

CHAPTER – ONE

INTRODUCTION

1.1 Background of the Study:-

The word 'Bank' developed from Italian word "Banco" which means a bench for keeping, lending and changing of money or coins in the market by money lenders, changers respectively.

Before the origin and development of the bank people used to borrow the loan from Land lord, merchant, goldsmith etc. But now, due to the implantation of the bank the people need not knock their door.

Banks are among the most important financial institutions in the economy of the country. Bank is a business establishment that safeguards people's money and uses it to make loans and investments. A bank is an organization concerned with the accumulation of the idle money of the general public for the purpose of advancing to others for expenditure of investment.

A bank is the institution, which accepts deposits from the public and in turn advances loans by creating credit. Banks are the institutions that provide the funding required starting the business to those with skills and desire to operate the business collecting from those with the money but no skill or time to operate the business. Bank is a resource of mobilizing institution, which accepts deposit from various sources and invests such accumulated resources in the fields of agriculture, commerce, trade and industry.

In other words, banks are the institutions offering deposits subject to withdraw on demand and making loans of a business nature. Banks offers wide range of financial services like credit, savings, payment services etc.

Bank is related monetary transaction. It accepts money as deposit from depositors by saving account, current account, fixed account and also lends the different types of loan to different sector as well as individual for different purpose. It provides and takes certain amount as interest to depositors and loan borrower respectively.

Biratlaxmi Development Bank is a Development bank. There is a lot of Development banks are working in Nepal. Some of these banks are Development banks i.e. Agricultural Development Bank Ltd., Industrial Development Bank Ltd. and Popular Bank Ltd. etc.

Development bank is one of the modern banks. In general bank means the commercial and Development bank. Hence the bank whose objective is to earn profit and generate finance for the Development of infrastructure of the nation by performing different financial activities is called Development bank. So, they are established to earn profit and welfare for the society. With certain exceptions Development banks are established according to the role of government.

Development bank collects its capital by selling share in the open market. The person buying bank shares are called shareholders. As far as the management is concerned it is managed by the board of directors which members are either elected or selected by the shareholders. If there is consensus then members are selected and if no consensus then elected.

Development bank accepts deposit pays the amount of cheques; grants loan performs different agency function and performs other monetary activities.

Development bank distributes profit of its shareholders as dividend. Now a day Development banks are in a form of Joint Stock Company.

It is also one faint investment bank which provide a lot of banking service to economical and financial sector as well as healthy services to individual and financial by lending loan and

giving other technical, economical advice, feasibility study, provide training and to help to sales bond and debenture.

Biratlxmi Development Bank Ltd. was established in 2061 B.S. under the company act 2061 and Finance company Act. 2042 of Nepal. With in the Biratlxmi Development Bank 60% share was belonging held by financial instituted, 40% by general public.

At present, the head office of Biratlxmi Development Bank Ltd. is Hanumandas Road, Biratnagar. The main branch of this bank is situated in Morang, Jhapa and Sunsary. There are four branches of Nepal of Biratlxmi Development Bank Ltd. The branch offices are situated in Biratnagar, Beldangi Road Jhapa, Biratchock Morang, Surunga Bazaar Jhapa and Itahari Sunsary.

Biratlxmi Development Bank Ltd. provide nice service like accept the deposit with nice interest rate as well as minimum balancing amount by current account saving account, fixed account and provide the different types of loan as education, Loan as property, Loan as mortgage, vehicle Loan, professional Loan by taking minimum amount of interest as well as lunching Astadal kamal Bachat programs.

It also provides some extra facilities of the customer as anywhere branch banking system, 365 days banking transaction by some branch. Other facilities are table banking services, foreign payment or foreign exchange, telegraphic transfer, safety locker etc.

At last, bank help the people in very field of economy for the development of the country through the different channel link personal business, people, industry, commercial area, social corporation etc.

Our study focuses on working capital management of private bank with special reference to Biratlxmi Development Bank Ltd. Its working capital management is found fluctuated. Due to this, it is operating in law profit in some year. It may be due to miss-

management of working capital. Financial management is universally involved in the management of private firm as well as public enterprises as does the oxygen in the atmosphere. Therefore, for achieving success in private bank proper financial management is of great importance. Financial management comprises of various aspects and study of financial management remains incomplete without study of management of working capital.

The study of working capital management in private bank is very important mainly for these four reasons. Firstly, private bank must determine the adequacy of investment in current assets; otherwise it would seriously erode their liquidity base. Secondly, they must select the types of current assets suitable for investments so, as to raise their operational efficiency. Thirdly, they are required to ascertain to turnover the current assets that greatly determine the profitability of the private business firm and lastly, they must find out the appropriate source of funds to finance current assets.

The role of working capital management is more significant in private banking because they must have adequate cash to pay wages, bills and other regular expenses. Similarly it is very important that to good management of short-term assets and liabilities, creation of goodwill, utilizing of opportunities, regular supplies of materials, easy availability of cash discount, creates feeling of securities and confidence, easy to bank loan, smooth operation of business etc.

There is a controversy regarding the meaning of working capital because many writers define it in different ways. Mostly there are two schools of thought or concepts regarding the meaning of working capital. According to one school of thought, working capital is meant for the current assets only. It is concerned nothing on liabilities side. According to other school of thought working capital is the excess of current assets. The former one is the gross concept and later one is net concept.

The gross working capital concept makes the implied meaning of working capital or current assets only. It is also called circulating capital. It is equal to total sum of current assets only, and it may represent both owned capital as well as loan capital assets used for financing current assets.

Current Assets are those assets, which can be converted in to cash within an accounting cycle that is usually a period of one year. Current assets include cash, notes receivable, marketable securities and other assets of quick and liquate nature. Account receivable and inventory. Authors who support the gross concept argue that real working capital of any enterprises entirely depends on current assets. So, working capital is total current assets only.

The term net working capital can be defined in two ways: (I) The most common definition of net working capital is the difference between current assets and current liabilities, (ii) The alternative definition of net working capital is that portion firm current assets which is financed with long term fund. It is a qualitative concept indicating the soundness of current financial position. It is a more important to the inventors and lenders.

The net working capital being the difference between current assets and current liabilities indicates the liquidity position and suggest the extent to which working capital needs may be financed by the permanent source of fund." Business enterprises must possess sufficient current assets to pay current liabilities and maturing obligation within the operating cycle because cash outflows and inflows do not coincide.

In other words, it is the non-synchronous nature of cash flows that makes net working capital necessary. While inadequate investment in working capital threatens solvency of firm and excessive investment affects enterprise profitability, as idle investment yield noting.

Due to the lack of basic knowledge of working capital most of the business enterprises in Nepal are unable to maintain the best

level of working capital. Deficiency of knowledge about working capital concept has often brought a lot of liquidity crises, which should have been avoided in the presence of knowledge among private enterprises managers.

