alone and only 18 percent is being covered by the Nepalese pharmaceutical industries. Comparing the above figures with that of 1972, the local production of medicines in 1972 was 15 percent only; and this signifies there has been insignificant growth of Nepalese pharmaceutical industries in time span of two and half decade. Number of causes have been pointed out in general for this short coming, which are; heavy influx of meager quality drugs from neighboring country, competition prevalent within local industries in spite of competing with foreign pharmaceutical companies, etc. The local industries are reluctant to compete with foreign companies because of various factors, mainly the technical, economical and goodwill deficiency.

Department of Drug Administration of Nepal Government records the following figures in pharmaceutical sector of the country:

Numbers of registered pharmaceutical outlets upto Asar 2065 stood 24093 out of which 3583 are whole seller and 20510 are retailer . There are 125 domestic drug industries and among them 79 are for allopathic producer and 46 are traditional aayurvedic and other producer . Three foreign companies are also operating in this field producing 6 product.

Introduction to Nepal Drugs Limited

History of Nepal Drugs Limited can be traced back to 2023 B.S. (1966 A.D) when Nepal Drugs Research Laboratory (NDRL) was established for the production and marketing of medicines. The aim of the program was to search for possibilities of establishment of pharmaceutical industries in Nepal and to help the laboratory for re-orientation of its research activities for betterment of the country. Thus, a separate production unit operating under this research laboratory was established, which was formally inaugurated by Her Majesty the Queen on Ashadh 8, 2025.

It was only after a trial period of four years in the production and marketing of medicines, the production unit was converted into Nepal Drugs Limited. Hence, Nepal Drugs Limited was established on Ashwin 1, 2029 under the Company Act, 2021 as per the decision of the then His Majesty's Government on Asadh 13, 2029. To begin with, the company began its activities from a small building situated at Thapathali. Now, the company is operating from Babarmahal, where it has 45 ropanies of land, which includes 90,000 square feet of main factory building and other smaller buildings.

The company initiated its activities with an authorized capital of Rs. 15,000,000 and paid up capital of Rs.6, 342,000. Currently the company's authorized capital is Rs. 150,000,000 and paid up capital is Rs 75,499,000. Out this capital, Nepal Industrial Development Corporation holds shares worth Rs. 7, 00,000 and the then His Majesty's Government owns rest of the shares. The company has also invested shares worth Rs. 1,302,000 in Herbs production and processing company limited.

The company is being assisted by international organizations such as; UNIDO, UNICEF, ZAIKA, WHO, UNDP in terms of plants and machineries. Currently, the company is facing competition with several existing drug manufacturing companies' particularly Indian pharmaceutical companies. Dynamic marketing and promotional activities has one of the necessities in the company. Besides, Sound Financial management practice has also been one of the requirements for the sustainability of the company.

Now the name of this company is changed into **Nepal Drugs Limited**, after the country is declared as LOKTANTRA in 2063, Baishak 11.

The main aims and objectives of Nepal Drugs Limited have been put as follows:

1. To produce and distribute safe, efficacious and quality medicine in reasonably fair prices to the general public in a way that will lead the country towards self-sufficiency in essential drugs.
2. To produce new varieties of medicines as per the market demand and deliver them in time.

3. To help the other local industries by using their products in production and packaging areas.

Types of Medicines

Nepal Drugs Limited produces and markets 30 clinical groups of medicines that consists of 70 preparations in 92 varieties in the form of tablets, powder, liquids, Ointments and injectable fluids.

Popularity of NDL Medicines

The medicines of Nepal Drugs Limited are consistently gaining popularity which shows by the consistent increase in sales volume. Some of the medicines are so popular that they have acquired household names. Various factors have contributed to the growing popularity; the most important is, of course, the confidence that has been shown by the medical practitioners, chemists and druggists on NDL products. The underlying truth in the confidence is “Nepal Drugs Limited manufactures safe, efficacious and quality medicines under GMP conditions of international standards and markets them at reasonably fair prices.”

Future Policies and Targets of NDL

NDL has the following future policies and targets for essential drugs and quality contribution of national income.

(a) Future Policies

NDL is concentrated to access pure medicine essential for public health facing the immense competitive condition of the market, the following future policy of NDL are as follows:

1. To provide sell and distribute new kinds of medicine according to demand of market.
2. The company is serious toward good manufacturing proactive to enhance product quality.
3. To operate the awareness programs about new product in the people.
4. To make selling policy adjusting.

(b) Future Targets

1. Generation of skill larger opportunity of employment.
2. Development of a new separate venture of potentials and I.V fluid unit.
3. Leading of NDL to such a state of profitability that its purchase of share may become lucrative.
4. Starting manufacture of 80% of essential drugs by number in the country.
5. Development of a situation to the employees in such a way that a hard working person will enjoy highest remuneration where as unproductive person will be made redundant.
6. Expansion of production ten-fold to have positive profitability trend.
7. Floating of the public share so that the capital investment will be at ease.

The production and sales achievement of Nepal Drugs Limited are shown in the following tables;

Table: 1.1
Production Achievement

(Rs. in '000')

F/Y	Tablet	Formaldehyde	Capsule	IVF& ENT	Powder & Suspension	Jeevan Jal
2056/57	193,711	768	5,246	330	54	3,768
2057/58	220,857	1,102	7,062	472	59	2,040
2058/59	127,493	813	5,816	552	44	4,596
2059/60	93,145	928	5,485	521	67	3,888
2060/61	72,999	746	3,551	383	-	1,701
2061/62	76,204	560	2,364	255	32	568
2062/63	76,695	737	2,535	324	20	920
2063/64	49,018	286	1,386	322	12	708
2064/65	42415	318	1580	302	17	1120

Table: 1.2
Sales Achievement

(Rs in '000')

Fiscal year	Sales
2056/57	127,389
2057/58	128,459
2058/59	93,279
2059/60	114,063
2060/61	81,833
2061/62	60,283
2062/63	65,953
2063/64	51,966
2064/65	52,813

(Source: Table 1.1 & 1.2, Source NDL Bulletin 2008)

Table: 1.3
Proportion of Nepal Drug Limited out of Total Drugs Production

Companies	Average production Rs in '000'					%
	Tablets	Capsule	Formaldehyde	Others	Total	
Deurali Janta	168300	9321	331	512	178464	31.36%
Curex	142516	6315	318	211	149360	26.25%
NDL	119067	5214	915	218	125414	22.04%
Simca	98522	3214	231	135	102102	17.94%
Others	12135	1318	180	25	13658	2.41%
Total					568998	100%

(Source: www.drugbulletin.com)

Above data shows that Deurali Janta Pharmaceutical is the highest producer of drugs and Nepal Drugs Limited is in third position with 22.04% out of the total drugs production.

1.2 Statement of the Problems

Cash estimation to the protection of firm's cash requirement. It is concerned with all decisions and acts that influence the determination of the appropriate level of cash and their efficient use as well as choice of the financing method, keeping in view of liquidity that the portion of its total current assets which is put to variable operative purpose and has the characteristics of greater divisibility, liquidity. The cash and bank

balance of an enterprise is that portion of its total current assets which is put to variable operative purpose and has the characteristics of greater divisibility, liquidity and rapidity of turnover which influence the types and terms of financing. Hence, cash is itself a decision making area within the framework of the overall current assets management.

The down-falling trend of public enterprises, especially the industrial enterprises or the manufacturing enterprises has been the everlasting problem of our country. Hardly a handful of these public manufacturing enterprises have proved satisfactory, rest of all being a burden to the government. In the name of economic liberalization, many of these companies are either privatized or are in the process of privatization to get rid of the burden. The annual report of financial status of public enterprises, the economic survey, FY 2003/2004, 2004/05, 2005/06, 2006/07 and 2007/08 conducted by Government of Nepal, Ministry of finance clearly mentions about the inefficiency of public enterprises.

- The hostile conditions of rampant destruction of its assets and operations resulting from internal conflict and open state of insurgency.
- Due to lack of proper planning interference corruption; and political interference causes high cost of production.
- The accumulated amount of account receivable which is being increased year by year shows the poor performance of NDL

1.3 Objectives of the Study

The present study has been conducted to examine cash management practices of Nepal Drugs Limited of Nepal, on the basis of the case study of Nepal Drugs Limited, the oldest public pharmaceutical company of the country.

It focuses on the investment decision of the company and in particular the cash requirements in short run business operation of the firms, i.e. management of the individual current assets like; cash and bank balance, receivable and inventory in the short-run.

The specific objectives of the study are as follows:

1. To examine and critically analyze the cash management practices in Nepal Drugs Limited
2. To examine the liquidity position of Nepal Drugs Limited.
3. To examine the cash flow statement of Nepal Drugs Limited.

1.4 Limitation of the Study

The study is subject to various limitations, which are as follows:

- The study assumed that the impact of political factors of the country such as; change in government, any sort of political involvement in the in the firm, if prevalent, has insignificant or no effect upon the financial decisions.
- The study is mainly dependent on secondary data, covering data of past seven fiscal years only.
- Nepal Drugs limited has been chosen as sample from among various manufacturing public enterprises. Hence, the findings couldn't be extensively generalized to all the existing public enterprises of the country.
- Statistical tools and financial ratio analysis have only been used to analyze quantitatively.

1.5 Organization of the Study

The study has been organized into five chapters, each devoted to some aspect of the study on “Cash Management Practices” of Nepal Drugs Limited. The titles of these chapters are as follows:

Chapter- I : Introduction

Background information on the subject matter of research undertaking has been presented under this section to provide a general idea of its history. So, this section includes a brief introduction to public enterprises in Nepal, role and objectives of public enterprises in Nepalese economy, then proceeding through an updated information of existing Nepalese pharmaceutical enterprises and introduction to Nepal Drugs limited. Likewise, the statement of the problem, objectives of the study comes next followed by limitations of the study.

Chapter- II: Review of Literature

This chapter included the reviews of relevant previous writing and studies to find the existing gap. Review of textbooks, dissertations/ thesis has been included.

Chapter-III: Research Methodology

In this chapter, the method employed to gather data and the tools used in its interpretation has been described under the headings; research designs the population and sample, nature and sources of data and financial and statistical tools for analysis of data.

Chapter-IV: Data Presentational and Analysis

This chapter is the one of the most important and core of the thesis. Since, it consisted of systematic presentation and analysis of financial statements employing financial and statistical tools and major findings.

Chapter-V: Summary, Conclusion and Recommendations

This chapter is also important part of the study covering summarization of the study work, viable recommendations suggested and conclusions. Apart from these all, bibliography and appendices follow.

CHAPTER- II

REVIEW OF LITERATURE

2.1 Conceptual Framework

2.1.1 Meaning of Cash

Cash is one of the most important current assets for the operation of every firm. It is an idle and non-earning asset. Cash is the money, which the firm can disburse immediately without any restriction. The term cash includes coins, currency and checks held by the firm and balance in its bank accounts. Some near cash items, such as marketable securities is also included in cash. Managing cash flows is an extremely important task for firm because the primary goal of a financial manager is to maximize firm's value and is based on cash flows. The financial manager's task is to determining how much cash a firm should have on hand at any time to ensure continuous normal business operations without interruption. If a firm holds more cash than it needs, share holder's returns will not be maximized. Therefore, for its smooth running and maximum profitability, proper and effective cash management in business is of paramount importance. So, the management of current assets and current liabilities of the business is necessary for day to day operation. It is concerned with the decision regarding the short-term funds influencing overall profitability and risk involving in the firm. Thus, management of cash has been regarded as one of the conditioning factors in the decision-making.

“Cash is lifeblood of the business. This is the most important component of the working capital. It is the most liquid assets, have vital importance to daily operations of the firm” (*Chandra; 1984:282*).

“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; 1999:18.1*).

2.1.2 Cash Management

Cash itself is not an asset capable of causing the profit differential for the firm, it is desirable that cash balances be minimized as much as possible. Yet the maintenance

of adequate cash balances is an obvious requirement of a firm's solvency is to be maintained. Cash management consists basically of having a sufficient quantity of cash yet maintaining a balance at the lowest figure adequate to meet current obligations (*Cooke and Bomeli;1999:3-4*).

Cash management involves managing the monies of the firm in order to maximize cash availability and interest income on any idle funds. At one end the function starts when a customer writes a check to pay the firm on its accounts receivable. The function ends when a supplier an employee or the government realizes collected funds from the firm on an account payable or accrual (*Van Horn; 1991:394*).

Cash management has certain variables, which directly related to cash. Diagram of cash flow and its related variables are shown (*Bleck;1981:50*).

2.1.3 Different Techniques of Cash Management

(1) Cash Budget

The cash budget shows the firm's projected cash inflows and outflows over some specified period. It is the most significant device to plan for and control cash receipts and payments. It provides much more detailed information concerning a firm' future cash flows. It is the most important tools for managing cash. It is useful in determining when cash surplus or shortage will occur. Plans can then, be made to borrow to cover shortages or to invest surplus.

(2) Cash Planning

Cash planning can help anticipate future cash flows and needs of the firm and reduces the possibility of idle cash planning is a technique to plan for and control the use of cash. The forecasts may be based on the present operation or anticipated future operation. Cash plan are very crucial in developing the overall operation plans of the firm. Cash planning may be done on daily, weekly or monthly basis. It depends upon the size of the firm and philosophy of management (*Pandey; 2005:46*).

(3) Long-term Cash Forecasting

Long-term cash forecasting are prepared to give an idle of the company's financial requirement of distant future. Once a company develops long term cash forecast, it

can be used to evaluate the impact of say new product development on the firm financials condition. The major uses of the long-term cash forecast are company's future financial needs, especially for its working capital requirements, to evaluate proposed capital projects and it help to improve corporate planning. Long term cash forecasting not only reflects more accuracy and the impact of any recent acquisitions but also foreshadows financing problems.

(4) Short-term Cash Forecasting

There are most two common used methods of short-term cash forecasting are as follows:

a. Receipts and Disbursements Forecasting

The prime aim of receipt and disbursement forecasts is to summarize cash flows during a predetermined period. In case of those companies where cash items of income and expenses involve flow of cash; this method is favored to keep a close control over cash.

b. Adjusted Net Income Method

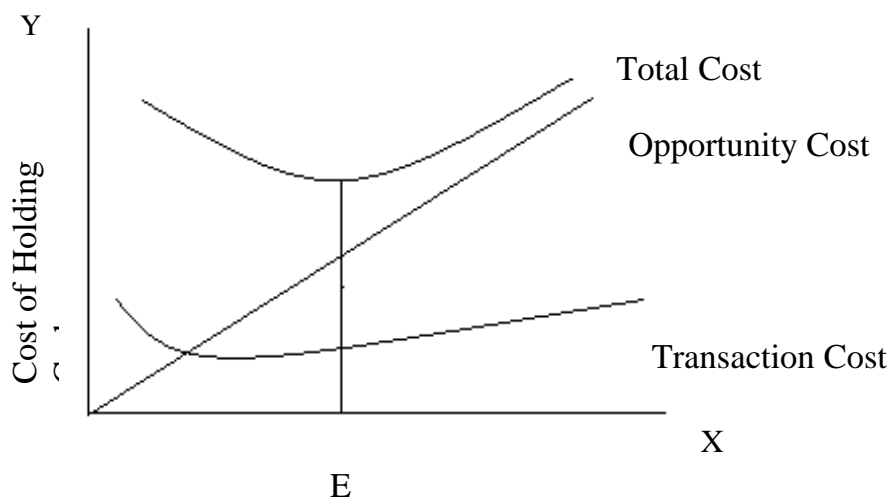
This method of cash forecasting involves the tracing of working capital flows. Sometime, it is also called the sources and uses approach. Two objectives of this method are; to project the company's need for cash at some future date and to show whether the company can generate this money internally or not.

2.1.4 Determining the Optimum Cash Balance

Financial manager responsibilities are to maintain a sound liquidity position of the firm, so that dues may be settled in time. Every firm needs cash not only to purchase raw materials and pay wages but also for payment of dividend, interest, taxes and countless other purpose. The test of liquidity is really the availability of cash to meet the firm obligations when they become due. Thus, the cash balance is maintained for transaction purpose and an additional amount may be maintained as a safety stock. The financial manager should determine the appropriate amounts of cash balance, a trade-off between risk and return influences such a decision. If the firm maintains a small cash balance, its liquidity position become weak and suffers from a capacity of cash to make payment. But investing released funds in some profitable opportunities

can attain a higher profitability. If the firm maintains a high level of cash balance it will have a sound liquidity position but forego the opportunity to earn interests. Thus, the firm should maintain an optimum cash balance to find out the optimum cash balance the transaction costs and risk of too small. A balance should be matched with the opportunity costs of too large a balance. The figure shows this trade-off graphically.