1.2 Statement of the problem:

Banking plays a significant role in the economic development of the country by extending credit to the people. Although Development bank in Nepal is making remarkable progress and growth, it's not without the problem. At the present context, the main problem faced by the business sector as well as bank is the unstable political and economic condition of the country.

Another problem faced by the Development bank is the lack of optimal capital structure. Biratlaxmi Development Bank is also a Development bank. There are so many problems in the Biratlaxmi Development Bank Ltd. There are not appropriate training and orientation class about the business operations. There is other main problem of Biratlaxmi Development Bank Ltd. is effective management policy, planning, organization, staffing, co-ordination, controlling, reporting, resources. Some major problems are listed below:

- It is facing the problem of limited market, as the trade and industry of our country are in front stage.
- Due to poor economic condition of the people of our country, banking transaction could not be increased.
- Due to lack of proper knowledge of banking service of large people.
- People show less interest in investing in shares of Development and commercial bank as compare to government bank. Therefore there is less attraction toward insurance company.
- Political flexibility is other major problems of the bank.
- Income statement and balance sheet of it are not kept properly.

1.3 Objectives of the study:

The primary objective of this study is determining the position of working capital of Biratlaxmi Development Bank Ltd. This research study has also got some specific objectives, which are mentioned as follows:

- To identify the various working capital aspects of Biratlaxmi Bikas Bank Ltd.
- To know the situation of the working capital management of Biratlaxmi Development Bank Ltd. with respect to cash, debtors, and inventory management.
- To establish the relationship between sales and different variable of working capital.
- To examine the effect of working capital on profitability.
- To evaluate the size, growth, structure, liquidity, accuracy, efficiency and productivity of working capital, position of Biratlaxmi Development Bank Ltd. on the basis ratio.
- To provide better suggestion from improving working capital management in future.

1.4 Importance of the study:

For the smooth operation of the financial institution in the short run as well as long run, sound working capital management is a prerequisite factor. Analyses of different component of current assets as well as current liabilities are important for the evaluation of working capital management of any firm. Working capital is a circulating capital which is compared as life blood of the human being. It is very essential for any types of bank i.e. commercial and non-commercial.

Working capital is the size of investment in each type of current assets. Each of these assets should be managed efficiently and effectively. It is because decision regarding working capital not only affects profitability of the bank or other institution but also affects the survival in the long run.

The need of the study is to find out Biratlaxmi Development Bank Limited internal position of working capital under financial problem as well as to given an opportunity or correcting its shortcomings.

1.5 Research questions of the study:

To fulfill above-mentioned objectives, this study attempts to answer the following questions:

1. Is the working capital management of the Bank satisfactory?
2. How well the bank utilizes the funds?
3. Is the earning of the bank adequate?
4. How efficiently does the bank use its current assets?
5. Is the bank in a position to meet its current obligations?
6. What is the bank's policy for financing working capital?

1.6 Assumptions and limitations of the study:

As every research have its own assumptions and limitations. The present study has the following assumptions and limitations:

- This study is not free from some assumption of the working capital management of study.
- The data available in published accounts and other references have been assumed correct and true.
- Since the analysis of data has been taken from the bank's account, the research is based mainly on the secondary data and this study is not free from the limitations.
- Working days of the bank is assumed 365 days per year.
- The trend of variable is assumed 100 and percentage trend are calculated.
- Lack of sufficient time for preparation of the thesis.
- The study only considers working capital management position of Biratlaxmi Development Bank.
- This study only present and analysis about Biratlaxmi Development Bank.
- Only 'four years data maintained in the study'.

- Information are recorded were not available for systematic and detailed.

1.7. Organization of the study:

This research of working capital management of Biratlaxmi Development Bank Ltd. has been divided into five chapters, viz., Introduction, Review of Literature, Research Methodology, Presentation and Analysis of Data and Summary, Conclusions and Recommendations.

Chapter-1 : *Introduction:*

This is the introduction chapter, which is related to the introduction of the study. It deals with focus of the study, statement of the problem, need of the study, objectives of the study research questions of the study and assumptions and limitations of the study.

Chapter-2 : *Review of literature:*

The second chapter deals with review of literature relating to working capital management. In this chapter a brief presentation of the related studies and findings as well as review of various pertinent literatures has been dolt.

Chapter-3: *Research Methodology:*

In this chapter, methodology used for the purpose of this study is explained. It includes research design, nature and source of data, population and sample of the study, procedure employed and use of analytical tools.

Chapter-4: *Presentation and Analysis of Data:*

In the forth chapter, the acquired data are presented, analyzed, and interpreted by using different financial as well as statistical tools i.e. ratio analysis, fund flow analysis, trend analysis, correlation co-efficient etc. and presented the results relating to the study.

Chapter-5: Summary, Conclusion and Recommendations:

The fifth and last chapter includes summary of study, conclusion of the study and the concrete, remedial measures from the improvement of the working capital management decisions as well as other financial position are presented as recommendations.

1.8 Key terms used in this study:

Current Assets:

Current assets include cash and those assets, which can be converted into cash within a year, such as marketable securities, debtors and stock. Prepaid expenses should also be included in current assets.

Current Liabilities:

An obligation maturing which in a year are included in current liabilities. Thus, current liabilities include sundry creditors, provision for taxation and unclaimed dividend provision for bonus, housing and income tax.

Net Working Capital:

The net working capital refers to the company's surplus balance of current assets over current liabilities.

Working Capital:

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

Fixed Assets:

It consists of the assets like land and building, plant and machinery, furniture and fixtures, equipment, vehicles etc.

Total Assets:

It is the total sum of current and fixed assets.

Inventory:

It includes the inventory of raw materials, chemicals and finished goods inventory.

Receivables:

It includes the sales debtors and other debtors only.

Cash and bank balance:

It includes the cash in hand and cash at bank.

Quick Assets

It is a part of current assets, which are considered as highly liquid. We have to reduce the prepaid expenses and inventories from total current assets to find out quick assets.

F/Y:

It is the period of 12 months from 1st Shrawan to 31st Ashad.

Total Fund:

It implies the total of long-term debt as well as short-term debt.

CHAPTER – TWO

REVIEW OF LITERATURE

2.1 Nature of working capital:

A financial Institution needs not only fixed capital but also the working capital. For day-to-day operation of the concern, it finances in some of the assets of short-term nature like inventories, accounts receivable (sundry debtors), cash and marketable securities etc. When all these short-term assets are put together it is called working capital. This working capital and total current assets are synonymous. It is therefore, said that working capital is related with short-term financing.