Figure: 2.1
Determination of Optimum Cash Balance



(Source: Pandey;2002:298)

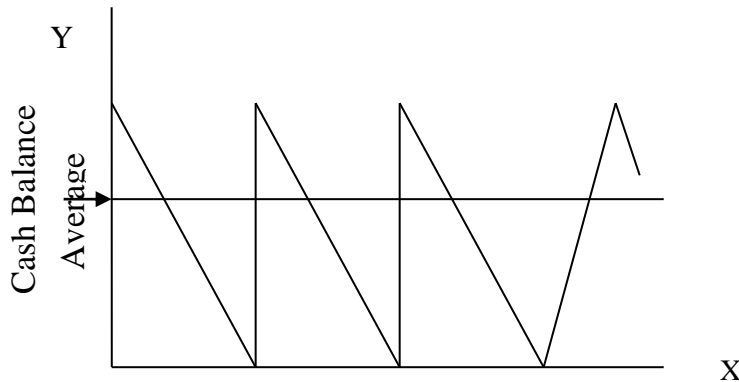
2.1.5 Optimum Cash Balance under Certainty; Baumol's Model

In view of minimizing the opportunity cost of holding cash and maximizing the return on the available funds, the cash balance should be maintained at a minimum level and the funds not required be invested in the marketable securities. Baumol model is one of the methods that can be used for this purpose. Baumol model is based on the assumptions that;

1. The cash is used at a constant rate,
2. The periodic cash requirements is more or less and
3. There are some costs such as opportunity costs that increase and other costs such as transaction costs that decrease as cash balance increase (*Khan and Jain; 2003:136*).

Because of the assumption (1) and (2) the graphical representation of cash position looks like as follows:

Figure: 2.2
Baumol's Model for Cash Balance



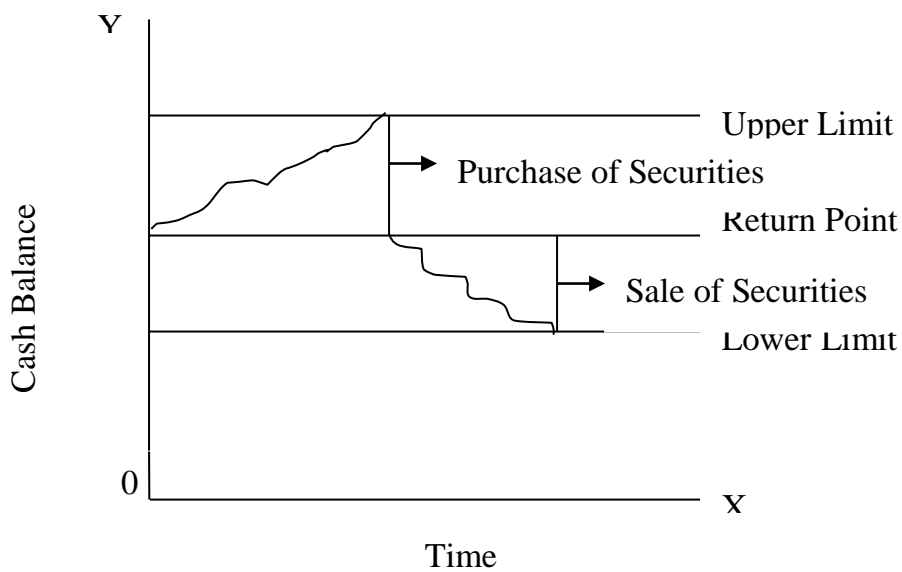
(Source: Pandey; 2002: 927)

Given its assumptions, the model prescribes an optimal size of cash balance and the optimal size of account or borrowing. What matter for a firm is the total of opportunity cost and the transaction cost? Therefore, the objective of this model is to minimize the total cost of holding cash balance. The figure below shows the relationship between the average size of cash balance and various costs associated with the cash maintenance.

2.1.6 Optimum Cash Balance under Uncertainty; The Miller-Orr Model

The limitation of the Baumol model is that it does not allow the cash flows to fluctuate. Firms in practice do not use their cash balance uniformly nor are they able to predict daily cash inflows and outflows. The Miller-Orr model cash flow variation. It assumes that net cash flows are normally distributed with a zero value of mean and a standard deviation. As shown in figure below, the Miller-Orr model provides for two control limits- the upper control limit as well as lower control limit and return point. If the firm's cash flows fluctuate randomly and hit the upper limit, then it buys sufficient marketable securities to come back to a normal level of cash balance (the return point). Similarly, when the firm's cash flows wander and hit the lower limit, it sells sufficient marketable securities to bring the cash balance back to the normal level (the return point).

Figure: 2.3
The Miller-Orr Model



(Source: Pandey;2002: 929)

2.2 Review of Thesis

In this section the review of the thesis of the master's level relating to cash have been studied. There were only few thesis/dissertations written on cash when browsed through computer records of theses reports presented earlier in Tribhuvan University Central Library, Nepal Commerce Campus as well as in Shaker Dev Campus. Nevertheless, there were plenty of dissertations, which were closely related to cash management. For instance, working capital management, inventory management and profit planning are the topics, which are some way related to cash management.

Bajracharya (1990) conducted a study on "*Cash Management of Nepalese Public Enterprises*", has taken 18 enterprises as a sample. He has the following research objectives:

- To critically review cash management techniques practiced by Nepalese public enterprises.
- To examine the demand for cash in the case of Nepalese Public enterprises.
- To suggest appropriate cash management policy for the future

His research has analyzed;

- Cash management in public enterprises is primarily based on the traditional practices. Lacking in a specific approach, more serious aspects of cash management has been the any formalized system of cash planning and cash budgeting in many of enterprises, although the executive of some enterprises do have the practices of forecasting cash requirements on a formal basis.
- Modern practices with respect to debt collection, monitoring the payment, behavior of customers and relevant banking arrangement in connection with collection of receivables have been virtually ignored in many enterprises.
- Majority of the enterprises didn't face any serious liquidity problem. However, this was not because of the effectiveness of cash planning and budgeting. The problem of liquidity actually didn't arise due to the coincidence of delay in payment to creditors.
- By and large most enterprises have periodic accumulation of surplus cash and corresponding cash shortage from time to time. However, one of the enterprises considered the implication of holding idle cash balance and few took on to account the potential benefit of investing surplus in marketable securities. These which failed to consider the cost of administering such investments.
- There had been wide variations over the time in the state of financial health of enterprises in terms of the composition of current assets to current liabilities as revealed by the relevant financial ratios.
- Neither interest rate nor the rate of inflation had any effect on the cash balance. Further there was very little evidence of effect on the cash balance holding in most case.

Further he recommended for developing appropriate strategies for cash management. He stressed on cash planning and budgeting to cash project cash surplus and cash deficit. Firm can accelerate the inflows as far as possible to reaccelerate outflow. He also stressed to maintain optimal level of cash and at last, it can be better to invest idle fund in marketable securities.

Yogi (2000) conducted a study on “*A working Capital Management of Uniliver Nepal Limited*”. He has the following research objectives:

- Analyze the liquidity, composition of working capital, assets utilization and profitability position.
- Analyze the optimal level of working capital.
- Analyze the financing position and profitability position
- Examine the relationship between liquidity and profitability position.

His research has analyzed:

- The liquidity position of the company is fluctuating year by year.
- The proportion of current assets is affected by the sales. In other words the sales affected the management of current assets.
- The composition of current assets and current liabilities are fluctuating in nature.

Aryal (2003) conducted a study on “*Working Capital Management of Pharmaceutical Industries of Nepal With Special Reference to Royal Drug Limited*”

He has the following research objectives:

- Finding the liquidity ratio
- To find turnover and profitability ratio
- Comparison of different outputs (among liquidity, turnover and profitability)
- Find out the profit and compare the trend.
- Show the relation of statistical approach of different variables by using Karl Pearson’s correlation coefficient method.
- Show the effect according to different graphical approach.
- Recommendation to achieve organizational goal.

His research has analyzed:

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

- The major components of current assets in RDL, are cash and bank balance , receivable inventory. During the period of study the proportion of cash and bank balance, receivables and inventory to current assets on an average are 8.53 percent,16.37 and 63.43 percent respectively. It is found that inventory holds the largest portion of that current assets.
- The over proportion of current assets on total assets are increasing upto fiscal year 2053/54. It is increased from 69.42% to 76.95%. And in range and fall down to 74.30% in fiscal year 2054/55.The average ration of current assets to total asset is 72.95%

Neupane (2004) conducted studied on “*A Study of Cash Management of Nepalese Public Enterprises*” (*A Case Study of Salt Trading Corporation Limited*). He has following research objectives:

- To study the exiting cash management in STCL,
- To critically review the cash management technique by STCL.
- To suggest appropriate cash management policy for future.

His research has analyzed:

- Cash management in STCL is primarily based on the traditional practice lacking in scientific approach. A more serious aspect of cash management has been the absence of any formalized system of cash planning and cash budgeting in STCL.
- Modern practices with respect of debt collection, monitoring the payment behavior of customers and relevant banking arrangement in collection of receivables have been virtually ignored in STCL.
- The STCL could not make the best use of available cash balance prudently.
- The average turnover time in a year is found 40 times which is in fluctuating trend over the study period.
- Average cash conversion cycle taken 64 days .
- i.e. little more than two month which is not a good signal for the cash management or cash collection efficiency of corporation is very low.

Koirala (2006) conducted a study on “*Cash Management in the context of Nepal Telecommunication*”. He has the following research objectives:

- To identify the sources and utilization of cash
- To examine the existing internal control policy of cash transaction of NTC.
- To identify the shortage or excess of cash in the company and the procedures of financing for the shortage and investment of excess cash.
- To study the liquidity position of the company.

His research has analyzed that:

- Company’s cash turnover ratio is in decreasing trend. In addition the turnover ratio was too low which indicates that the company is unable to utilize its idle cash in generating sales. The company’s position of liquid cash that remained idle was too high. So there was lack of proper management of idle cash in the company towards profitable sector which could have yield more revenue.
- Current asset of the company over the study period was good enough to meet the current liabilities. And the major portion of current assets comprised of cash. The position of highly liquid assets to meet the current liabilities of the company was found more than sufficient. It was because of the huge portion of cash in the current assets.
- Cash flow position of company in different fiscal year was discussed in actual cash flow analysis portion of the study from fiscal year 2056/57 to 2060/61 cash inflow from operating activities was increasing year by year.
- There are strict provisions regarding cash handling in the company. The decision making process will be lengthy due to compliance of time consuming rules and procedure as shows that the company is still suffering from centralization problem of management.

Karki (2008) conducted a study on “*Cash Management in listed Manufacturing Companies in Nepal*”. His research has the following research objectives:

- To examine and critically analysis the cash management in listed companies.
- To identify the liquidity position of the companies.
- To study the relationship of cash with other influencing aspects of cash management whether it is significant or not.

- To analyze cash conversion cycle of the companies.
- To provide necessary recommendation for improvement of cash management on the basis of analysis.

His research has analyzed that:

- Listed companies seem not able to maintain the adequate proportion of cash in total assets. The average investment in cash by listed manufacturing companies is just 6.06% which is very low.
- Relationship of cash on receivable and payable has found to be a significant level. The multiple correlation coefficients of cash on receivable and payable have been obtained to be 0.97. its coefficient of multiple determinations has been obtained to be 0.945. it means that 94 percent of total changes in the values of cash have been explained by the effect of receivable and account payable. The regression coefficient of cash on receivable -0.408 means 0.408 times decrease in cash if one time increases in receivable, holding payable constant. Similarly, the regression coefficient of cash as account payable 1.54 means 1.54 times change in cash of 1 times change in payable, holding receivable constant.
- The average collection period and payable deferral period have been found to be 531 days and 88 days. It has found the gap of 443 days. So the listed manufacturing companies are in the position of worst condition.
- Liquidity position of listed manufacturing companies has not been satisfactory. the companies overall average of CR and QR have been obtained to be 1.51:1 and 0.92:1. the QR has not so bad. The standard ratios are CR=2:1 and QR=1:1 as a whole it is seemed that the companies are not able to meet their current obligation within the stated time.

Bhatta (2008) conducted a study on “*A Study of Cash Management of Nepal Trading Limited*”. He has the following research objectives:

- To see the position of current assets and liabilities of NTL.
- To study of existing cash management system in NTL.
- To make the suggestions of the basis of above analysis to improve the cash management of NTL.

His research has analyzed that:

- Cash collection efficiency in this corporation is low.
- The collection of trade credit in the corporation is low during the three years of the study period.
- Management has taken liberal credit policy to sales of goods . hence the cash and bank balance of the study period is minimum of AR.
- No optimum cash balance is maintained. The cash and bank balance with respect to current asset has been fluctuating trend. Similar of cash with respect to the total assets.

Ban (2009) conducted a study on “*Cash Management in Public Manufacturing Company (A Case Study of Bottlers Nepal Limited)*”. He has the following research objectives:

- To study the existing cash management system in BNL.
- To critically review the cash management technique practiced by BNL.
- To suggest appropriate cash management policy for the future.

His research has analyzed:

- Cash management in BNL is primarily based on practices lacking in scientific approach.
- The BNL could not make the best use of available cash balance prudently.
- Modern practices with respect debt collection monitoring the payment behavior of customers and relevant banking arrangements in connection with collection of receivables have been virtually ignored in BNL.
- The average cash turnover time in a year is found 136 times which is in fluctuating trend over the study period.
- The average inventory conversion period into cash is found more than 4 month i.e.128 days which is slow than cash turnover time.
- The average cash conversion period is faster than a average receivable period which is not a good signal for the purpose of managing cash.
- Average cash conversion cycle takes 126 days i.e. little more than 4 months which is also normal signal for cash management or cash collection efficiency of company is very normal.

Research Gap

The review of the above relevant literature has contributed to enhance the fundamental understanding and knowledge, which is required to make study meaningful and purposive. This study focused on the topic in which research has not yet made. So this research work is very much centered to identify the liquidity position of this company, to make analysis of cash conversion cycle of the company, to study relationship of cash with other influencing variables of cash and ultimately to recommend practical suggestions for the betterment of this company. So this study will be fruitful to those interested person, parties, scholars, professors, students, businessmen and government for understanding cash management practices of the company. Hope this study will help others in future in the related field.

CHAPTER- III

RESEARCH METHODOLOGY

3.1 Research Design

Research design is the plan, structure and strategy of the research plan to obtain answers of research questions. It is the arrangement for collection and analysis of data. To achieve the objective of this study, descriptive casual correlation, analytical research design has been used. Some financial tools along with statistical tools have been applied to examine the cash position of Nepal Drugs Limited. This study is the case study of Nepal Drugs Limited, a manufacturing pharmaceutical company of Nepal. Annual data of 2057/58 to 2064/65 were used in this study. The balance-sheets, profit and loss account statements, cash flow statement were taken as basis to analyze the cash management position of the company.

3.2 Nature and Sources of Data

Financial statement such as: balance-sheet, profit and loss accounts, statements of proposed budget were collected for analysis. The company doesn't have computerized records of financial statements. Data of 2057/58 to 2064/65 were collected from annual report of Nepal drugs Limited.

3.3 Methodology

- Financial tools
- Statistical tools

3.3.1. Financial Tools

The financial analytical tools of the quantitative analysis of secondary data were as follows:

1. Financial Ratio Analysis

Financial ratio analysis was used to determine the relative strengths and weakness of Nepal Drugs Limited. It also provides a framework for financial planning and control. Financial Managers need the information to evaluate the firm's past performance and

to design future plans. Financial analysis concentrates on financial statement analysis, which highlights the key aspects of firm's operation. Financial statement analysis involves a study of the relationship between income statement and balance-sheet accounts. Although financial analysis has some limitations, when used with care and judgment, it can provide some very useful insights into the operation of a company.

a. Current Ratio

Current ratio examines the liquidity position of the company. It examines the position of the company as to its holding of current assets against its current liabilities. Higher ratio indicates satisfactory position and vice-versa. However, too high ratio is indication of poor cash management indicating poor credit management.

The standard current ratio is 2:1; however for a public enterprise, the ratio tends to be little lower than 2:1, as these enterprises generally require very little current assets. But nevertheless any company should maintain this ratio above 1:1, since ratio lower than this definitely indicates poor liquidity position

This ratio is obtained by following formula:

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

b. Quick Ratio

This ratio is also known as 'acid-test ratio'. This ratio also examines the liquidity position of the company. The purpose of this ratio is to test the ability of the firm for immediate payment of current liabilities. This ratio calculated by deducting inventories from current assets and dividing the remainder by current liabilities. Inventories and prepaid expenses are excluded because it may be difficult to liquidate them at their full back value. More or less than standard ratio is not favourable for a company. Generally acid-test ratio of 1:1 is considered satisfactory as a firm can easily meet all current liabilities.

This ratio is obtained by following formula:

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

c. Cash Turnover

The cash turnover ratio explains how quickly the cash is received from the sales. In other words, it measures the speed with which cash move through an enterprise's operation.

Cash Turnover Ratio is Obtained by the following formula:

$$\text{Cash Turnover Ratio} = \left[\frac{\text{Sales}}{\text{Cash in hand and bank}} \right]$$

d. Receivable Turnover Ratio

Receivables turnover ratio gives an idea as to how quickly receivables are converted into sales.

This ratio is obtained by following formula:

$$\text{Receivable Turnover in time} = \frac{\text{Total Sales}}{\text{Receivable}}$$

With computation of this ratio, average collection period of receivables is also calculated. Shorter average collection period refers to good credit management and vice-versa. But too short collection period suggests that the company has a very rigid credit policy and thus sales curtail would be the consequence as the sales transaction is only targeted to parties making payments promptly.

$$\text{Average Collection Period (ACP)} = \frac{\text{Days in a year}}{\text{Receivable Turnover in Time.}}$$

e. Inventory Turnover Ratio

Inventory turnover ratio gives idea on how quickly inventory is converted into sales. It is often necessary to use the average inventory figure rather than the year end figure especially if a firm's business is highly seasonal or if there has been a strong upward or downward sales trend during the year. It measures the efficiency of inventory utilization. Increasing ratio is favorable which shows that firm is very efficient on inventory management. This ratio is obtained by following formula;

$$\text{Inventory Turnover Ratio} = \frac{\text{Sales}}{\text{Inventory}}$$

f. Cash Balance to Account Receivable

This ratio measures the cash and bank balance in relation with account receivables of the firm. Higher ratio refers to sound liquidity position and vice-versa. However, too high ratio is indicative of the fact that the business dealings are restricted to only those parties making quick payments, thereby limiting its scope of sales volume.

This ratio is obtained by following formula;

$$\text{Cash Balance to Account Receivable} = \frac{\text{Cash}}{\text{Account Receivable}} .$$

g. Cash Balance to current Assets

This ratio is also supportive to analyze liquidity position of the firm. It measures the position of the cash and bank balance, the most liquid current asset in the total current assets. Higher ratio implies sound liquidity position and vice-versa.

This ratio is obtained by the following formula:

$$\text{Cash and Bank Balance to Current Assets} = \frac{\text{Cash Balance}}{\text{Current Assets}}$$

h. Cash Balance to Current Liabilities

This ratio calculates the cash balance available with the firm in meeting payments of current liabilities. Moderately higher ratio indicates good liquidity, too high and too liquid ratios are unfavorable for the firm. Since, too high indicates excess cash balance held idle and too low ratio means the firm unable to meet current liabilities.

This ratio is obtained by following formula;

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

i. Return on Working Capital Ratio

This ratio is also examining 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 obtained by following formula;

$$\text{Return on Working capital Ratio} = \frac{\text{Net Profit after tax}}{\text{CA}}$$

3.3.2. Descriptive Statistics

The statistical tools used for the quantitative analysis of secondary data were as follows:

a. Mean (\bar{X})

Mean is value which represents a group of values. It shows the characteristics of the whole group. Generally the average value lies somewhere in between the two extremes, i.e. the largest and the smallest items. It is also known as simple average.

b. Standard Deviation (σ)

Standard deviation measures scatter, spread and provides idea of homogeneity or heterogeneity of the distribution. Out of various methods of studying dispersions such as; range, quartile deviation, mean deviation; standard deviation and variance are the most popular method.

$$\text{S. D.} = \sqrt{\frac{1}{N} \sum (X - \bar{X})^2}$$

Where;

N = Number of observations/time periods

\bar{X} = Expected return of the historical data

In conjunction with standard deviation, coefficient of variation (c.v.) was used. It is defined as the standard deviation divided by the mean of expected return. It is used to

standardize the risk per unit of return. A project with a low c. v. has less risk per rupee than a project with a high c. v.

$$\text{C.V.} = \frac{\text{Standard Deviation}}{\text{Expected Return}} \times 100\%$$

c. Coefficient of Correlation (r)

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 analysing the covariation of two or more variables.

It is to be noted that a high degree of correlation between two variables doesn't always necessarily imply that changes in one variation cause changes in the other .

Out of several methods of calculating correlation, coefficient of correlation is one of the best and popular method. Karl Pearson's coefficient of correlation(r) measures the degree of association between the two variables suppose X and y; given by :

$$r = \frac{\sum \mu V}{\sqrt{\sum \mu^2 \cdot \sum V^2}}$$

Where;

r = Coefficient of Correlation between X and Y.

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

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

$$\bar{X} = \frac{\sum X}{N}, \quad \bar{Y} = \frac{\sum Y}{N}$$

N = Number of Years.

Interpretation of correlation coefficient (r)

- The value of 'r' lies between +1.00 to -1.00
- When r =+1, there is positively perfect correlation between the two variables.
- When r = -1, there is a negatively perfect correclation between the two variabes.
- When r =0, the variables are uncorrelated i.e, increase or decrease in one variable results no impact on another variable and vice-versa.

Together with coefficient of correlation probable error (P.E.) of the correlation coefficient is also computed. P. E is the measure of testing the reliability of the

calculated value of 'r'. It is given by: $P. E. = 0.6745 \frac{1-r^2}{\sqrt{n}}$

Where;

P. E. = Probable error of correlation coefficient

N= Number of pair of observations

r= correlation coefficient.

It is used in interpretation whether calculated value of 'r' is significant or not.

1. If $r < P. E.$, it is insignificant. So, perhaps there is no evidence of correlation.
2. If $r > 6P. E.$, it is significant .
3. But when $P. E. < r < 6 (P.E)$, the value of 'r' is inconclusive as to statistically significant/ insignificant correlation.

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

$r + P. E$ (Upper Limit) and

$r - P. E$ (Lower Limit), respectively

But when 'r' is of negative value , i.e. $-1.00 \leq r < 0$, in order to compare 'r' with P.E which is always in positive value, 'r modulus' or $|r|$ 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 'r' is compared with P. E. and $6 (P.E.)$ to derive to a conclusion of practically significant/insignificant correlation.

d. Regression Analysis

Regression is the statistical tool which is used to determine the statistical relationship between two (or more) variables and to make estimation of one variable on the basis of the other variable(s). The closer the relationship between the two variables, the

more accurate the estimated value is. The unknown variable to be estimated is called dependent variable and the known variable is called independent variable.

Noteworthy here is that correlation analysis indicates to what degree the variables are related and 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

σ_X = Standard deviation of X variable

σ_Y = Standard deviation of Y variable

r = Karl Pearson's coefficient of Correlation.

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

$$(Y - \bar{Y}) = r \frac{\sigma_Y}{\sigma_X} (X - \bar{X})$$

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

4.1 Analysis of Cash Balance

Holding of optimum cash and bank balance is the rational cash management practice of a business firm. Management of cash plays a significant role in current assets of NDL. Total cash balance refers to the cash in hand, cash at bank, and cash in transit, near cash assets such as; marketable securities and time deposit in bank.

Table-8 below shows the amount of cash and bank balance of NDL during the period under study. The cash and bank balance of each fiscal year end was compared to preceding years to analyze fluctuations.

Table: 4.1
Analysis of Cash Balance

(Rs in million)

Fiscal Year	Cash Balance (Rs)	Increase(Decrease)%
2057/58	3.79	-
2058/59	4.50	18.73%
2059/60	2.94	(34.67)%
2060/61	3.76	27.89%
2061/62	44.69	1088.56%
2062/63	4.67	(89.55)%
2063/64	3.97	(14.99)%
2064/65	39.59	(897.23)%

Note: Figures in paranthesis indicates negative amount

In the fiscal year 2057/58, the cash balance of the company was Rs 3.79 million, which is increased by 18.73% to Rs 4.50 million, in the following year. However, it was decreased by (34.67) % in the fiscal year 2059/60 like wise; it declined in the fiscal year 2062/63&2063/64. In the fiscal year 2061/62 the cash balance of the company was Rs. 44.69 million, which increased by 1088.56%.

However, sharpest deviation in increments of cash balance occurred in the fiscal year 2058/59 when the company held cash balance of Rs. 4.50 million compared to Rs

3.79 million in the previous year. It indicated a increment by 18.73 %. Afterwards, the figure declined in the fiscal year 2059/60 by (34.67) %, 2062/63 by (89.55) % &2063/64 by (14.99)% and increased by 797.23% in 2064/65 . The figure suggested that the cash balance held was very erratic in nature ranging from the lowest Rs 3.79 million in the fiscal year 2057/58 to the highest of Rs 44.69 million in the fiscal year 2061/62. The figures thus show that the company has not been following definite policies regarding the amount of cash to be held in each fiscal year end.

It can be presented with the help of graph to show the variation in cash balance held at the end of each fiscal year.

Figure: 4.1
Cash Balance

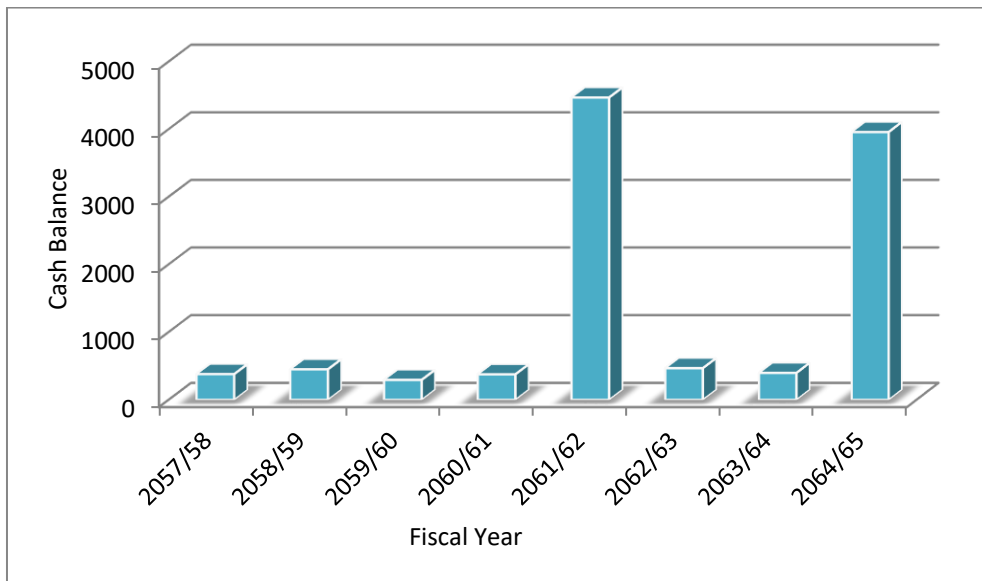


Figure 4.1 shows the small fluctuation in cash in the year 2057 to 2061 and in the year 2061/62 high increment in cash by 1088.56% than previous year. Again in

4.2 Analysis of Cash Turnover Ratio

The cash balance of the company should be optimum to meet its current obligations in course of daily business transactions. The cash turnover ratio represents how quickly the cash is received from its sale. Higher turnover is the signal of good liquidity and vice-versa. However, too high ratio indicates excess cash balance being held idle.

Table: 4.2
Analysis of Cash Turnover Ratio

(Rs in Million)

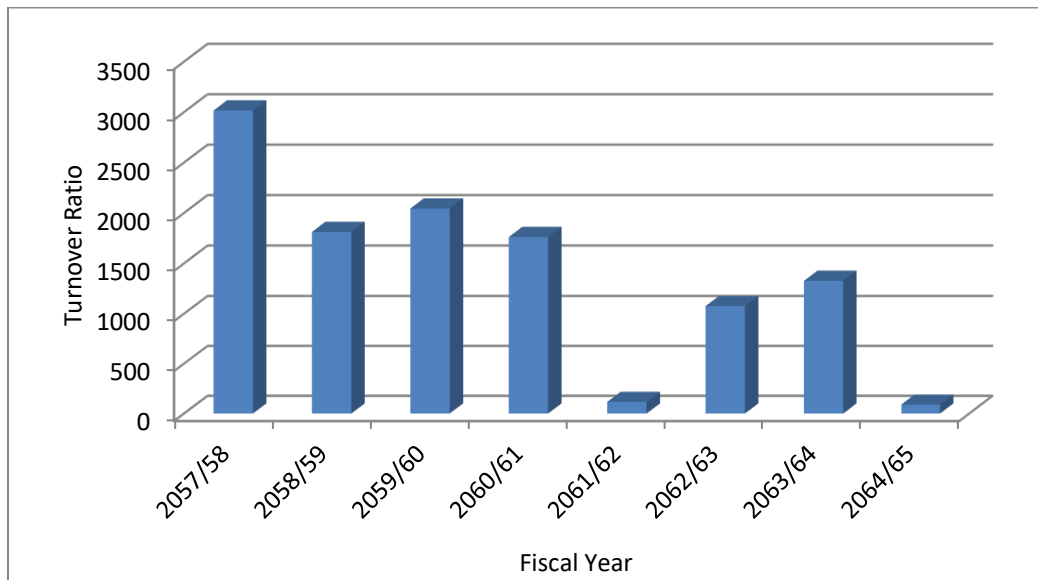
Fiscal Year	Sales	Cash and Bank	(Times)Ratio	Cash Conversion Days
2057/58	114.31	3.79	30.16	12
2058/59	81.56	4.50	18.12	20
2059/60	60.11	2.94	20.44	18
2060/61	66.21	3.76	17.61	20
2061/62	51.81	44.69	1.16	310
2062/63	50.26	4.67	10.76	34
2063/64	52.70	3.97	13.27	27
2064/65	35.28	39.58	0.89	32
Total	512.24	107.9	112.4	473
Average	64.03	13.48	14.05	59.125

Source: Annual Report of NDL

Table 4.2 shows erratic fluctuations in cash turnover analysis. The ratio is fluctuating too high and too low, indicative of no definite policy of holding cash balance in relation to sales volume. The above table shows the highest ratio of 30.16 times in FY 2057/58. Like wise, the lowest ratio of 0.89 has been observed in FY 2064/65. Overall, average ratio was 14.05 times. Likewise the average cash turnover cycle was found to be 59.125 days. However, due to unavailability of information regarding credit policy of the company, the credit days allowed to its debtors was not known. So, no precise analysis could be carried out for cash turnover cycle.

It can be presented with the help of graph to show the cash turnover ratio in relation with sales and cash balance.

Figure: 4.2
Cash Turnover Ratio



4.3 Analysis of Current Ratio

One of the reliable methods to examine liquidity position of an enterprise is by means of current ratio.

The conventionally accepted current ratio 2:1 is the standard ratio, a company should maintain. However, depending upon the nature of the company, the development of capital market and availability of long-term funds to finance current assets; the satisfactory ratio varies. As stated by Khan and Jain, taking into consideration the nature of a company, satisfactory current ratio for a public enterprise is generally very low, as normally these companies have very little need for current assets. So, satisfactory ratio for NDL, a public enterprise is therefore between 2:1 and higher than 1.5:1. But in general, ratio less than 1:1 is certainly undesirable for any enterprise.