The use of the term working capital indicates that its flow is circular in nature. Because of the circular nature of current assets, working capital is sometimes called circulating capital. (*Pandey, 1987: 328*)

C.W. Gatenbery said, "Circulating capital means current assets of a company that are changed in the ordinary course of business from one form to another, as for example, from cash to inventories, inventories or receivables, receivables to cash." (*Encyclopedia, Banking & Finance, 1983:147*)

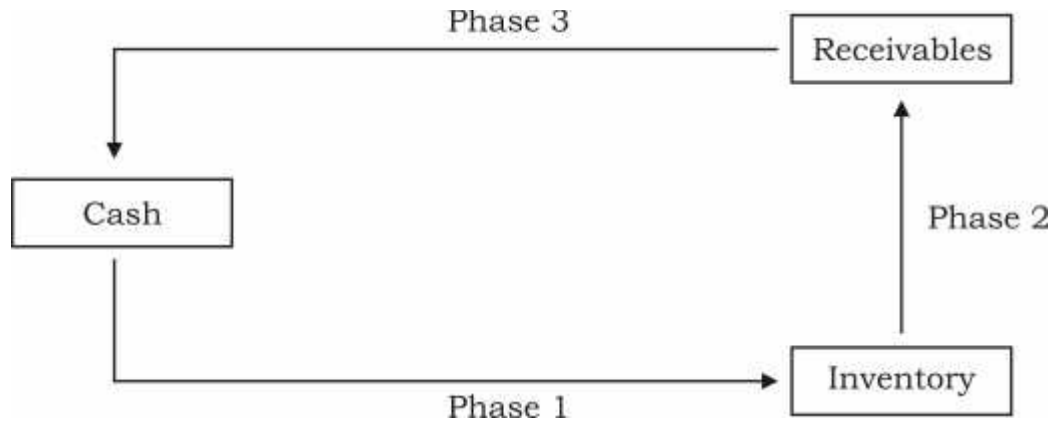
The use of this term 'Circulating Capital' emphasizes on short-term cash cycle or operating cycle of the firm. The short-term cash cycle refers to the recurring transaction from cash to 'Inventory, inventory to receivable and then to cash again. In other words "The term cash cycle refers to the length time necessary to complete the following cycle of events:

- i. Conversion of cash into inventories.
- ii. Conversion of inventories into receivable.
- iii. Conversion of receivables into cash.

(*Khan & Jain, 1998:620*)

The operating cycle, which is a continuous process, is as shown in fig 2.1.

Figure 2.1
Operating Cycle



The operating cycle consists of the three phases: In phase 1, cash gets converted into inventory. This would include purchase of raw materials, conversion of raw materials into work-in-progress, finished goods and terminate in the transfer of goods to stock at the end of the manufacturing process. In phase 2 of the cycle, the inventory is converted into receivables as credit sales are made to customers. Firms which do not sell on credit will obviously not have phase 2 of the operating cycle. In phase 3, the receivables are collected. This phase completes operating cycle. Thus, the firm has moved from cash to inventory, to receivable and to cash again".

In the concern of working capital the well-known professor K.U. Smith has given the nature of working capital as "Working capital management is concerned with the problems the arise in attempting to manage the current assets, the current liabilities and inter-relationship that exist between them". (Smith, 1974:5)

The term current assets refer to those assets, which can be converted into cash within an accounting year or operating cycle, and include cash, short-term securities, debtors, bills receivable, inventory and prepaid expenses. Current liabilities are those claims outsiders which are expected to mature for payment within an

accounting year and include an account payable, creditors, bills payable, bank overdraft and outstanding expenses. "Each of the current assets must be managed efficiently in order to maintain the liquidity of the firm by not keeping too high level of any one of them. The interaction between current assets and liabilities is, therefore the main theme of the theory of working capital management.

According to K.M. Upadhyay "The value represented by current assets circulates from one working capital to another i.e., from cash to cost of goods manufacturing accounts, from inventory accounts to sales accounts, from sales accounts to cash accounts. This is described as circular nature of current assets or in other words, working capital has a circular nature. The speed of circulation of working capital or the turnover of current assets is an indicator of the degree of efficiency of the management. The faster the turnover, the higher the degree of efficiency". (*Upadhaya, 1987:47*)

Working capital has a volatile nature. This nature presents some problems and constrains in financing working capital need. The volatile nature of working of capital refers to the change in total current assets.

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

2.2 Concept of Working Capital

The management of the funds of business can be described as financial management. Financial management is mainly concerned with two aspects. Firstly, fixed assets and fixed liabilities; in other words, long-term investment and sources of funds. Secondly, current assets and current liabilities, that are concerned with current uses and sources of funds. Both of these

types of funds play a vital role in business finance. Business firms need various types of assets in order to carry out its operation. Some assets are required to meet the needs of regular production and some others are required specially to meet day to day, expenses and short-term obligations. The assets, such as cash, marketable securities, account receivables and inventories, which are known as current assets are required to be maintained at a certain level depending upon the volume of production and sales.

The cash and marketable securities are respectively considered as purely liquid and near liquid assets whereas the account receivable and inventories are not. However, they can be liquidated as and when necessary within a period of less than one year. The capital invested in these assets is known as working capital. In short, working capital is the source of financing current assets and it includes short as well as long-term financing.

Working capital is a controlling nerve of business. It is an important and integral part of financial management as short-term survival is a pre-requisite to long term success. The pointed out by Ralph Kennedy and Steward McMullar, the inadequacy or mismanagement of working capital the heading cause of business failure. Unless the payment is made at the maturity of the particular debt, the firm is at worst and the creditors may force the firm to terminate its business. (*Funk and Donald, 1964:13*)

Firms need cash to pay for all their day-to-day activities. They have to pay wages, pay for raw materials, pay bills and so no. the money available to them to do this is known as the firm's working capital. The main sources of working capital are the current assets as these are the short-term assets that the firm can use to generate cash. However, the firm also has current liabilities and so these have to be taken account of when working out how much working capital a firm has at its disposal.

Working Capital (WC)	=	Current Assets (CA) II -	Current liabilities (CL)
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Thus working capital is the same as net current assets, and is an important part of the top half of the firm's balance sheet. It is vital to a business to have sufficient working capital to meet all its requirements. Many businesses have gone under, not because they were unprofitable, but because they suffered from shortage of working capital. (*www.bized.ac.uk*)

Working capital refers to the cash a business requires for day-to-day operations, or, more specifically, for financing the conversion of raw materials into finished goods, which the company sells for payment. Among the most important items of working capital are levels of inventory, accounts receivable, and accounts payable. Analysts look at these items for signs of a company's efficiency and financial strength. The better a company manages its working capital, the less the company needs to borrow. Even companies with cash surpluses need to manage working capital to ensure that those surpluses are invested in ways that will generate suitable returns for investors. (*www.studyfinance.com*)

Gross Concept

According to the gross concept, WC refers to the capital invested in current assets of a firm. It focuses only on the optimum investment in current assets and financing of current assets. It includes cash, short-term securities, and inventory and accounts receivables. The level of current assets may be fluctuating with the changing business activity. Thus, this concept can help in earning more profit through maximum utilization of current assets. This concept is called the quantitative concept. (*Pradhan; 1986:119*)

Working capital in the gross concept means the total sum of current assets only. The view was supported by distinguished

authorities like Mean, Baker, Milled, Panday, Pradhan, Field and Adam Smith. Adam Smith called 'Circulating capital' for current assets. The use of this term emphasizes on the short-term cash cycle of the firm. The short-term cash cycle refers to the recurring transactions from cash to inventory, inventory to receivables and receivables to cash again.

Net Concept

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

The term net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders which are expected to nature for payment within an accounting year, and includes; creditors, bills payable, bank overdrafts and outstanding expenses or accrued income. Net working capital arises-when current assets exceed current liabilities. A negative WC occurs when current liabilities are in excess of current assets. *(Pandey;1995:710)*

According the well known Indian professor I.M. Panday, there are specially two concepts of 'working capital; Gross concept and Net concept. The gross working capital simply are those assets, which can-be converted into cash within an accounting year and includes cash, short-term securities, debtors, bills receivables, stock and prepaid expenses. According to James C. Van Horne, there are two major concepts of working capital-net working capital and gross working capital. When accountant use the term working capital, they are generally referring to net working capital, which is

the dollar difference between current assets and current liabilities. This is one measure of the extent to which the firm is protected from liquidity problems. From a management viewpoint, however, it makes little sense to take about trying to actively manage a net difference between current assets and current liabilities, particularly when that difference is continuously changing.

A financial analyst, on the other hand, means current assets when they speak of working capital. Therefore, their focus is on gross working capital. Since it does make sense for the financial manager to be involved with providing the correct amount of current assets for the firm at all times, we will adopt the concept of gross working capital. As the discussion of working capital management unfolds, our concern will be to consider the administration of the firm's current assets-namely, cash and marketable securities, receivables, and inventory and the financing needs to support current assets. (*Van Horne; 1996:204*)

Thus, there are two concepts of WC: gross concept and net concepts. However, the concept of WC is related not only with gross and net concepts of WC, but also with organization borrowings. The management of any organization has to pay attention towards the total amount of both current assets' as well as borrowing. And along with this, the management has to check whether profit earning capacity of the organization is favorable or not because it is higher than the cost of borrowings. In a corporation or any type of firm, the financial manager should pay attention to the aspects of profitability. He should also aim to ensure the liquidity of the firm. Any established business is a constant 'debtor'. It borrows from financial institutions. It purchases merchandise on credit and it has tax obligations to the government or the concerned authorities. Thus in every step of the business or corporation activities, there is an obligation of creditors. So, to satisfy their creditors, the firm must have that much of liquid cash for making payment of all these obligations in time. Hence, both concepts of net and gross working

capital are resource needed by a firm and use it in a most profitable field without keeping any idle fund as far as possible.

2.3 Meaning of Development Banks

It is difficult to give concise and accurate definition of bank. It is so because a modern bank renders various functions. It is difficult to include all those functions in a single and concise definition. Even though, it can be said that a bank is an institution whose business is to trade in money. Trading in money relates to activities such as taking deposit, wanting loans, discounting bills, issuing cheques to be drawn upon and other various functions on behalf of customers. Any institution will be known as bank if it renders all or some of these functions. It is quite impossible to discharge all these functions by a single bank. So they specialize in certain set of functions. Banks are classified on the basis of their functions, which are as follows:

1. Central Bank
2. Commercial Bank
3. Development Bank
4. Agricultural Bank
5. Industrial Bank
6. Exchange Bank
7. Saving Bank etc.

American Institute of Banking defines "Development bank is a corporation which accepts demand deposits subject to cheques and makes short-term Long-term loans to business enterprises, Industries regardless of the scope of its other services". The institution also aid down the four functions of development bank as receiving and handling deposit (Deposit Function), handling payments of money (Payment Function), making loans, and investments (Loan Function) and creating money by extension of

credit (Money Function). It today's concern the operating function of the Development banks are,

- To collect working capital.
- To utilize the working capital in various purposes.
- by utilizing the working capital it earns profit and
- Part of the profit is distributed as dividend and part of the profit is retained for the expansion of banking transactions.

Development Bank Act, 2058 BS of Nepal has defined it as a Development is one which exchanges money, deposit money, accepts deposits, grants loans and performs Development banking functions and which is a bank meant for cooperative agriculture, industries or for such specific purpose. The Development Bank Act 2063 also pointed the functions of Development Bank provide short-term and long-term debts necessary for trade, Industry, Agriculture and commerce. They take deposits from the public and grants loans in different forms. They purchase and discount bills of exchange, promissory note, and exchange foreign currency. They discharge various functions on behalf of their customers provided that they are paid for their services.

2.4 Classification of Working Capital

Before turning our attention of the way working capital should be financed, we need to take a slight detour and classify working capital. Working capital can be classified into two types:

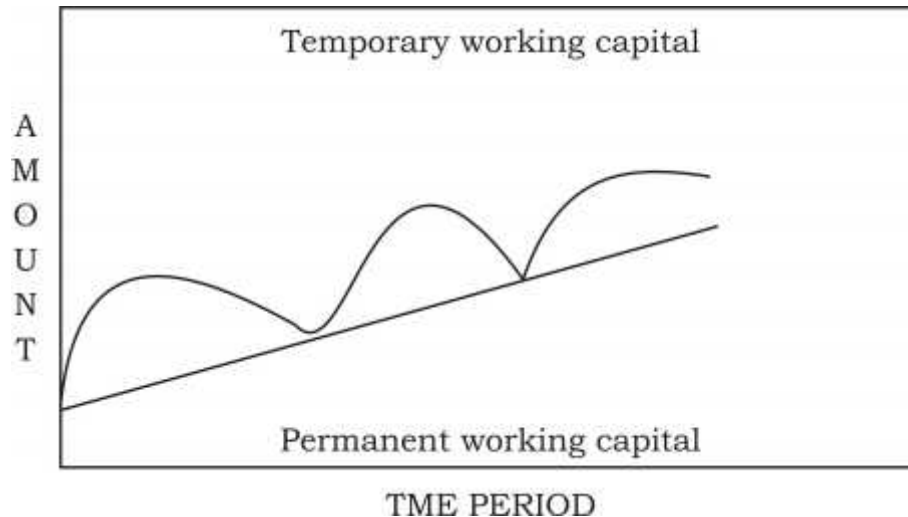
1. Permanent or fixed working capital.
2. Variable or temporary or fluctuating working capital.

A firm's permanent working capital is the amount of current assets required to meet long term minimum needs. You might call this "bare bones' working capital. Temporary working capital, on the other hand, in the investment in current assets that varies with seasonal requirements. Figure in below illustrates the firm's

changing needs for working capital over time while highlighting both the temporary and permanent nature of those needs.