Table: 4.3
Analysis of Current Ratio

(Rs in Million)

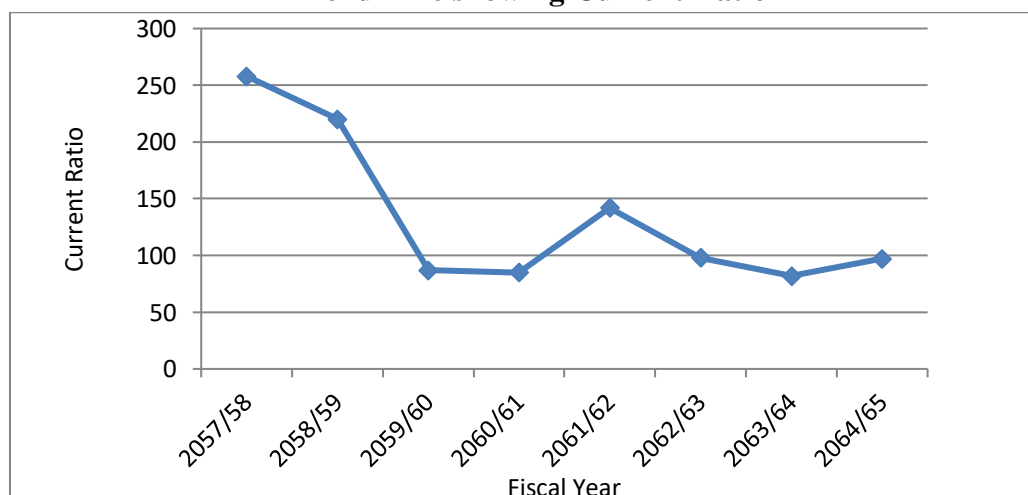
Fiscal Year	Current Assets	Current Liabilities	Ratio (times)
2057/58	109.87	42.57	2.58:1
2058/59	94.24	42.83	2.20:1
2059/60	88.65	101.45	0.87:1
2060/61	99.85	116.83	0.85:1
2061/62	122.30	86.21	1.42:1
2062/63	74.90	758.70	0.98:1
2063/64	67.57	81.82	0.82:1
2064/65	101.76	104.88	0.97:1
Total	759.14	640.31	-
Average	94.89	80.04	1.18:1

Source: Annual Report of NDL

The above table shows that the current ratio reported 2.58:1 in the FY 2057/58 to 0.85:1 in the FY 2060/61 indicating wide fluctuations. Observing the figure one may note that except in the FY 2059/60 & 2060/61, 2062/63 & 2063/64 none of the ratios calculated in the fiscal years under study were below 1:1. But in the FY 2059/60 & 2060/61 2062/63 & 2063/64 current ratio were below 1:1 which indicated that the NDL did not have a sound or satisfactory liquidity position. The most favorable current ratio was observed in the FY 2061/62 when the ratio recorded 1.42:1.

This can be represented in the following trend line to show the ratios in relation with current assets and current liabilities.

Figure: 4.3
Trend Line showing Current Ratio



4.4 Analysis of Quick Ratio

The ratio conveys the most precise information on liquidity position of a firm, since; it excludes the inventory, the least liquid asset from the current assets and compares it with current liabilities. Inventory when excluded from current assets is called quick assets. The preceding ratio analysis, i.e. the current ratio analysis fails to convey information regarding composition of the current assets of a firm. Current assets are composed of cash and bank balance, Short- time marketable securities, receivable and inventory. However, inventory is not capable of readily converting into cash and therefore it is the less liquid compared to other composition of the current assets. Thus this quick ratio is more reliable measure of liquidity than current ratio. Quick ratio is so called because it measures the capacity of a firm to convert its current assets quickly into cash in order to meet its current liabilities.

Table: 4.4
Analysis of Quick Ratio

(Rs in Million)

Fiscal Year	Quick Assets	Current Liabilities	Ratio (times)
2057/58	41.10	42.57	0.96:1
2058/59	43.37	42.83	1.01:1
2059/60	39.95	101.45	0.39:1
2060/61	43.20	116.83	0.37:1
2061/62	78.82	86.21	0.91:1
2062/63	43.49	75.70	0.57:1
2063/64	33.05	81.82	0.40:1
2064/65	63.85	104.88	0.61:1
Total	386.83	640.31	-
Average	48.35	80.04	0.60:1

Source: Annual Report of NDL

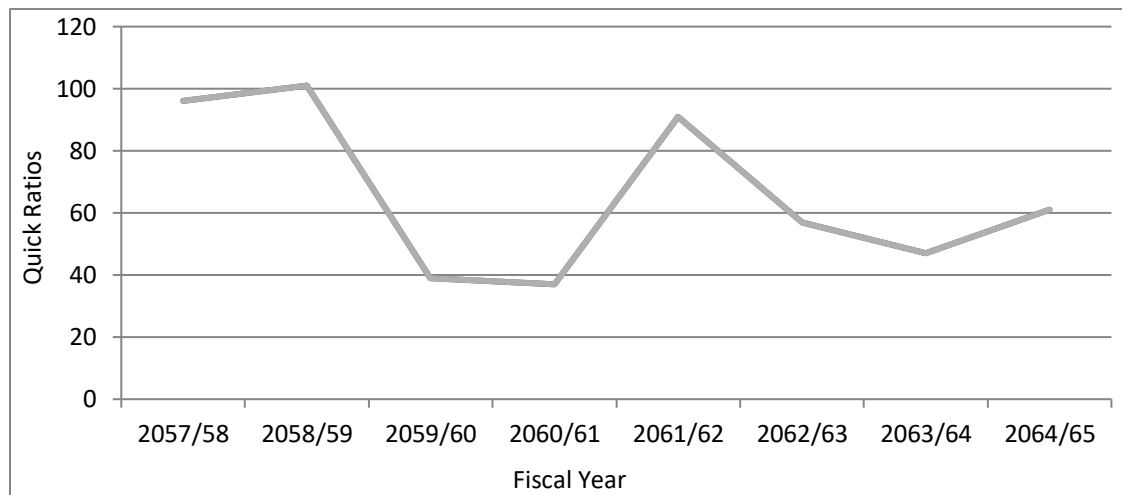
The standard quick ratio to be maintained by the enterprise is 1:1. From the above table, one may conclude that the ratios obtained were satisfactory for the fiscal year 2057/58, 2061/62, since during these fiscal years the ratios tend to be around the standard ratio of 1:1. In fact, in the fiscal year 2058/59, the ratio exactly coincides with the standard ratio of 1:1. However, other ratios for rest of the fiscal years were below the standard ratio, and as such liquidity positions for the corresponding years were unsatisfactory.

A note worthy point of observation here is, in the FY 2061/62, where the current ratio calculated in table. No: 10 i.e. 1.42:1 suggested liquidity position to be satisfactory. On the contrary, the quick ratio calculated for the same fiscal year i.e. 0.91:1, revealed the liquidity position to be favourable. The interpretation that can be reduced by cross examination in terms of current ratio and quick ratio in this case is that, though in the FY 2061/62 the liquidity position as revealed by current ratio was found satisfactory, a large part of the current assets was tied-up in slow-moving and non-salable inventories and slow-paying debts. Thus, the analyses of liquidity position by these both methods gave a precise, insight into the liquidity position of NDL.

This can be represented in the following trend line showing the quick ratios in relation with quick assets to current liabilities.

Figure: 4.4

Trend Line Showing Quick Ratios (F/Y 2057/58 to 2063/64)



4.5 Analysis of Receivables Turnover Ratio

This ratio shows how quickly receivables are converted into cash. The ratio shows how well the debtors were handled by the company. In connection with this ratio, average collection period is also calculated. Higher ratio and shorter average collection period indicates better trade credit management and better liquidity of debtors, and consequently better liquidity of the enterprise. Likewise, lower ratio and longer average collection period signals delayed payments by the debtors.

Table: 4.5
Analysis of Receivables Turnover Ratio

(Rs in million)

Fiscal Year	Sales	Receivables	Ratio (times)	Average Collection Days
2057/58	114.31	19.27	5.93	61
2058/59	81.56	19.58	4.16	86
2059/60	60.11	16.81	3.57	101
2060/61	66.21	19.99	3.31	109
2061/62	51.81	16.34	3.17	114
2062/63	50.26	16.90	2.97	123
2063/64	52.70	14.44	3.65	100
2064/65	35.28	13.21	2.67	87
Total	512.24	136.54	-	-
Average	64.03	17.06	3.678	97.625

Source: Annual Report of NDL

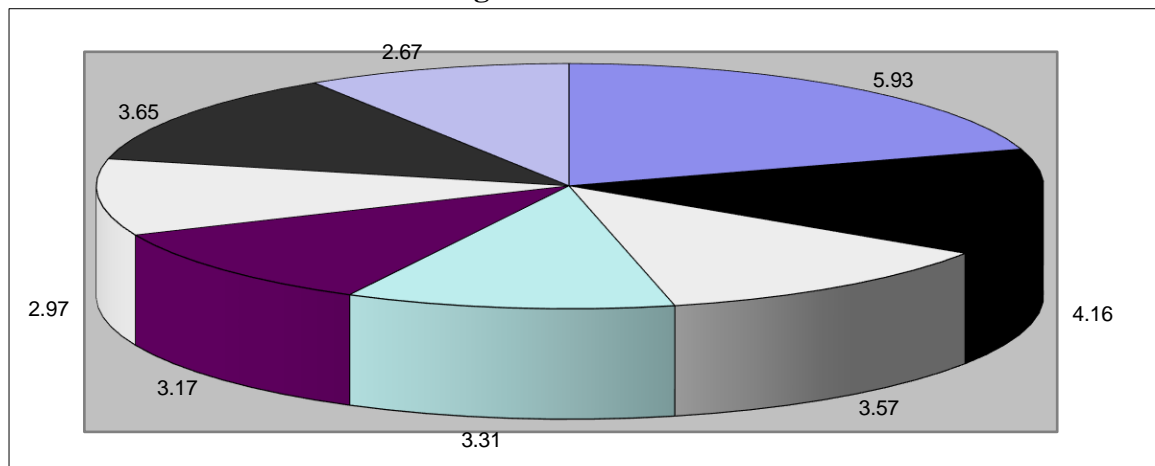
From the above table shows that the ratios are moderately fluctuating and vary from the lowest of 2.67 times to the highest of 5.93 times and average collection days of 61 days to 123 days in the fiscal year 2057/58 and 2063/64 respectively.

Likewise, the average collection days vary from 61 days to 123 days and overall, the average of average collection days is 97.625 days. Since the information regarding credit days extended to customers were not available, and moreover, such credit days were likely to vary depending upon the nature of debtors, there was no absolute means of comparison available to compare the average collection days. So, analysis regarding average collection days was carried-out.

However, it should be noted that too short average collection days doesn't necessarily imply that the firm is functioning well, for it indicates a very restrictive credit and collection policy thereby restricting its sales only to those debtors whose financial conditions are sound and who make their payments readily. Such restrictive policy would definitely avoid bad debts but the sales volume is likely to be curtailed by large proportion. Consequently, the overall profitability of the firm goes down.

It can be represented in the following pie chart showing receivable turnover ratios in relation with sales to receivables.

Figure: 4.5
Pie Chart showing Receivable Turnover Ratios



4.6 Analysis of Inventory Turnover Ratio

This ratio is yet another way of analyzing the liquidity of an enterprise. This ratio shows how effectively a firm is managing its assets and whether or not the level of those assets is properly related to the level of operations as measured by sales. High inventory turnover ratio indicates better inventory management and vice-versa. However, very high inventory turnover ratio is indicative of under-investment in or very low level of inventory; and as such implies that the firm has not been meeting customer demand. So, a firm should go for an optimum inventory turnover ratio, which signifies sound inventory management.

Table: 4.6
Analysis of Inventory Turnover Ratio

(Rs in Million)

Fiscal Year	Sales	Inventory	Ratio (times)
2057/58	114.31	68.77	1.66
2058/59	81.56	50.87	1.60
2059/60	60.11	48.71	1.23
2060/61	66.21	53.65	1.23
2061/62	51.81	43.47	1.19
2062/63	50.26	31.40	1.60
2063/64	52.70	34.52	1.53
2064/65	35.28	37.91	0.93
Total	512.24	369.3	-
Average	64.03	46.16	1.387

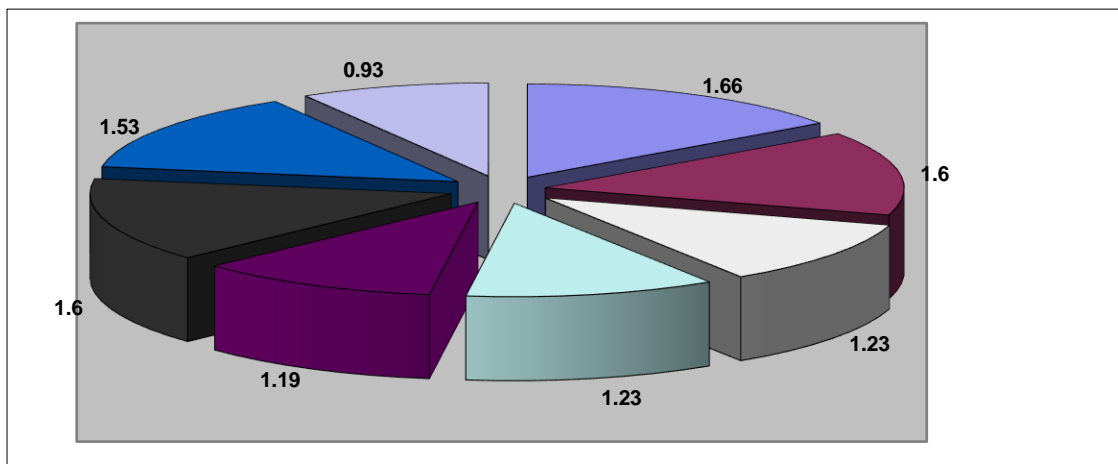
Source: Annual Report of NDL

The above table shows that the ratio fluctuated from 0.93 times to 1.66 times and these occur in 2064/65 and 2057/58. The ratios for the fiscal year 2057/58 was 1.66 times, the highest of all ratios, has definitely suggested that during the period, either the company should have undergone underinvestment or the inventory held was comparatively lower. The fluctuation is moderate and the overall ratio is 1.38 times.

This can be represented in the following pie chart showing inventory turnover ratios in relation with sales to inventory.

Figure: 4.6

Pie Chart showing Inventory Turnover Ratios



4.7 Analysis of Cash to Account Receivable

This ratio measures the relationship between the cash balance on hand to account receivable. The higher ratio indicates better liquidity position and vice-versa. However, too high ratio indicates excessive cash balances.

Table: 4.7

Analysis of Cash to Account Receivable

(Rs in Million)

Fiscal Year	Cash & Bank	Account Receivable (AR)	Percentage of A.R.
2057/58	3.79	19.27	19.67%
2058/59	4.50	19.58	22.98%
2059/60	2.94	16.81	17.49%
2060/61	3.76	19.99	18.81%
2061/62	44.69	16.34	273.50%
2062/63	4.67	16.90	27.63%
2063/64	3.97	14.44	27.49%
2064/65	39.58	13.21	299.625%
Total	107.9	136.54	-
Average	13.48	17.0675	78.98%

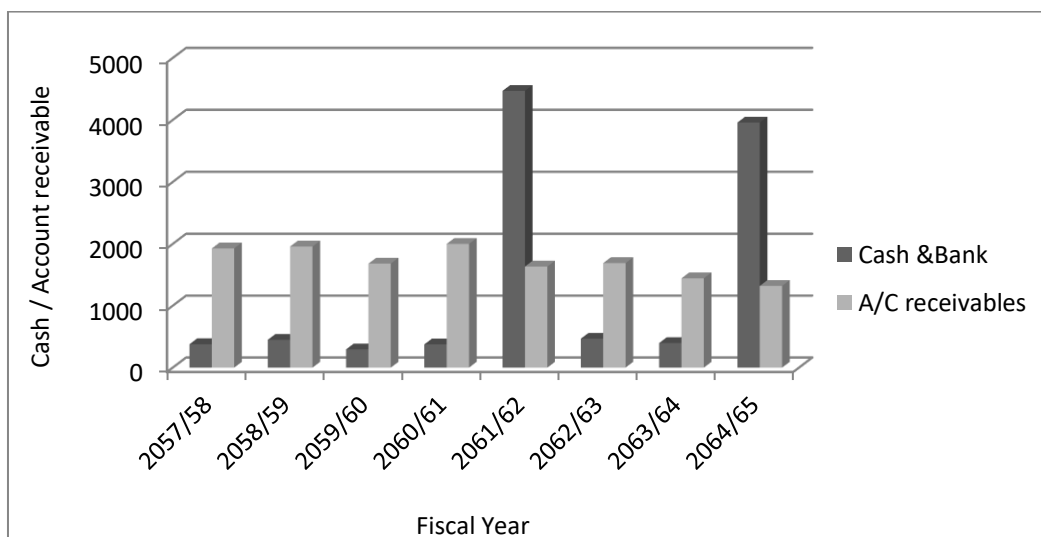
Source: Annual Report of NDL

The table shows that the ratio or percentage of account receivables fluctuated from 17.49% to 299.625%, showing an erratic fluctuation. In the fiscal year 2064/65, the percentage of account receivables was 299.62% which indicated that the cash balance held was excessive. The erratic fluctuations suggest that the company did not follow a definite policy regarding how much cash balance to hold at the fiscal year end. The average percentage of account receivable is 78.98%.

It can be presented with the help of graph to show the relationship between cash and bank balance and account receivable.

Figure: 4.7

Cash & A/C Receivables



4.8 Analysis of Cash Balance to Current Assets

The cash is the most liquid current asset and as such more the amount of cash balance in an enterprise, more liquid the enterprise in meeting its current obligations. However, bearing excess cash signifies cash balance being held idle without any motive.

The ratio of cash and Bank to current assets indicate the proportion of cash balance in the current assets. Stable pattern of ratio for different fiscal years indicate that the company was following a systematic policy regarding how much cash balances to hold at the fiscal year end

Table: 4.8
Analysis of Cash Balance to Current Assets

(Rs. in million)

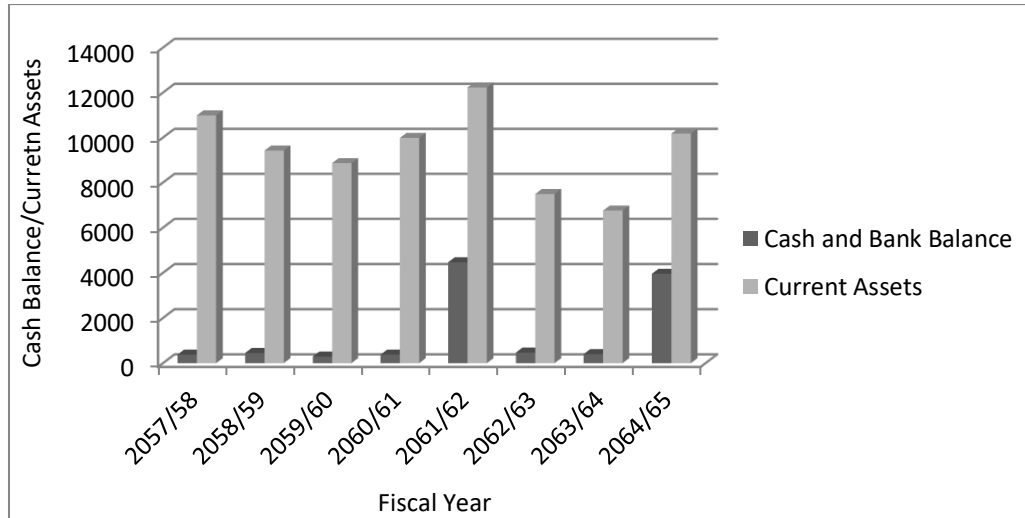
Fiscal Year	Cash & Bank	Current Assets	Ratio of cash and bank to current Assets	Difference Ratio
2057/58	3.79	109.87	3.45%	-
2058/59	4.50	94.24	4.77%	1.32
2059/60	2.94	88.65	3.32%	(1.45)
2060/61	3.76	99.85	3.76%	0.44
2061/62	44.69	122.30	36.54%	32.78
2062/63	4.67	74.90	6.23%	(30.31)
2063/64	3.97	67.57	5.87%	(0.36)
2064/65	39.58	101.76	38.89%	33.02%
Total	107.9	759.14	-	-
Average	13.487	94.89	14.21	-

Source: Annual Report of NDL

The above table shows the percentage of cash and bank balance to current Assets of the NDL. The table indicates that the cash and bank balance with respect to current Assets has fluctuating trend. During the study period the percentage of cash and bank balance to current Assets ranged from the lowest of 3.32% to the highest of 38.89% in the fiscal years 2059/60, and 2064/65 respectively. Attention has been drawn in the FY 2057/58, 2059/60 & 2060/61 where the percentage of cash and bank balance to current assets was very low with 3.45% 3.32% and 3.76% only. These data showed that the company was in cash scarcity to meet short-term payments during this fiscal year. On an average the projection of cash and Bank Balance to current Assets for the study period is 9.13%.

It can be presented with the help of graph to show the relationship between cash and Bank Balance and current Assets.

Figure: 4.8
Cash to Current Assets



4.9 Analysis of Cash to Current Liabilities

Among the technique of measuring corporate liquidity, the ratio of cash and Bank Balance to current liabilities may also be used as an index of cash management. This ratio indicates the amount of cash (in percentage) available to pay the current obligation of the firm. A moderate ratio is considered satisfactory, too high ratio indicates excess cash balance and too low ratio is indicative of company being unable to meet its payment of current liabilities in time.

Table: 4.9
Analysis of Cash to Current Liabilities

(Rs in million)			
Fiscal Year	Cash & Bank	Current Liabilities	Ratio (%)
2057/58	3.79	42.57	8.90%
2058/59	4.50	42.83	10.51%
2059/60	2.94	101.45	2.90%
2060/61	3.76	116.83	3.22%
2061/62	44.69	86.21	51.84%
2062/63	4.67	75.70	6.17%
2063/64	3.97	69.84	5.68%
2064/65	39.58	104.88	37.74%
Total	107.9	640.31	-
Average	13.48	80.03	16.84%

Source: Annual Report of NDIL

The table shows that the ratios fluctuate from the lowest of 2.90% to the highest of 51.84% in the fiscal years 2059/60 and 2061/62. The above table has clearly indicated that the company did not follow a systematic cash management practice. The average ratio is 16.84%.

It can also be presented with the help of graph to show the relationship between cash and Bank Balance and current liabilities

Figure: 4.9

Cash to Current Liabilities

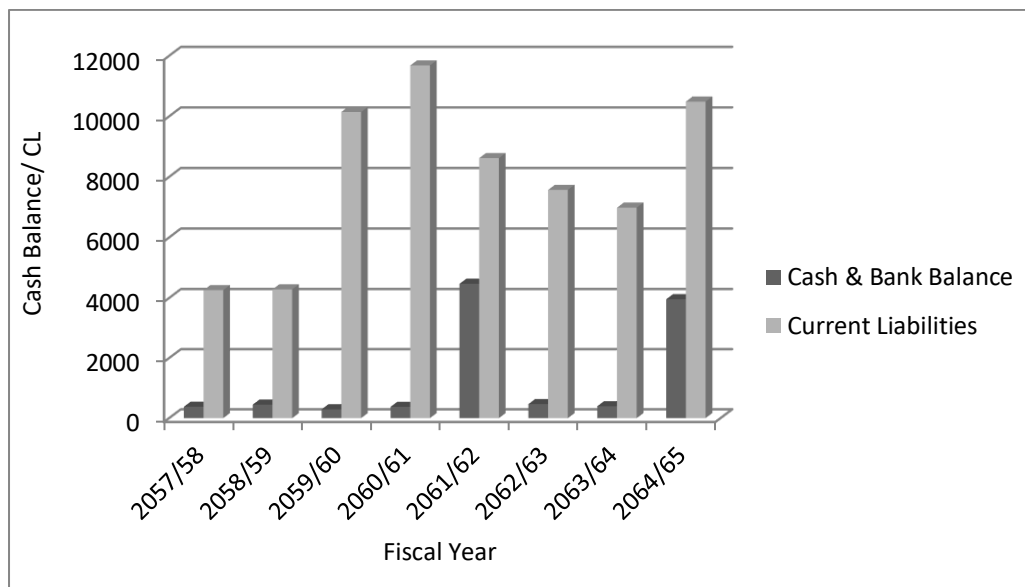


Table: 4.10

Table showing Mean and Standard Deviation

	C/A	C/L	Sales	Cash	A/R	INV.
Mean(\bar{X})	94.89	80.03	64.03	13.48	17.03	46.16
S.D. (σ)	26.22	29.1	22.77	16.59	2.29	4.68

It is seen that standard deviation for current liabilities highest where as it is lowest for account receivables. So, we can say that current liabilities are more dispersed than others .

4.10 Analysis of Dispersion in Cash

Table 4.11 shows the dispersion in the cash balances at the year ends during the period study. ‘Standard deviation’ is the measures of dispersion used for the analysis.

Table: 4.11
Analysis of Dispersion in Cash Balance

(Rs in million)

Fiscal Year	Cash and Bank (X)	$(X - \bar{X})$	$(X - \bar{X})^2$
2057/58	3.79	-9.69	93.89
2058/59	4.50	-8.98	80.64
2059/60	2.94	-10.54	111.09
2060/61	3.76	-9.72	94.48
2061/62	44.69	31.21	974.06
2062/63	4.67	-8.81	77.61
2063/64	3.97	-9.51	90.44
2064/65	39.58	26.1	681.21
Total	107.9		2203.42
N=8			

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N} = \frac{107.9}{8} = 13.48$$

$$\text{Standard Deviation} = \sqrt{\frac{1}{N} \sum (X - \bar{X})^2}$$

$$= \sqrt{\frac{2203.42}{8}}$$

$$= \text{Rs. } 16.59 \text{ million}$$

$$\text{Coefficient of variation (C.V.)} = \frac{\sigma}{\bar{X}}$$

$$= \frac{16.59}{13.48} \times 100$$

$$= 123.07\%$$

4.11 Fitting the straight line trend by least square method for variations in cash and Bank Balance

This is one of the time series analyses, where future events of a variable (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 cash balance of NDL for the next fiscal years, based on its past trend.

Table: 4.12

Fitting the straight line trend by least square method for variations in cash balance

(Rs in million)

Fiscal Year	(Y) Cash and Bank	Deviation from (2060/61) (X)	XY	X ²
2057/58	3.79	-3	-11.37	9
2058/59	4.50	-2	-9	4
2059/60	2.94	-1	-2.94	1
2060/61	3.76	0	0	0
2061/62	44.69	1	44.69	1
2062/63	4.67	2	9.34	4
2063/64	3.97	3	11.91	9
2064/65	39.58	4	158.32	16
Total	∑Y=107.9	∑X=4	∑XY=200.95	∑X ² =44

The equation of straight line trend is given by $Y_c = a + bx$

$$\text{Here, } a = \frac{\sum Y}{N} = \frac{107.9}{8} = 13.48$$

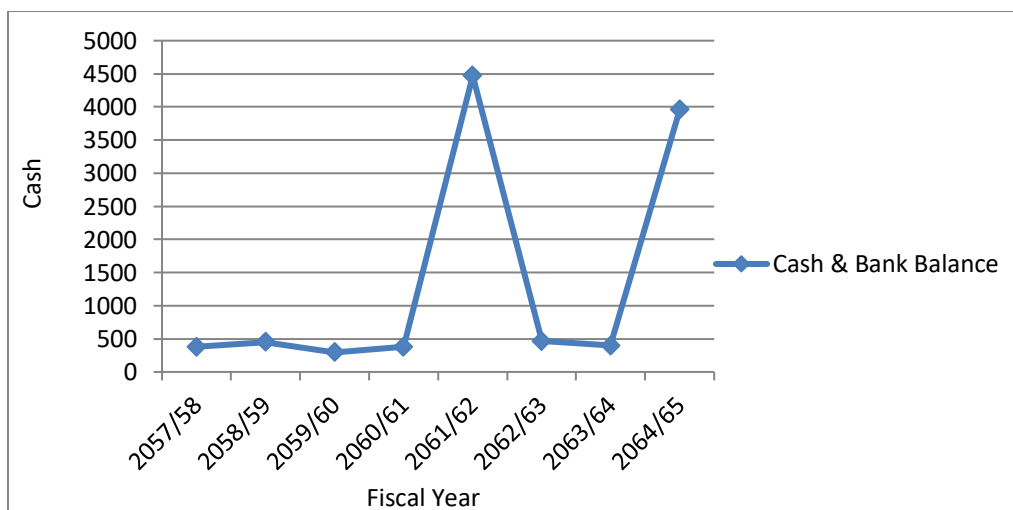
$$b = \frac{\sum XY}{\sum X^2} = \frac{200.95}{44} = 4.567$$

$$Y_c = a + bx$$

$$= 13.48 + 4.567 X$$

Figure: 4.10

Trend Line for Variation in Cash Balance



4.12. (A): Analysis of Coefficient of Correlation (r) between Sales and Cash Balance

To find correlation between sales and cash balance, Karl Pearson's coefficient of correlation (r) is determined. For this purpose sales (x) are assumed to be dependence variables and cash balance (Y) are assumed to be independent variables. At first it is assumed that actual sales will increase as cash balance will increase and vice-versa. It means there should be positive correlation between cash balance and sales. The significance of correlation 'r' is rested with probable error (P.E.).

Table: 4.13

Analysis of Coefficient of Correlation (r) between Sales and Cash Balance

(Rs in Million)

Fiscal Year	Sales (x)	Cash Balance (Y)	(x- \bar{X}) (μ)	(y- \bar{Y}) (ν)	$\mu\nu$	μ^2	ν^2
2057/58	114.31	3.79	50.28	-9.69	-487.21	2528.07	93.89
2058/59	81.56	4.50	17.53	-8.98	-157.42	307.3	80.64
2059/60	60.11	2.94	-3.92	-10.54	41.32	15.366	111.09
2060/61	66.21	3.76	2.18	-9.72	-21.19	4.75	94.47
2061/62	51.81	44.69	-12.22	31.21	-381.38	149.33	974.06
2062/63	50.26	4.67	-13.77	-8.81	121.31	189.61	77.61
2063/64	52.70	3.97	-11.33	-9.51	107.75	128.36	90.44
2064/65	35.28	39.58	-28.75	26.1	-750.37	826.56	681.21
	$\sum x=512.24$	$\sum y=107.9$			$\sum \mu\nu=-1527.09$	$\sum \mu^2=4149.346$	$\sum \nu^2=2203.41$

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N} = \frac{512.24}{8} = 64.03$$

$$\text{Mean}(\bar{Y}) = \frac{\sum Y}{N} = \frac{107.9}{8} = 13.48$$

$$\begin{aligned} \text{Correlation coefficient (r)} &= \frac{\sum \mu\nu}{\sqrt{\sum \mu^2 \cdot \sum \nu^2}} \\ &= \frac{-1527.09}{\sqrt{(4149.346)(2203.41)}} \\ &= -0.5050 \end{aligned}$$

This shows that there exists negative correlation between sales volume and cash balance.

Since, correlation (r) is negative; in order to compare it with probable error |r| has been calculated as follows:

$$r = -0.5050$$

$$|r| = |-0.5050| = 0.5050$$

Calculation of probable Error P.E.

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

$$= \frac{0.6745\{1-(0.5050)^2\}}{\sqrt{8}}$$

$$= 0.1776$$

$$6 \times (\text{P.E.}) = 6 \times 0.1776 = 1.0656$$

Now, if $|r| > 6 (\text{P.E.})$, it is indicative of statistically significant positive correlation. Likewise, if $|r| < 6 (\text{P.E.})$, it is indicative of statistically insignificant positive correlation.

But in this case, $\text{P.E.} < |r| < 6 (\text{P.E.})$. i.e. $0.1776 < 0.5050 < 1.0656$, this implies, though there exists negative correlation between the two, no conclusion could be derived as to statistically significant/ insignificant. Therefore, this correlation analysis indicated that the sales did not significantly the cash balance.

This shows that the company has not been practically following the general rule of higher sales volume, higher cash balance and vice-versa.

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

$$r + \text{P.E.} = -0.5050 + 0.1776 = -0.3274 (\text{upper limit})$$

$$r - \text{P.E.} = -0.5050 - 0.1776 = -0.6826 (\text{lower limit})$$

So, the coefficient of correlation is expected to lie between -0.3274 and -0.6826.

4.13 (B): Regression Analysis

A regression line can also be fitted to show the degree of relationship between sales and cash balance. Cash balance can be forecasted by the value of sales. For this purpose, cash balance and sales have been assumed interrelated economic variables.

The regression line of sales (X) on cash balance (Y) is given by,

$$(X - \bar{X}) = r \cdot \frac{\sigma_X}{\sigma_Y} (Y - \bar{Y})$$

Where,

$$\bar{X} = \text{Mean sales} = 64.03$$

$$\bar{Y} = \text{Mean cash balance} = 13.48$$

σ_X = standard deviation of sales

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

$$= \sqrt{\frac{4149.346}{8}}$$

=Rs. 22.77 million

σ_Y = Standard deviation of cash.

$$= \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}}$$

$$= \sqrt{\frac{2203.41}{8}}$$

=Rs. 16.596 million.

r = Karl Pearson's coefficient of correlation = - 0.5050

Now,

$$(X - \bar{X}) = r \cdot \frac{\sigma_X}{\sigma_Y} (Y - \bar{Y})$$

$$\text{Or, } (X - 64.03) = - 0.5050 \times \frac{22.77}{16.596} (Y - 13.48)$$

$$\text{Or, } (X - 64.03) = -0.6928 (Y - 13.48)$$

$$\text{Or, } X = -0.6928Y + 73.36$$

$$X = 73.36 - 0.6928Y$$

This equation shows that sales are estimated to increase by 0.6928 per unit decrease in cash balance.