Figure 2.2

Permanent and temporary working capital



Permanent working capital is similar to the firm's fixed assets in two important respects. First, the amount investment in both of these asset groups is long term. Therefore, suppliers of capital to the firm need to realize the funding needs for permanent current assets is long term despite the seeming contradiction that the assets being financed are called "current". Second, for a growing firm, the level of permanent working capital needs will increase over time in the same way that a firm's fixed assets will need to increase over time. However, permanent working capital is different from fixed assets in one very important respect-it is constantly changing. Permanent working capital does not consist of particular current assets staying permanently in place, but is a permanent level of investment in current assets, where individual items are constantly turning over. Viewed still another way, permanent working capital is similar to the level of water that we find in a day at low tide. Like permanent working capital, temporary working capital also consists of current assets in a constantly changing form. However, since the need for this portion

of the firm's total current assets is seasonal, we may want to consider financing this level of current assets from a source which can itself be seasonal or temporary in nature. (*Van Horne, 1996:205*)

Thus the permanent working capital refers to that level of current assets which is required on a continuous a basis over the entire year and the temporary working capital represents that portion of working capital, which is required over permanent.

2.5 Need of Working Capital

Efficient management of working capital is an integral part of overall financial management and has a bearing on the objective of the maximization of the owner's wealth. Sufficient profit is needed to achieve this objective. Profit position of the firm depends upon the amount of sale. In other words a good sales program is needed to gain sufficient profit. But the amount of sales shown in the book can not reflect the real income. Some time lag between sales and cash realization is needed. As the operation cycle in this period can not be stopped, some amount of liquid assets in needed to run the operation without interruption. That very amount of liquid assets is called working capital. Indeed the concepts of working capital (gross and net) are exclusive; rather they are equally significant from the management point of view. However, the firms differ in the management of working capital has been regarded as one of the conditioning factors in the decision making issue. It is no doubt, very difficult to point out as to how much working capital is needed by a particular company, but it is very essential to analyze and find out the solution to make an efficient use of funds for minimizing the risk of loss to attain profit objectives. Thus goes the importance of working capital in operating life of the company. A successful business keeps its working capital moving rapidly; hence it is also a lead circulation capital or a moving capital he transaction of a company's working capital into income and profits and back into working capital is once of the most dynamic she vital aspects of

business operation. And only this movement of current assets keeps the business alive. A fully equipped factory without stock to sell is of no use. These circumstances emphasize the importance of working capital in a business firm. (*Ghimere; 2002:73*)

The need for working capital or current assets cannot be overemphasized. The objective of financial decision making is to maximize the shareholders' wealth. To achieve this, it is necessary to generate sufficient profits. The extent to which profit can be earned will naturally depend upon the magnitude of the sales among other things. A successful sales program is in other words, necessary for earning by any business enterprise. However, sale does not convert into cash instantly: there is invariably a time lag between the sale of goods and receipt of cash. There is, therefore, sufficient working capital necessary to sustain sales activity. Technically, this is referred to as the operating or cash cycle. The operating cycle can be said to be at the heart of the need for working capital. "Operating cycle is the time duration required to convert sales. After the conversion of resources into inventories, into cash" (*Pandey; 1996:731*) business, every firm needs to hold the working capital components like cash, receivable, inventories etc. therefore every firm needs working capital to meet the following motives:

1) The transactional motive

According to transactional motive, a firm holds cash and inventories to facilitate production and sales operation in regular. Thus, the firm needs the working capital to meet the transaction motive.

2) The precautionary motive

Precautionary motives is the need to hold cash & inventories to guard against the risk of unpredictable change in demand and supply forces and other factors such as a strike, failure of important customer, unexpected slow down in collection of account receivable, cancellation of some order

for goods and some other unexpected emergency. Thus, the firm needs the working capital to meet any contingencies in future.

3) The speculative motive

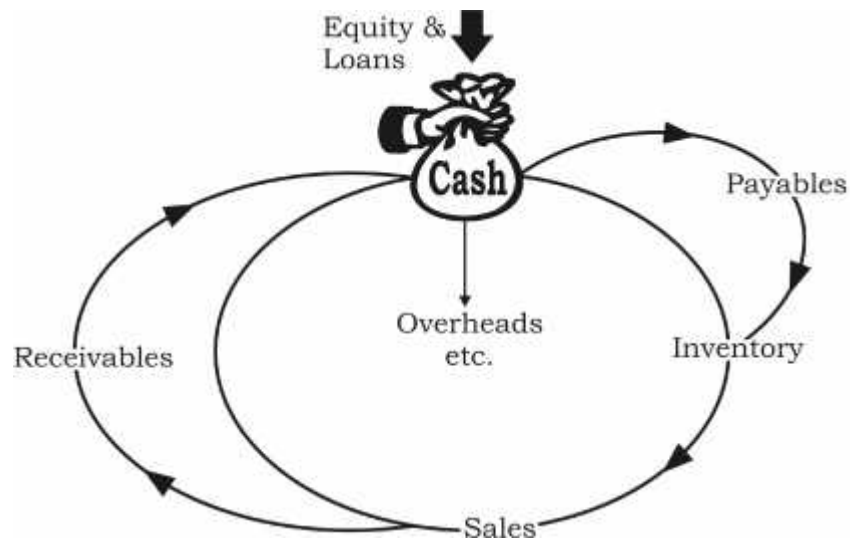
Speculative motive refers to the desire of a firm to take advantages of following opportunities:

- a) Opportunities of profit making investment.
- b) An opportunity of purchasing raw materials at a reduced price on payment of immediate cash.
- c) To speculate on interest rate and
- d) To make purchases at favorable price etc. Thus the firms need the working capital to meet the speculative motive.

2.6 Working Capital Cycle

Cash flows in a cycle into, around and out of a business. It is the business's life blood and every manager's primary task is to help keep it flowing and to use the cash flow to generate profits. If a business is operating profitably, then it should, in theory, generate cash surpluses. If it doesn't generate surpluses, the business will eventually run out of cash and expire. The faster a business expands the more cash it will need for working capital and investment. The cheapest and best sources of cash exist as working capital right within business. Good management improves profits and reduces risks. Bear in mind that the cost of providing credit to customers and holding stocks can represent a substantial proportion of a firm's total profits. There are two elements in the business cycle that absorb cash—Inventory stocks and work-in-progress) and Receivables (debtors owing you money). The main sources of cash are Payables (you creditors) and Equity and Loans.

Figure 2.3
Working Capital Cycle



Each component of working capital (namely inventory, receivable and payables) has two dimensions: TIME and MONEY. When it comes to managing working capital, TIME IS MONEY. If you can get money to move faster around the cycle (e.g. collect monies due from debtors more quickly) or reduce the amount of money tied up (e.g. reduce inventory levels relative to sales), the business will generate more cash or it will need to borrow less money to fund working capital. As a consequence, you could reduce the cost of bank-interest or you'll have additional free money available to support and additional sales growth or investment. Similarly, if you can negotiate improved terms with suppliers e.g. get longer credit or an increased credit limit; you effectively create free finance to help fund future sales.