Likewise, the regression line of cash balance (Y) on sales (X) can be computed as follows.

$$(Y - \bar{Y}) = r \cdot \frac{\sigma_Y}{\sigma_X} (X - \bar{X})$$

$$\text{Or, } (Y - 13.48) = -0.5050 \times \frac{16.596}{22.77} (X - 64.03)$$

$$\text{Or, } Y - 13.48 = -0.3680 (X - 64.03)$$

$$\text{Or, } Y - 13.48 = -0.3680X + 23.56$$

$$Y = 37.05 - 0.3680X$$

This shows that cash balance is estimated to increase by 0.3680 units per decrease in sales.

4.14. (A) Analysis of Coefficient of Correlation (r) between Account Receivables and Cash Balance

To find out the correlation between account receivables and cash balance, Karl Pearson's coefficient of correlation (r) is determined. For this purpose account receivables and cash balance are assumed to be interrelated variables. Let us assume receivables as 'X' are dependent variables and cash balance 'Y' are independent variables.

Table: 4.14
Analysis of Coefficient of Correlation between Account Receivables and Cash Balance

(Rs in million)

Fiscal Year	Receivable (X)	Cash (Y)	(x- \bar{X}) (μ)	(y- \bar{Y}) (ν)	$\mu\nu$	μ^2	ν^2
2057/58	19.27	3.79	2.24	-9.69	-21.7	5.017	93.89
2058/59	19.58	4.50	2.55	-8.98	-22.89	6.5	80.64
2059/60	16.81	2.94	-0.22	-10.54	2.32	0.048	111.09
2060/61	19.99	3.76	2.96	-9.72	-28.77	8.76	94.48
2061/62	16.34	44.69	-0.69	31.21	-21.53	0.47	974.06
2062/63	16.60	4.67	-0.43	-8.81	3.788	0.18	77.61
2063/64	14.44	3.97	-2.59	-9.51	24.63	6.7	90.44
2064/65	13.21	39.58	-3.82	26.1	-99.7	14.59	681.21
Total	$\sum x=136.24$	$\sum y=107.9$			$\sum \mu\nu=-163.85$	$\sum \mu^2=42.26$	$\sum \nu^2=2203.42$

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N} = \frac{136.24}{8} = 17.03$$

$$\text{Mean } (\bar{Y}) = \frac{\sum Y}{N} = \frac{107.9}{8} = 13.48$$

$$\begin{aligned} \therefore \text{Correlation coefficient}(r) &= \frac{\sum \mu\nu}{\sqrt{\sum \mu^2 \cdot \sum \nu^2}} \\ &= \frac{-163.85}{\sqrt{(42.26)(2203.42)}} = -0.537 \end{aligned}$$

This shows that there exists negative correlation between account receivable and cash balance.

Since, correlation (r) is negative; in order to compare it with probable error |r| has been calculated as follows.

$$r = -0.537$$

$$\text{Now, } |r| = |-0.537| = 0.537$$

Calculation of probable error (P.E.)

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

$$= \frac{0.6745\{1 - (0.537)^2\}}{\sqrt{8}}$$

$$= 0.1697$$

$$6(\text{P.E.}) = 6 \times 0.1697$$

$$= 1.0182$$

Now, If $|r| > 6(\text{P.E.})$, it is indicative of statistically significant -ve correlation. Likewise, if $|r| < \text{P.E.}$, it is indicative of statistically insignificant -ve correlation.

But in this case, $\text{P.E.} < |r| < 6(\text{P.E.})$, i.e. $0.1697 < 0.537 < 1.0182$. This implies, though there exists negative correlation between the two, no conclusion could be derived as to statistically significant/insignificant.

Therefore, this correlation analysis indicated that the cash balance did not increase with increase in account receivables.

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

$$r + P.E = -0.537 + 0.1697 = - 0.3673 \text{ (Upper Limit)}$$

$$r - P.E = -0.537 - 0.1697 = - 0.7067 \text{ (Lower Limit)}$$

So, the correlation coefficient is expected to lie between $- 0.3673$ and -0.7067 .

4.14 (B): Regression Analysis

A regression line can also be fitted to show the degree relationship between account receivables and cash balance.

The regression line of receivable (X) on cash balance (Y) is given by,

$$(X - \bar{X}) = |r| \cdot \frac{\sigma_X}{\sigma_Y} (Y - \bar{Y})$$

Where,

$$\bar{X} = \text{Mean receivables} = 17.03$$

$$\bar{Y} = \text{Mean Cash balance} = 13.48$$

σ_x = standard deviation of receivables

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

$$= \sqrt{\frac{42.26}{8}}$$

=Rs. 2.29 million

σ_y = Standard deviation of cash balance

$$= \sqrt{\frac{\sum (Y - \bar{Y})^2}{N}} = \sqrt{\frac{2203.42}{8}}$$

= Rs. 16.59 million

r = coefficient of correlation = -0.537

Now,

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

$$\text{Or, } (X-17.03) = -0.537 \frac{2.29}{16.59} (Y-13.48)$$

$$\text{Or, } (X-17.03) = -0.0741 (Y-13.48)$$

$$\text{Or, } X - 17.03 = -0.0741Y + 18.029$$

$$\therefore X = 18.029 - 0.0741Y$$

This equation shows that receivables are estimated to increase by 0.0741 per unit decrease in cash balance.

Likewise, the regression line of cash balance (Y) on receivables (X) can be computed as follows.

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

$$\text{Or, } (Y-13.48) = -0.537 \times \frac{16.59}{2.29} (X-17.03)$$

$$\text{Or, } (Y-13.48) = -3.89 (x-17.03)$$

$$\text{Or } Y-13.48 = -3.89X + 66.25$$

$$\therefore Y=79.73- 3.89X$$

This shows that cash balance is estimated to increase by 3.89 per unit decrease in receivable.

4.15 Analysis of Coefficient of Correlation (r) between Current Assets and Cash Balance

To find – out the correlation between current assets and cash balance, Karl Pearson’s coefficient of correlation (r) is determined. For this purpose current assets and cash balance are assumed to be interrelated economic variables. Let us assume current assets as ‘X’ are dependent variables and cash balance ‘Y’ are independent variables.

Table: 4.15**Analysis of Coefficient of Correlation (r) between Current Assets and Cash Balance**

(Rs in million)

Fiscal year	Current Assets (X)	Cash (Y)	(X- \bar{X}) (μ)	(Y- \bar{Y}) (ν)	$\mu\nu$	μ^2	ν^2
254.72	109.87	3.79	14.98	-9.69	-145.15	224.4	93.8961
0.1089	94.24	4.50	-0.65	-8.98	5.837	0.4225	80.6404
2059/60	88.65	2.94	-6.24	-10.54	65.76	38.9376	111.0916
2060/61	99.85	3.76	4.96	-9.72	-48.21	24.6016	94.4784
2061/62	122.30	44.69	27.41	31.21	855.46	751.308	974.0641
2062/63	74.90	4.67	-19.99	-8.81	176.11	399.6	77.6161
2063/64	67.57	3.97	-27.32	-9.51	259.81	746.382	90.4401
2064/65	101.76	39.58	6.87	26.1	179.3	47.1969	681.21
Total	759.14	107.9			$\sum\mu\nu=1348.92$	$\sum\mu^2=2232.85$	$\sum\nu^2=2203.437$

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N} = \frac{759.14}{8} = 94.89$$

$$\text{Mean } (\bar{Y}) = \frac{\sum Y}{N} = \frac{107.9}{8} = 13.48$$

$$\begin{aligned} \therefore \text{Correlation coefficient (r)} &= \frac{\sum \mu\nu}{\sqrt{\sum \mu^2 \cdot \sum \nu^2}} \\ &= \frac{1348.92}{\sqrt{(2232.85)(2203.437)}} \\ &= 0.6081 \end{aligned}$$

This shows that there exists positive correlation between current assets and cash balance. The correlation should be statistically significant to ascertain that there practically exists correlation between the two variables. For this purpose, probable error was calculated as follows.

$$\begin{aligned} \text{Probable Error (P.E)} &= \frac{0.6745(1-r^2)}{\sqrt{N}} \\ &= \frac{0.6745\{1-(0.6081)^2\}}{\sqrt{8}} = 0.1503 \end{aligned}$$

$$6 \times (\text{P.E}) = 6 \times 0.1503 = 0.902$$

Now, If $r > 6 (\text{P.E})$, it is indicative of statistically significant positive correlation.

Likewise, If $r < 6 (\text{P.E})$, it is indicative of statistically insignificant positive correlation.

But in this case, $\text{P.E.} < r < 6 (\text{P.E})$, i.e. $0.1503 < 0.6081 < 0.902$. This implies, though there exists positive correlation between the two, no conclusion could be derived as to statistically significant/insignificant.

This shows that the company has not been practically following the general rule of higher current-assets, higher cash balance and vice-versa.

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

$$r + \text{P. E} = 0.6081 + 0.1503 = 0.7584 \text{ (Upper Limit)}$$

$$r - \text{P. E} = 0.6081 - 0.1503 = 0.4578 \text{ (Lower Limit)}$$

So, the coefficient of correlation is expected to lie between 0.7584 and 0.4578.

4.16 Analysis of Coefficient of Correlation (r) between Current Liabilities and Cash Balance

To find-out the correlation between current liabilities and cash balance, Karl Pearson's coefficient of correlation (r) is determined. For this purpose current liabilities and cash balance are assumed to be interrelated economic variables. Let us assumed current liabilities as 'X' are dependent variables and cash balance 'Y' are independent variables.

Table: 4.16
Analysis of Coefficient of Correlation (r) between Current
Liabilities and Cash Balance

(Rs in Million)

Fiscal Year	Current Liabilities (X)	Cash (Y)	(X- \bar{X}) (μ)	(Y- \bar{Y}) (ν)	$\mu\nu$	μ^2	ν^2
2057/58	42.57	3.79	-79.45	-9.69	769.871	6312.3025	93.8961
2058/59	42.83	4.50	-37.21	-8.98	334.146	1384.5841	80.6404
2059/60	101.45	2.94	21.41	-10.54	-225.661	458.3881	111.0916
2060/61	116.83	3.76	36.79	-9.72	-357.599	1353.5041	94.4784
2061/62	86.21	44.69	6.17	31.21	192.566	38.0689	974.0641
2062/63	75.70	4.67	-4.34	-8.81	38.2354	18.8356	77.6161
2063/64	69.84	3.97	-10.2	-9.51	97.002	104.04	90.4401
2064/65	104.88	39.58	24.84	26.1	648.324	617.0256	681.21
Total	640.31	107.9			1496.88	10286.749	2203.437

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N} = \frac{640.31}{8} = 80.04$$

$$\text{Mean } (\bar{Y}) = \frac{\sum Y}{N} = \frac{107.9}{8} = 13.48$$

$$\begin{aligned} \therefore \text{Correlation coefficient (r)} &= \frac{\sum \mu\nu}{\sqrt{\sum \mu^2 \cdot \sum \nu^2}} \\ &= \frac{1496.88}{\sqrt{(10286.749)(2203.437)}} = 0.3144 \end{aligned}$$

This shows that there exists positive correlation coefficient between current liabilities and cash balance. The correlation should be statistically significant to ascertain that there practically exists correlation between the two variables. For this purpose, probable error was calculated;

Calculation of probable error (P.E)

$$\begin{aligned} \text{Probable Error (P.E)} &= \frac{0.6745(1-r^2)}{\sqrt{N}} \\ &= \frac{0.6745\{1-(0.3144)^2\}}{\sqrt{8}} = 0.2149 \end{aligned}$$

$$6 \times (\text{P.E}) = 6 \times 0.2149 = 1.289$$

Now, If $r > 6 (\text{P.E})$, it is indicative of statistically significant positive correlation.

Likewise, If $r < (\text{P.E})$, it is indicative of statistically insignificant positive correlation.

But in this case, $\text{P.E.} < r < 6 (\text{P.E})$, i.e. $0.2149 < 0.3144 < 1.289$. This implies, though there exists positive correlation between the two, no conclusion could be derived as to statistically significant/insignificant.

This shows that the company has not been practically following the general rule of higher current-liabilities, higher cash balance and vice-versa.

Upper and lower limit within which the correlation coefficient is expected to lie is given by.

$$r + \text{P.E} = 0.3144 + 0.2149 = 0.5293 \text{ (Upper Limit)}$$

$$r - \text{P.E} = 0.3144 - 0.2149 = 0.0995 \text{ (Lower Limit)}$$

Hence, the correlation coefficient is expected to lie between 0.5293 and 0.0995.

4.17 Analysis of Coefficient of Correlation (r) between Net Profit after Tax and Cash Balance

To find-out the correlation between net profit after tax and cash balance, Karl Pearson's coefficient of correlation (r) is determined. For this purpose, Net profits after tax and cash balance are assumed to be interrelated economic variables. Let us assumed Net profit after tax as 'X' are dependent variables and cash balance 'Y' are independent variables.

Table: 4.17

**Analysis of Coefficient of Correlation (r) between
Net Profit of Tax and Cash Balance**

(Rs in million)

Fiscal year	Net profit after tax (X)	Cash (Y)	(X- \bar{X}) (μ)	(Y- \bar{Y}) (ν)	$\mu\nu$	μ^2	ν^2
2057/58	(23.00)	3.79	22.45	-9.69	-217.5405	504.0025	93.896
2058/59	(27.01)	4.50	18.44	-8.98	-165.5912	340.0336	80.64
2059/60	(82.22)	2.94	-36.77	-10.54	387.5558	1352.0329	111.09
2060/61	(36.13)	3.76	9.32	-9.72	-90.5904	86.8624	94.478
2061/62	(60.88)	44.69	-15.43	31.21	-481.5703	238.0849	974.06
2062/63	(41.63)	4.67	3.82	-8.81	-33.6542	14.5924	77.616
2063/64	(26.61)	3.97	18.84	-9.51	-179.1684	354.9456	90.44
2064/65	(66.11)	39.58	-20.66	26.1	-539.226	426.8356	681.21
Total	(363.6)	107.9			-1319.7852	3317.3899	2203.4

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N} = \frac{(363.6)}{8} = (45.45)$$

$$\text{Mean } (\bar{Y}) = \frac{\sum Y}{N} = \frac{107.9}{8} = 13.48$$

$$\begin{aligned} \therefore \text{Correlation coefficient (r)} &= \frac{\sum \mu\nu}{\sqrt{\sum \mu^2 \cdot \sum \nu^2}} \\ &= \frac{(1319.78)}{\sqrt{3317.39 \times 2203.04}} = 0.488 \end{aligned}$$

This shows that there exists positive correlation coefficient between net profit after tax and cash balance. The correlation should be statistically significant to ascertain that there practically exists correlation between the two variables. For this purpose, probable error was calculated;

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

$$= \frac{0.6745\{1 - (0.488)^2\}}{\sqrt{8}} = 0.1817$$

$$6 \times (P.E) = 6 \times 0.1817 = 1.09$$

Now, If $r > 6 (P.E)$, it is indicative of statistically significant positive correlation.

Likewise, If $r < (P.E)$, it is indicative of statistically insignificant positive correlation.

But in this case, $P.E. < r < 6 (P.E)$, i.e. $0.1817 < 0.488 < 1.09$. This implies, though there exists positive correlation between the two, no conclusion could be derived as to statistically significant/insignificant.

This shows that the company has not been practically following the general rule of higher current-liabilities, higher cash balance and vice-versa.

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

$$r + P.E = 0.488 + 0.1817 = 0.6697 \text{ (Upper Limit)}$$

$$r - P. E = 0.488 - 0.1817 = 0.3063 \text{ (Lower Limit)}$$

So, the coefficient of correlation is expected to lie between 0.6697 and 0.3063

4.18 Trend Analysis

4.18.1 Trend Analysis of Cash and Balances

Under this section, trend values of cash and balances have been calculated for 8 years from FY 2057/58 to 2064/65 and forecasted for the next three years up to 2067/68.

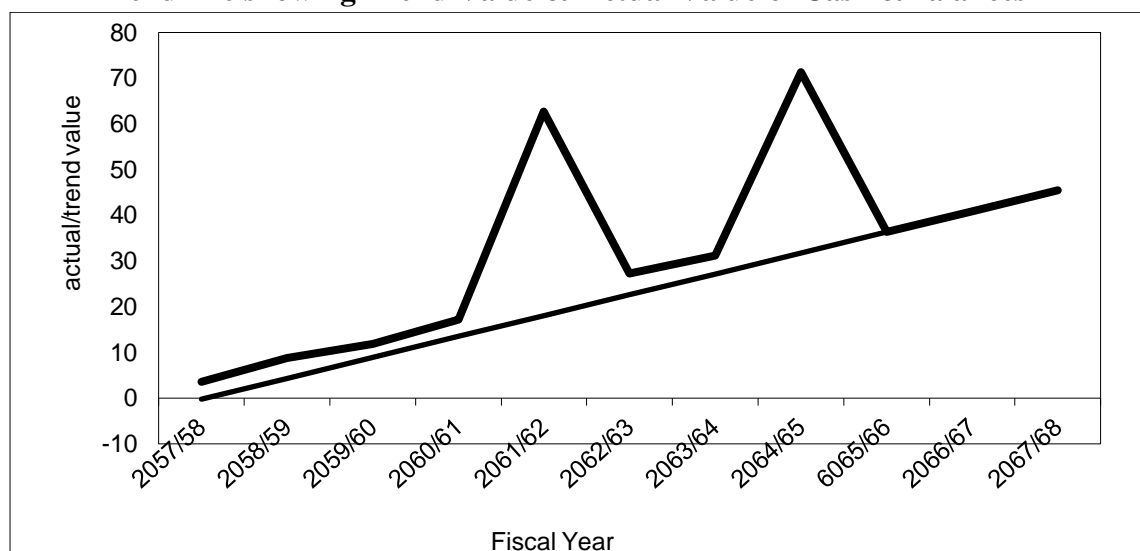
Table: 4.18
Trend of Cash and Balances

(Rs. Million)		
Fiscal Year	Trend Value	Actual Value
2057/58	-0.221	3.79
2058/59	4.346	4.50
2059/60	8.913	2.94
2060/61	13.48	3.76
2061/62	18.047	44.69
2062/63	22.614	4.67
2063/64	27.181	3.97
2064/65	31.748	39.58
2065/66	36.315	-
2066/67	40.882	-
2067/68	45.449	

(Source: Appendix 1)

From the above table, NDL's expected cash balance in the FY 2065/66, 2066/67 and 2067/68 are expected to be Rs.36.315 million, Rs. 40.882 million and Rs.45.449 million respectively.

Figure: 4.11
Trend line showing Trend Value & Actual Value of Cash & Balances



The above graph shows the increasing trend of trend and actual value of cash balance to FY 2061/62 then in decreasing and increasing trend every fiscal year.

4.18.2. Trend of Current Assets

Under this section, trend values of current assets have been calculated for seven years from FY 2057/58 to 2063/64 and forecasted for the next three years up to 2066/67.

Table: 4.19
Trend Analysis of Current Assets

(Rs. Million)

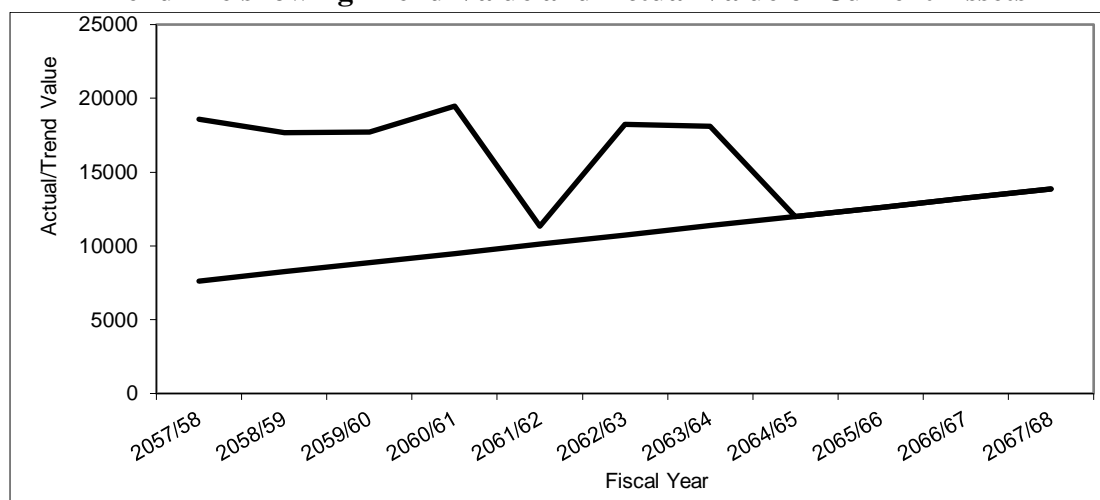
Fiscal Year	Trend Value	Actual Value
2057/58	76.14	109.87
2058/59	82.39	94.24
2059/60	88.64	88.65
2060/61	94.89	99.85
2061/62	101.14	122.30
2062/63	107.39	74.90
2063/64	113.64	67.57
2064/65	119.89	101.76
2065/66	126.14	-
2066/67	132.39	-
2067/68	138.64	-

(Source: Appendix 2)

The above table shows that NDL's expected current assets in F/Y 2065/66, 2066/67 and 2067/68 are expected to be Rs.126.14 million, Rs. 132.39 million and Rs.138.64 million respectively.

Figure: 4.12

Trend line showing Trend Value and Actual Value of Current Assets



The above figure shows that the trend value is in decreasing trend and actual value has increased in the fiscal year 2060/61 then decreasing trend in the rest of the fiscal years.

4.18.3 Trend of Current Liabilities

Under this section, trend values of current liabilities have been calculated for seven years from FY 2057/58 to 2063/64 and forecasted for the next three years up to 2066/67.

Table: 4.20

Trend of Current Liabilities

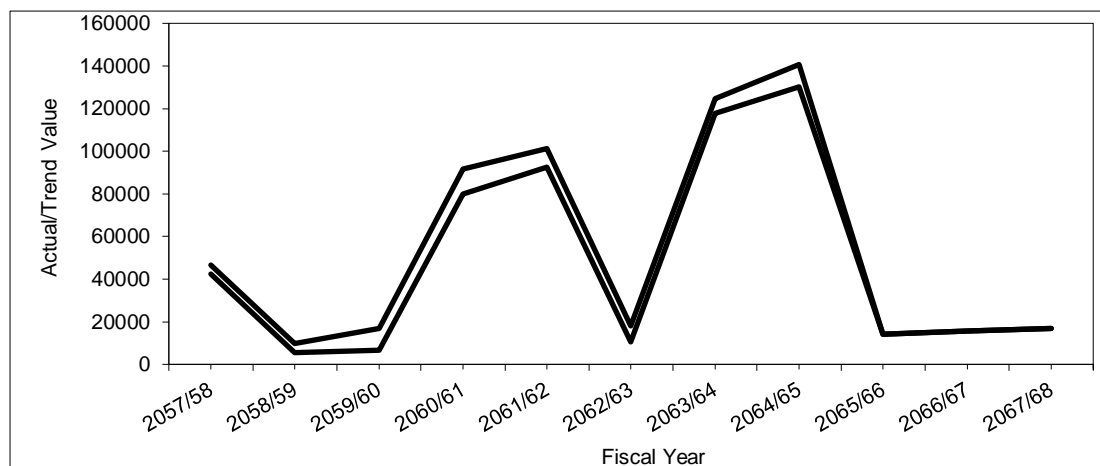
Fiscal Year	Trend Value	Actual Value
2057/58	42.418	42.57
2058/59	54.96	42.83
2059/60	67.49	101.45
2060/61	80.038	116.83
2061/62	92.578	86.21
2062/63	105.12	75.70
2063/64	117.658	69.84
2064/65	130.198	104.88
2065/66	14274	-
2066/67	155.27	-
2067/68	167.82	-

(Source: Appendix 3)

The table shows that NDL's expected current liabilities in the F/Ys 2064/65, 2065/66 and 2066/67 are expected to be Rs.95.37, Rs.100.09 and Rs.104.81 respectively.

Figure: 4.13

Trend line showing Trend Value and Actual Value of Current Liabilities



The figure shows that the trend value is in increasing trend and actual value has increased in the F/Y 2060/61 and then again in the decreasing trend.

4.18.4 Trend of Sales

Under this section, trend values of sales have been calculated for eight years from FY 2057/58 to 2064/65 and forecasted for the next three years up to 2067/68.

Table: 4.21

Trend Analysis of Sales

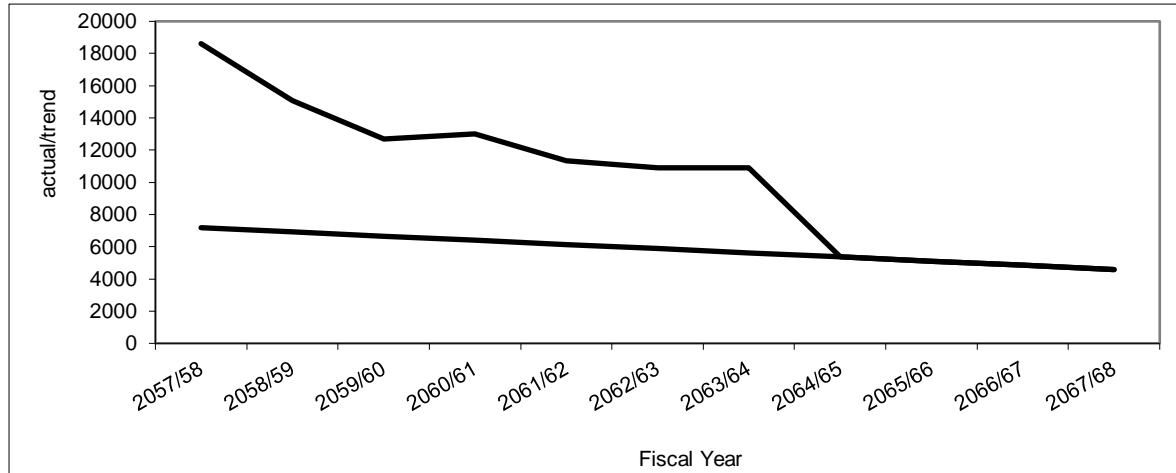
Fiscal Year	Trend Value	Actual Value
2057/58	71.83	114.31
2058/59	69.23	81.56
2059/60	66.63	60.11
2060/61	64.03	66.21
2061/62	61.43	51.81
2062/63	58.83	50.26
2063/64	56.23	52.70
2064/65	53.63	35.28
2065/66	51.03	-
2066/67	48.43	-
2067/68	45.83	-

(Source: Appendix 4)

The table shows that NDL’s expected sales in the F/Ys 2065/66, 2066/67 and 2067/68 are expected to be Rs.51.03, Rs48.43 and Rs.45.83 respectively.

Figure: 4.14

Trend line showing Trend Value and Actual Value of Sales



The figure shows that the trend value and actual value of sales is in the decreasing trend.

4.19 Analysis of Cash Flow Statement

Cash flow statement of the company signifies the movements of cash in and out of company. Inflow of cash is known as sources of cash and outflow of cash is known as uses of cash. This statement also depicts the factors for such inflow and gets flow of cash. It virtually takes the nature and character of cash receipt and cash payments, through the basic information used in the preparation of this statement differs from that which is used in recording cash receipts and cash payments in cash inflow and outflow are explained and shown in cash flow statement before highlighting its nature and utility. The actual cash flow statement is presented on the heading of cash flow from operating activities, cash flow from financing activities and cash flow from investing activities for the fiscal year 2059/60 to 2063/64.

4.19.1 Analysis of Operating Activities

Overall, the operating activities of NDL were moderate on account of the fact that there occurred cash inflows as well as outflows from such operating activities in the

FYs under study. However, there were high fluctuations in such cash inflows and outflows, ranging from the highest outflow of (Rs 5.23) million in the FY 2060/61 and the highest inflow of Rs 58.28 million in FY 2061/62. A wide fluctuation is favored in view of operating activities.

4.19.2 Analysis of Investing Activities

Investing activities of NDL were the poorest of all three activities involved in cash flow statement. This activity has incurred cash outflows every year ranging from (Rs 0.54) million to (Rs 8.58) million in the FYs 2059/60 and 2063/64. But in the F/Ys 2060/61, 2061/62 and 2062/63 were positive i.e. Rs 0.94 million , Rs 3.12 million & Rs.2057 million respectively. These negative figures, i.e. cash outflows under the heading: Net cash flow from investing activities in the FYs verify the fact that there never occurred cash inflow from investing activities. Only a small portion of surplus cash was invested in short – term investments, and as such, there never occurred cash inflow from investing activities.

4.19.3 Analysis of Financing Activities

Financing activities were the idlest of all the three activities. This activity has been stated as the idlest activity on the grounds that it has neither generated cash inflows nor outflows in the most of the FYs under study. The FYs 2059/60, 2060/61, 2061/62, 2062/63 & 2063/64 generated significant cash inflow of Rs 27.01, 99.07, 101.43, Rs.101.55 and Rs.123.36 million respectively. Thus, the financing activity of the company was the most passive activity, and hence the company should increase its financing activity by various financial activities such as, loan borrowings, issue of shares debentures etc.

Table: 4.22

Cash Flow Statement FY (2059/60 to 2064/65)

Statements	2059/60	2060/61	2061/62
<u>A: Cash Flow From Operating Activities</u>			
Net profit before taxation &extra ordinary items	-82.22	-36.13	-60.88
Adjustments for:			
a) Depreciation	1.47	1.5	1.54
b)Interest income	8.41	13.29	9.23
Operating profit before working capital change	-72.34	-21.34	-50.11
(Increase)/ Decrease in Current Assets	5.58	-11.19	-22.45
(Increase)/Decrease in Current Liabilities	-58.62	-15.38	30.62
Cash generated from operations	19.3	-5.23	58.28
Income Tax Paid	-	-	-
Net Cash Flow from Operating Activities	19.3	-5.23	58.28
<u>B: Cash Flow From Investing Activities</u>			
(Purchase)/ Sale of Fixed Assets	-0.98	-1.31	-1.53
Interest Received	-	-	-
(Increase)/Decrease in Loan &Deposit	0.44	2.25	4.65
Net Cash Flow from Investing Activities	-0.54	0.94	3.12
<u>C: Cash Flow From Financing Activities</u>			
Proceed from capital subsidy income	-	-	-
Long term debt	27.01	99.07	101.43
Net Cash Flow from Financing Activities	27.01	99.07	101.43
Net Increase/(Decrease) in Cash & Cash Equivalents (A+B+C)	45.77	94.78	162.83
Cash & Cash Equivalents at the Beginning of the Period	4.5	2.94	3.76
Cash & Cash Equivalents at the End of the Period	2.94	3.76	44.69

Statements	2062/63	2063/64	2064/65
<u>A: Cash Flow From Operating Activities</u>			
Net profit before taxation & extra ordinary items	-41.63	-26.61	66.11
Adjustments for:			
a) Depreciation	1.61	1.58	2.36
b) Interest income	13.83	7.14	19.41
Operating profit before working capital change	-26.19	-17.89	-40.27
(Increase)/ Decrease in Current Assets	47.40	7.33	34.19
(Increase)/Decrease in Current Liabilities	10.51	5.86	23.06
Cash generated from operations	31.72	-4.7	3.8
Income Tax Paid	-	-	-
Net Cash Flow from Operating Activities	31.72	-4.7	-7.4
<u>B: Cash Flow From Investing Activities</u>			
(Purchase)/ Sale of Fixed Assets	-1.56	-1.30	115.95
Interest Received	-	-	-
(Increase)/Decrease in Loan & Deposit	4.13	-7.28	
Net Cash Flow from Investing Activities	2.57	-8.58	115.95
<u>C: Cash Flow From Financing Activities</u>			
Proceed from capital subsidy income	-	-	
Long term debt	101.55	123.36	-72.84
Net Cash Flow from Financing Activities	101.55	123.36	-72.84
Net Increase/(Decrease) in Cash & Cash Equivalents (A+B+C)	135.84	110.09	35.61
Cash & Cash Equivalents at the Beginning of the Period	44.69	4.67	3.97
Cash & Cash Equivalents at the End of the Period	4.67	3.97	39.58

4.20 Analysis of Budgeting Allocation Practice of NDL

One of the indications that a company is said to be working under sound condition is when its investment expenses exactly coincide with the prior allocated budget. However, in practice rarely did these two coincide, and as such tendency to coincide is indicative of sound cash investment. So, if a ratio of 'Approved Budget' to expenses is 1:1, it indicates that cash investment decision in the firm is in its best suit. A ratio nearing to 1:1 can also be considered satisfactory, however too high ratio indicates that the firm is over cautious of cash deficit and as such allocates higher budget than required. Likewise, a ratio lower to 1:1 refers that the company faces cash deficit in its investment and signals serious problems in meeting cash payments.

4.20.1 Analysis of Approved Current Assets Investment Budget

Since, cash management deals with the management of cash in the short-run, a time period of not more than one year, cash budget for fixed assets investment, which is a long-term investment decision doesn't come under the scope of this study. Hence, analyses of fixed assets investment have not been extensively included in the study. Hence, subsequently, approved current assets investment budget and expenses has been analyzed.