If you	Then.....
Collect receivable (debtors) faster	You release cash from the cycle
Collect receivables (debtors) slower	Your receivables soak up cash
Get better credit (in terms of duration or amount) from suppliers	You increase your cash resources
Shift inventory (stocks) faster	You free up cash
Move inventory (stocks) slower	You consume more cash

It can be tempting to pay cash, if available, for fixed assets e.g. computers, plant, vehicles etc. If you do pay cash, remember

that this is now longer available for working capital. Therefore, if cash is tiger, consider other waves of financing capital investment-loans, equity, leasing etc. Similarly, if you pay dividends or increase drawings, these are cash outflows and, like water flowing downs a plug hole, they remove liquidity from the business. (Source: *www.planware.org*)

2.7 Working Capital Policy

A firm's net working capital position is not only important as an index of liquidity but it is also used as a measure of the firm's risk. Risk, in this regard, means chances of the firm, being unable to meet its obligations on due date. (Pandey:op. cit:738)

Working capital management involves deciding upon the amount and composition of current, assets and how to finance these assets. These decisions, involve trade off between risk and profitability. The greater the relative proportion of liquid assets, the lesser the risk of running out of cash all other things being equal. Profitability, unfortunately, also will be less. The longer the composite maturity schedule of securities used to finance the firm, the lesser the risk of cash insolvency all other things being equal.

Again the profits of the firms are likely to be less. Resolution of the trade off between risk and profitability with respect to these decisions depends upon the risk preferences of management. Working capital policy refers to the firm's basic policies regarding target level of each category of current assets and how current assets will be financed. (Western and Brigham; 1996:333).

So, first of all, the firm has to determine how much funds should be invested in working capital gross concept. Every firm can adopt different financing policy according to the financial manager's attitude towards the risk-return trade off. One of the most important decisions of finance manager is how much current liabilities should be used to finance current assets. Every firm has to find out the different sources of funds for working capital.

2.7.1 Current Assets Investment Policy

Current assets investment policy refers to the policy regarding the total amount of current assets to be carried out to support the given level of sales. How much a firm will invest in CA will depend on its operating cycle. There are three alternative current assets investment policies-fat car, lean and mean and moderate. (*Western and Brigham; 1996:344*)

(i) Fat policy

This known as relaxed current assets investment policy, the firm holds relatively large amount of cash, marketable securities, inventory and receivable to support given level of sales. This policy creates longer inventory and cash conversion cycles. It also creates the longer receivable collection period due to the liberal credit policy. Thus, this policy provides the lowest expected return on investment with lower risk. This policy provides the lowest expected return on investment with lower risk.

(ii) Lean and Mean Policy

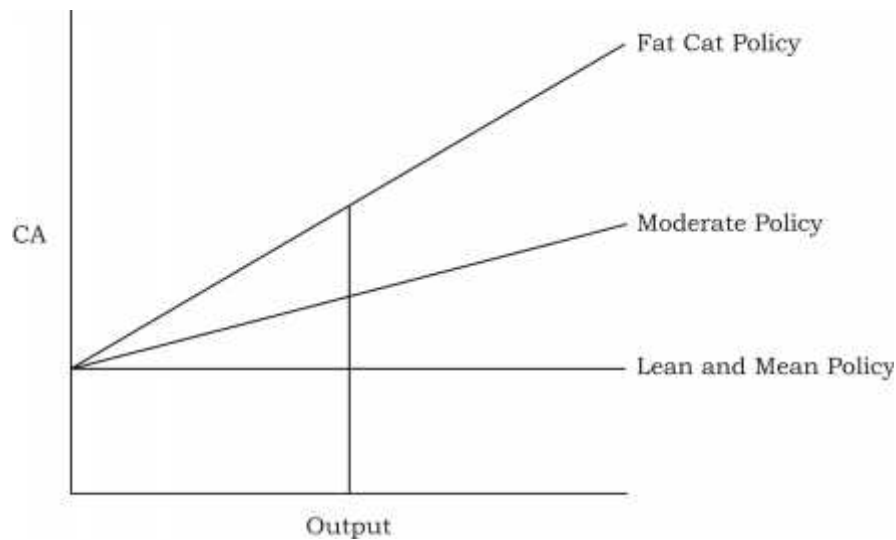
In lean and mean policy; a firm holds the minimum amount of cash, marketable securities, inventory and receivables to support a given level of sales. This policy tends to reduce the inventory and receivable conversion cycle. Under this policy firm follows a light credit policy and bears the risk of losing sales.

(iii) Moderate Policy

In this policy, a firm holds the amount of current assets in between the relaxed and restrictive polices. Both risk and return are moderate in this policy.

Figure 2.4

Alternative Current Assets Investment Policy



The relationship between output and current assets level for these alternatives is illustrated in above figure. We can see from the figure that the greater the output, the greater the need for investment in current assets to support that output and sales. This relationship is based on the notion that it takes a greater proportional investment in current assets when only a few units of output are produced than it does later on, when the firm can use its current assets more efficiently.

2.7.2 Current Assets Financing Policy

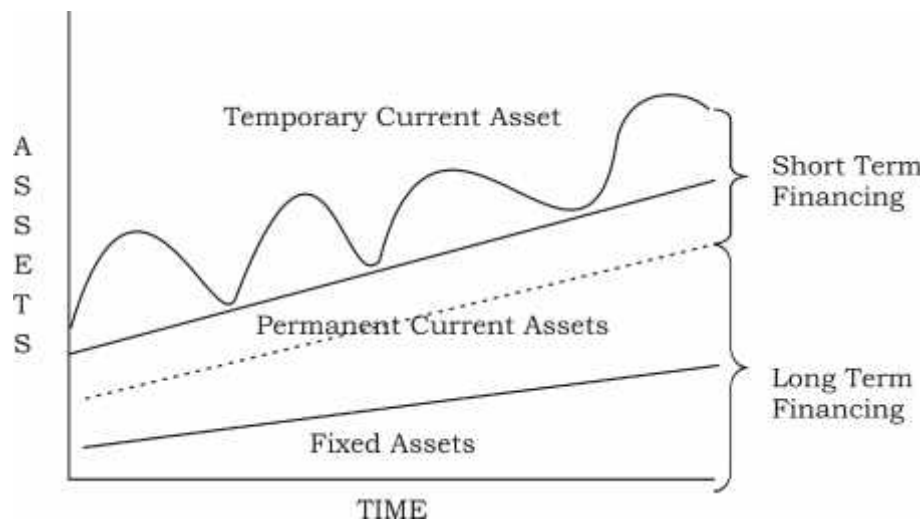
It is the manner in which the permanent and temporary current assets are financed. Current assets are financed with funds raised from different sources. But cost and risk affect the financing of any assets... Thus, current assets financing policy should clearly outline the sources of financing. There are three policies-aggressive, conservative and matching or hedging policies of current assets financing.

i) Aggressive Policy

In this policy, the firm finances a part of its permanent current assets with short term financing and rest with long-term financing. In other words, the firm finances not only temporary current assets but also a part of permanent current assets with short term financing. In this policy, the liquidity position will be low and the

risk will be high. A low liquidity position may expose the firm to opportunity costs. If a firm relies heavily on short-term borrowings, during the period of high money, credit may be rational and the firm may be unable to obtain all the financing its needs.

Figure 2.5
Aggressive Financing



Above figure shows that short-term financing finances 50 percent of the permanent current assets. In general, interest rate increases with time i.e. shorter the time, lower the interest rate. It is because lenders are risk adverse and risk generally increases with the length of lending period. Thus, under normal situation the firm borrows on a short-term financing rather than long-term financing. On the other side, if the firm finances its permanent current assets by short-term financing, then it runs the risk of renewing the borrowing again and again. Thus continued financing exposes the firm to certain risk. It is because, in future the retest expenses will fluctuate widely and also, it may be difficult for the firm to raise the funds during the stringent credit periods. In conclusion, there is higher risk, higher return and low liquidity position under this policy.

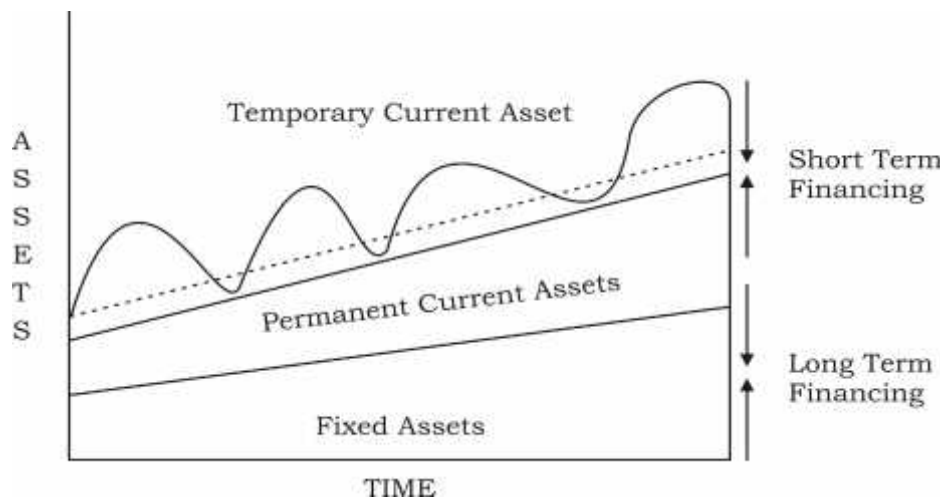
ii) Conservative Policy

In This policy, the use of short-term fund is restricted to the emergency situation when there is necessity in invest current assets. Otherwise; the long-term fund should be used as far as

possible in financing of investment in current assets. However, the cost of financing in this policy will be more, the liquidity will be relatively greater and risk will be minimized.

A firm may adopt a conservative policy in financing its current and fixed assets. The financing policy of the firm is said to be conservative when it depends more on long-term funds for financing needs. Under a conservative plan, the firm finances its permanent assets and a part of temporary current assets with long-term financing. Thus, in periods when the firm has no temporary current assets with long-term financing. Thus, in periods when the firm has no temporary current assets, it stores liquidity by investing surplus funds into marketable securities. The conservative financing relies heavily on long-term financing and, therefore, is less risky. The conservative financing policy is shown in figure below. (Pandey; 1995:684),

Figure 2.6
Conservative Financing Policy



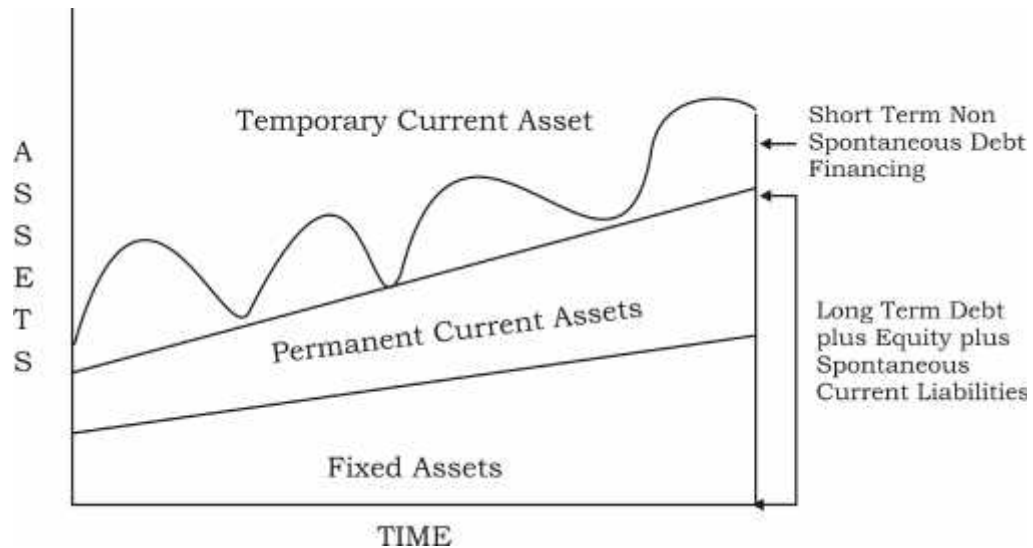
In above figure, the conservative financing policy is shown. Note that when the firm has 0 temporary current assets (at the level of slope); the long-term funds released can be invested in marketable securities to build up the liquidity position of the firm.

iii) Matching Policy

In this policy, the firm finances the permanent current assets with long-term financing and temporary with short-term financing.

It lies in between the aggressive and conservative policies. It deals to neither high nor low level of current assets and current liabilities. Figure in below shows the temporary working capital financed by short-term financing and long-term financing. Thus, no working capital is zero under this Policy.

Figure 2.7
Matching Policy



Thus when the firm follows matching policy also known as hedging policy, long-term financing will be used to finance fixed assets and permanent current assets and short-term financing to finance temporary or variable current assets. Figure 2.7 is used to illustrate the matching policy over time. The firm's fixed assets and permanent CA are financed with long-term funds and as the level of these assets increases, the long-term financing level also increase. The temporary or variable CA are financed with short-term funds and as their level increases, the level of short term financing also increases.

2.8 Financing of Working Capital

The firm's working capital assets policy is never set in vacuum; it is always established in conjunction with the firm's working Capital financing policy. Every financial company requires additional assets whether they are in stable-growing conditions.