Table: 4.23

Analysis of Approved Budget and Expenses

(Rs in million)

Statement	FY (2059/60)		FY(2060/61)		FY(2061/62)		FY (2062/63)		FY(2063/64)		FY(2064/65)	
	Approved	Expenses	Approved	Expenses	Approved	Expenses	Approved	Expenses	Approved	Expenses	Approved	Expenses
	Budget		Budget		Budget		Budget		Budget		Budget	
Raw materials	35.00	14.00	41.50	30.14	28.00	4.96	28.00	8.40	26.00	7.57	27.00	5.20
Packing-materials	15.00	4:1	20.50	13.32	19.99	3.62	19.99	5.72	16.00	5.07	17.00	7.38
Lab. Chemicals	0.025	0.008	0.25	0.003	0.15	0.03	0.15	0.03	0.10	0.02	0.021	0.011
Other expenses	58.25	25.00	59.99	36.38	51.78	28.86	51.81	36.11	40.11	32.05	23	13
Total	108.28	43.11	122.24	79.84	99.92	37.47	99.95	50.27	82.21	44.71	67.021	25.59
Ratio	2.51		1.53		2.67		1.99		1.84		2.61	
Average Ratio	2.19											

The above table clearly indicates that each year the company has been holding excess cash than required for its current assets investment. The figure further shows that the company has never faced any cash deficit in its current assets investment. The ratios of 2.51 in FY 2059/60, 1.53 in the FY 2060/61, 2.67 in the FY 2061/62, 1.99 in the FY 2062/63 & 1.84 in the FY 2063/64 suggest that the company has been over cautious of cash deficit and as such has been holding more than enough cash balance. This is indicative of excess cash balance being held idle. A satisfactory ratio could only be observed in the FY 2060/61 when the ratio is 1.53. Average ratio of 2.11 suggests that the company has not been following definite policy regarding allocation of cash budget.

4.21 Analysis of Primary Information Collected Through Questionnaire

In course of analyzing the data, I have not only analyzed the secondary data. To make my research work more effective and accurate, I have also collect some primary data through the means of questionnaire with the help of company's employee possessing different post i.e., general manager, senior account officer, sales manager, junior account officer.

There were 4 respondents in total who help me for filling up questionnaire because of the belongings of the information I had not consult the lower level employees of the company. On the basis of answers given by them, I made analysis of the answers. For this purpose, I arranged the information in a tabular form. The questionnaire given with options of answers is kept in last at annex.

Table: 4.24
Analysis of Respondent Answers

Q.No.	Number of respondents					
	Option of answers					
	Yes	No	a	b	c	d
1			2	1	1	
2	4					
3			4			
4			3		1	
5					4	
6	4					
7	4					
8			1	1	2	
9	4					
10					3	1
11				4		
12	2	2				
13				3	1	
14		4				
15	4					
16	4					
17	4					
18					1	3
19		4				
20			2	2		

(Source: Details of Questionnaires see Annex)

Except some exception, there seems to be homogeneity in answers for the questionnaire numbers: 2, 3, 6, 7, 9, 11, 14, 15, 16, 17, and 19. On these questions most of the respondents' answers matched with each other where as different answers were given in remaining other questionnaire.

According to respondents answers it can be said that the company hold. Cash for transaction motives, precautionary motives and speculative motives. The above table shows that the company also prepared cash allocation /expenses budget annually. Most of the respondents were in favor of cash allocation /expenses budget (cash budget) and one respondent was in favor of projected balance method.

There were different thought of the respondents for the conditions and circumstances to maintain minimum cash balance, some were in the favour of seasonal fluctuation in sales, some were in the favour of to meet future contingencies and some were in the favour of others. Most of the respondents were in the favour of making any investment of excess cash balance. Some respondents were in favor of assets investment for the business expansion where as some responds are in favour of assets investment in others.

The above table shows that the most of the respondents were in favor of bank borrowing if cash balance fell below its minimum cash balance. Some respondents were in favor of following any specific method for cash collection and some respondents were not in favour of following any specific method for cash collection. Some respondents answered that the major problems of the company was inadequate cash balance while managing the cash and some respondents answered that the major problems of the company was problem of effective utilization of cash. Most of the respondents were in the favour of not using any standard methods or models for determining optimal cash balance.

Most of the respondents were in favor of uniform terms of credit allowed to customer and charging interest on delayed payments as well as offering cash discount to the customers for early payment. There was no advance payment system from customers and out of four, one said that the company could not take advantage of cash discount and three respondents said that the company never takes advantage of cash discount. According to respondents majority, it can be said that the organization was not able to pay its short term liabilities on due dates and this was due to shortage of cash, delayed payment by customers and decline in cash sales. There were different thought of the respondents for improving cash collection system, some were in the favour of initiate compromise, and some were in the favour of charging higher rate of interest.

Thus, by analyzing this primary information it was found that the result of secondary data analysis and results of primary data analysis matched in various major aspects.

4.22 Major Findings

Summary of major findings was presented in following headings.

4.22.1. Overall Cash Management

(1) NDL did not have any definite policy regarding the amount of cash balance to hold at the end of each fiscal year

Cash and Bank balances held during the fiscal years under study were observed to be high fluctuated. Dispersion of cash and bank balance of Rs 14.21million and coefficient of variation (CV) of 145.57%. Equation of straight line trend showed that cash balance increased by Rs 15, 20,000 every year. Thus the very fact indicated the company to be lacking definite policy regarding the amount of cash and balance to hold in each FY. Moreover the cash balance held was in increasing trend.

(2) NDL did not make forecast of cash balance taking into consideration the Sales Volume

The cash and bank balance did not comply with sales of the firm. Correlation coefficient between cash and bank balance and sales being negative of -0.3134 and P.E. $< |r| < 6$ (P.E). i.e. $0.2299 < 0.3134 < 1.3794$, this implies that, though there exists negative correlation between the two, no conclusion could be derived as to statistically significant/ insignificant. Therefore, this correlation analysis indicated that the sales did not make increase cash balance.

(3) NDL failed to collect receivables from its Sundry Debtors Timely

Proportion of Cash and Bank balance compared to its Account Receivables was not in satisfactory trend, and that Cash and Bank balance did not increase or decrease in the same pattern as Account receivable. It suggests that holding of cash balance has no relation with Account Receivables of the company. Ratio of cash and Bank balance to Account receivable was 17.49% in the F/Y 2059/60 and 273.50% in the FY 2061/62 which indicated the fluctuation was erratic. Correlation between Cash and Bank balance and Account Receivables was negative i.e. -0.2916 which suggested increase in Cash and Bank balance decreases in Account receivable and vice versa.

(4) NDL failed to maintain an adequate proportion of cash in its Current Assets

Proportion of Cash and Bank balance in its current assets was very small and the cash balance held shown positive relation to the amount of current assets of NDL. Average ratio of Cash and Bank to Current Assets was 9.13%, which was very small portion of cash in current assets. Correlation coefficient between the two is 0.6492.

(5) NDL could not meet its cash & bank balance to Pay Current Liabilities Payment

The cash and Bank balance held compared to current liabilities indicated that for some FYs such cash and bank balances held were excessively high and where as for some other FYs such cash and bank balance was extremely low. This is yet another indication of mismanagement of cash. Moreover, cash and bank balance was negatively correlated with current liabilities. The ratio of cash and bank to current liabilities was 51.84% excess in the FY 2061/62. In the FY 2059/60, and 2060/61 the ratios were 2.90%, and 3.32% respectively which indicated that in these FYs, there was shortage of cash to meet its current liabilities. But in the FYs 2062/63 and 2063/64 the cash & bank balance to current liabilities ratio increased i.e. 6.17% and 5.68% respectively. Correlation coefficient between these two variables was positive i.e. 0.1353 which indicated practically significant. This definitely showed that there exists cash surplus to meet current liabilities payment.

4.22.2 Liquidity Position

Overall, liquidity position of the company was moderately dissatisfactory.

(1) A large portion of NDL's current assets was tied-up in the most less Liquid Asset; i.e. Inventory

The cross examination of the liquidity position suggested that current assets were tied-up in slow moving and unsaleable inventories. Analysis showed that the average current ratio was found to be dissatisfying and it was 1.41:1. It is lower than the conventionally accepted current ratio of 2:1. The average quick ratio was also found to be dissatisfying and it was 0.67:1. It is lower than the conventionally accepted quick ratio of 1:1. This indicated the possibility of current assets being tied-up in slow moving and unsaleable inventories.

(2) Current assets and Quick assets were not being maintained in accordance with Current Liabilities

Current assets were not maintained in the accepted pattern of i.e. increase in current assets with increase in current liabilities and vice-versa. Likewise, neither the quick assets were maintained in the accepted pattern of i.e., increase in quick assets with increase in current liabilities and vice-versa.

(3) Profitability of NDL being in worsening trend, liquidity did not practically increase with increase in Profitability and Vice-Versa

Average Net profit Margin Ratio i.e. average ratio of Net profit after tax to sales was – 70.76%; Average ratio of Net profit after tax to current assets was -46.12%; and Average ratio of Net profit after tax to Quick assets was – 93.68%. This analysis indicated that profitability position of NDL was worsening in an alarming rate.

4.22.3. Cash Flow Statement

(1) Operating activity of NDL was Moderately Satisfactory

Overall, the operating activities of NDL were moderate on account of the fact that there occurred cash inflows as well as outflows from such operating activities in the FYs under study. However, there were high fluctuations observed in such cash inflows and outflows, ranging from the highest outflows of (Rs 5.23) million in the FY 2060/61 and the highest inflow of Rs 58.28 million in the FY 2061/62.

(2) Investing activity of NDL was very poor. Surplus cash and cash equivalent was not invested in Short- Term Investment Opportunities

Investing activities of NDL were the poorest of all three activities involved in cash flow statement. This activity made cash outflows every year ranging from (Rs 0.54) million to (Rs8.58) million in FYs 2059/60 and 2063/64. But in the FY 2061/62 the cash inflow of Rs 3.12 million.

(3) Financing activity of NDL was almost passive, and thus Poor

In the FYs 2059/60, 2060/61, 2061/62, 2062/63 and 2063/64 financing activity generated insignificant cash inflow of Rs 27.01, 99.07, 101.43, Rs.101.55 and Rs.123.36 million respectively. Thus, the financing activity of the company was the

most passive activity, and hence the company should increase its financing activity by various financial activities such as; loan borrowings, issue of shares etc.

4.22.4 Cash Budgeting Practice

Overall, cash budgeting practice of NDL was very poor. Nepal Drugs Limited allocated more than required cash budget for its current assets investment. In other words, the allocated budget exceeded actual expenses of the company each fiscal year, which was indicative of excess cash balance being held idle incurring high cost. The ratios of 2.51 in the FY 2059/60, 1.53 in the FY 2060/61, 2.67 in the F/Y 2061/62, 1.99 in the F/Y 2062/63 and 1.84 in the F/y 2063/64 suggested that the company was over cautious of cash deficit and as such has been holding more than enough cash balance. This was indicative of excess cash balance being held idle. Average ratio of 2.11 suggested that the company was not following definite policy regarding allocation and expenses of cash budget.

4.22.5 Issues and Constraints

While analyzing the management of cash in Nepal Drugs Limited. Major issues and constraints noticed are as follows:

1. It was observed that the cash management was least concerned to forecast of cash for the coming period. The cash forecasting was completely lacking in the company. The fluctuating trend of cash deficit revealed the fact clearly.
2. The lack of accurate and proper sales forecast was one of the important constraints that affect the financial performance of the company. If the company forecasts the expected sales accurately, it can manage the various activities accordingly.
3. Restrictive credit policy was one of the important constraints that affected the sales volume of the company. If it adopts liberal credit policy, it can increase the sales volume and the receivable turnover by employing a restrictive credit policy. But however, this is true up to the certain point only because such strategy tends to decrease the sales.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Nepal Drugs limited is a growing concern of greater national importance in the area of pharmaceutical to the public at large. It contributes significantly to the economic development of the country. However, NDL is found to be suffering from inefficient 'cash management'. So, the objectives of this study is to examine and critically analyze the cash management practice of NDL; to examine the liquidity position of NDL, to examine cash flow statement of NDL, to examine cash allocation /expenses budget practice of NDL and to recommend viable suggestions to cope up with cash management shortcomings in NDL. These objectives of this study are to have true insight into its 'cash management'.

Hence, an effort was made in this thesis to present major findings of the study by beginning with finding in 'overall cash management', then proceeding through 'liquidity position' and 'cash flow statement' and finally 'cash allocation/expenses budget practice'. There after, in the same pattern 'recommendations' were stated. Likewise, 'conclusions' were drawn at the end of the chapter.

For the purpose of conducting this study, mainly the secondary data were used. It constituted mostly, the balance sheet and profit and loss account besides; the performance was also supplemented from interview with the related persons of Nepal Drugs Limited.

5.2 Conclusion

That cash management is an important aspect of the financial decision making variable. Many factors or determinants such as nature of business, level of sales, credit terms, quality of customers, economic condition etc needed to be considered in cash management. Apart from the 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 technique of cash management etc. are needed to be considered.

Conclusively, it can be stated that NDL's cash management was very poor. Negative profitability of the company added much to the worsening financial position of the company. Besides, cash management being one of the important elements in financial function, there are other numerous aspects of finance involved in the overall financial performance of the company. In addition to this, the overall performance of the company counts for other managerial aspects such as; human resource management, organizational structure, markets management etc. However, above all disappointing down-falling trend of the financial position is indicative of the fact that NDL should immediately seek for drastic change in its managerial structure. So far cash management is concerned, the recommendations suggested above could, to a greater extent, uplift NDL's cash situation.

5.3 Recommendation

Nepal Drugs Limited required some suggestions to improve the application of 'cash management' system in NDL for its better operation. The study has clearly shown that NDL's planning was not systematic, there was lack of coordination between departments, and implementation aspect was poor as well. The study recommends the following steps to improve NDL's planning and performance.

1. Efficient Management of Cash

Nepal Drugs Limited should have proper cash planning to estimate the cash receipts and payments. It helps to minimize the problem of excess or deficit cash balance. The company should first identify the cash needs for operation. For this, the company should consider the various expenses it has to incur for purchase of commodities, payment to be made for wages, salaries and rent, power etc. In other words, it should forecast the cash needs for manufacturing expenses, administrative and selling overheads for certain period of time. After identifying the cash needs then the company should estimate the cash to be received. It could be estimated with the proper budgeting of cash sales and collection of credits. When the cash flows are forecasted, the company should then determine the minimum level of cash balance needed to the company. At the same time, the seasonal requirement should also be considered.

2. To design the effective Account Receivables Management

Account receivable management is one of the basic components of current assets. And management should be given top priority by the top management of the company since major share of company current assets has been occupied by account receivables. Account receivables can be managed efficiently by designing an appropriate receivable management programme. This programme has two main approaches; in the first place the company should try to minimize account receivable by selling only in cash terms. Secondly, it should try to maximize collection efforts by different process restoring to various measures.

3. Adopt effective Credit Policy

The company should have suitable credit policy to handle the cash management effectively. It should adopt liberal credit policy to increase the sales.

4. Activate Investing Activities

Cash flow statements have shown that investing activities are not functioning. This fact together with the fact that NDL has been holding excess cash and cash equivalent at the end of years necessitates immediate investments in short-term investments which would earn a return till the funds can be utilized in the firm.

5. Activate Financing Activities

The study of cash flow statement has also pointed that financing activities of NDL is almost passive, incurring neither cash inflows nor cash outflows. Financing activities has greater impact on the profitability of the company and consequently on liquidity. So, it is recommended to activate its financing activities through long-term borrowings, paying interests and dividends wherever required etc.

6. Maintain optimum Cash Balance Every Year

The study has identified that NDL hasn't been maintaining optimum cash balance. The balances held are at times too high and too low and without any definite purpose as to why the firm has held excess or deficit balance. For a good running of a firm , holding of optimum cash balance as per its sales, profit and or other influencing variables is recommended.

7. Prepare cash budget on the basis of Cash Flow Analysis

NDL needs to prepare cash budget based on cash flow analysis. The objective of preparing a cash budget is to forecast whether at any point of time there is likely to be an excess or shortage of cash.

Thus, for NDL, it is necessary to highlight the importance of developing appropriate strategies for cash management in respect of:

- a. Cash planning and cash budgeting in a formal basis so as to project cash surplus or cash deficit for a period not exceeding one year and broken-up into shorter intervals.
- b. Optimizing the level of cash balance by matching the cost of holding excess cash and the danger of cash deficiency.
- c. Managing of cash flows so as to accelerate the inflows and as far as possible to decelerate outflows.
- d. Investing idle cash balance taking into account the cost of administering investments in marketable securities.

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