The most important function of financial manager is to determine the level of WC and to decide how it is to be financed, Financing of any asset is concerned with two major factors-cost and risk. Therefore, the financial manager must determine an appropriate financing max, or decide how CL should be used to finance

CA.However, a number of financing mixes are available to the financial manager. He can resort generally three kinds of financing.

i) Long-term Financing

Long-term financing has high liquidity and low profitability. Ordinary share, debenture, preference share, retained earning and long-term debt of financial institution are major sources of long-term financing.

ii) Short-term Financing

A firm must arrange its short-term credit in advance. The sources of short-term financing of working capital are made credit and bank borrowing. Trade Credit refers to the credit that a customer gets from suppliers of goods in normal course of business. The buying firms have not to pay cash immediately for the purchase is called trade credit. It is mostly an informal arrangement and it granted on an open account basis. Another from of track credit is bills payable. It depends upon the term of trade credit. (*Van Horn;1996:248*)

Bank Credit is the primary institutional sources for working capital financing. For the purpose of bank credit, amount of working capital required has to be estimated by the borrowers and banks are approached with the necessary supporting data. After availability of this data, bank determines the maximum credit based on the margin requirement of the, security. The types of loan provided by Development Bank are loan arrangement, overdraft arrangement, and Development papers etc.

iii) Spontaneous Financing

Spontaneous financing arises from the normal operation of the firms. The two major sources of such financing are trade credit

and accruals. Whether trade credit is free of cost or not actually depends upon the terms of trade credit. Financial manager of the firm would like to finance its working capital with spontaneous sources as much as possible. In practical aspect, the real choice of CA financing is either short-term long-term sources. Thus, the financial manager concentrates his power in short-term versus long-term financing. Hence, the financing of working capital depends upon the working capital policy which is perfectly dominated by management attitude towards the risk-return.

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

- a) Hedging Approach.
- b) Conservative Approach.
- c) Aggressive Approach.

a) Hedging Approach:

The firm can adopt a financial plan which involves the match in of the expected life of assets with the expected life of the sources of funds raised to finance assets. *(Pandey;1995:683)*

In this approach the long-term assets are financed by short term funds. It is called hedging approach because it matches the risk-regarding activities. M.Y. Khan and P.K. Jain express that the term hedging is often used in the sense of a risk-reducing investment strategy involving transitions of a simultaneous, but apposite nature, so that the effect of one is likely to counter balance the effect of the other. With the hedging approach short-term of seasonal variations in CA would be financed with short-term debt; the permanent components of CA would be financed with long-term debt or equity. In this approach assets are classified into three categories.

- Fund requirement for seasonally needed CA
- Funds requirement for regularly needed CA.
- Funds requirement for fixed or long-term assets.

According to the hedging approach, we should finance variables or short-term WC from CL or short-term funds and long-term funds should be used to finance the fixed portion of CA.

b) Conservative Approach: The financing policy of the firm is said to be conservative when it depends more on long-term funds for financing needs. Under a conservative plan the firm finances its permanent assets and also a part of temporary current assets, with long-term financing. In the periods when the firm has no need for temporary current assets the idle long-term funds can be invested in the tradable & securities to conserve liquidity. The approach relies heavily on long term financing, as a result firm has less possibility of financing the problems of shortage of funds. In conservative approach, permanent capital is used to finance all permanent assets requirements or also to meet some or all of the seasonal demands. (*Western and Brigham;1996:27*)

c) Aggressive Approach:

A firm can follow aggressive policy in financing its assets. Under an aggressive approach, the firm finances a part of its permanent current assets with its short-term financing. "The relatively more use of short-term financing make the firm more risky." (*Pandey;1995:685*)

The greater the portion of the permanent asset need financed with short-term debt, the more aggressive the financing is said to be (*VanHorne;1996:209*)

2.9 Determinants of Working Capital

The total requirement of working capital is determined by a wide variety of factors. The influence of these factors is different in different business organizations. Perhaps none of them can neglect the management of adequate WC. Therefore' an analysis of the relevant factors should be made in order to determine the total investment in WC the description of the factors which generally influence the WC requirement of the firm is given below.

(i) Nature and Size of Business

The working capital requirement of a firm is basically related to size and nature of the business. If the size of the firm is bigger, then it requires more working capital. Trading and financial firms have a very low investment in fixed assets. Contrary to this, public utilities have a very limited need of working capital and have to invest abundantly in fixed assets. Their working capital requirements are nominal.

(ii) Manufacturing Cycle

The manufacturing cycle starts with the purchase and use of raw material and completes with the production of finished goods. Longer the manufacturing cycle, large will be the firm's working capital requirements. An extended manufacturing time span means a larger tie-up of funds in stocks. Thus, if there are alternative ways of manufacturing cycle should be chosen. Once a manufacturing process has been selected, it should be ensure that manufacturing cycle is completed within the specified period. This needs proper planning and coordination at all levels of activity. Non-manufacturing firms' service and financial enterprises do not have manufacturing cycle. *(Pandey; 1995:674).*

(iii) Production Policy

We just noted that a strategy of constant production may be maintained in order to resolve the working capital problems arising due to seasonal changes in the demand for the firm product. A steady production policy will cause inventories to accumulate during the season periods and the firm will be exposed to greater inventory costs and risks. Thus, if costs and risks of maintaining a constant production schedules in accordance with changing demand. Those firms, whose productive capacities can be utilized for manufacturing varied products, can have the advantage of diversified activities and solve their working capital problems. *(Pandey; 1995:675)*

(iv) Credit Policy

Credit policy also affects the working capital of a firm. Working capital requirement depends on terms of sales. Different term may be followed by different customers according to their creditworthiness.

(v) Operating Efficiency

The operating efficiency of a firm relates to the optimum utilization of resources at minimum costs. The firm can not effectively contribute to its working capital when the operating efficiency is low. Working capital turnover is improved with a better operation and financial efficiency of a firm. Efficiency of operation accelerates the pace of cash cycle and improves the working capital turnover. It releases the pressure on working capital by improving profitability and improving the internal generation of fund.

(vi) Profit Margin

The net profit is a source of working capital to the extent that has been earned in cash. The capacity to generate profit differs from, company to company. In the word of I.M. Panday, "some firms enjoy a dominant position, due to quality product or good marketing management or monopoly power in the market and earn a high profit margin." Higher profit margin contributes to more working capital. The level of working capital is determined not only by the profit margin, but also by the way of appropriation for taxations, dividend, reserves and depreciation. Only after providing for these items, internal funds can be set aside for working capital. As the provisions for these items are higher, the amount of working capital will be lesser.

(vii) Level of Taxes

The level of taxes also influences working capital requirement of a bank. The amount of taxes to be paid in advances is determined by the prevailing to tax regulation. But the firm-'s profit is not constant, or can't be predetermined. Tax liability in a sense of short-term liquidity is payable cash. Therefore, the provision for tax amount is one of the important aspects of working capital

planning. If tax liability increases, it needs to increase the working capital and vice-versa.

Besides the above factors there are many other factors also which may have a greater role in determining the size and composition of working capital. For example, firm's attitude to take risk, firm's policies toward the financial management, in the inflationary period, co-ordination among production distribution, developed transport and communication system etc could also pay an important role in determinants affects both temporary and permanent working capital.

2.10 Review of literature:

2.10.1 Introduction:

Working capital it the effective life-blood and controlling nerve center of any business. Hence, the management of working capital plays a vital role for the success the failure of any enterprise. So far as the management of working capital in Nepalese enterprise is concerned, different management experts and students of MBS describing the working capital management of various enterprises have under taken a number of studies. The purpose of this chapter is to provide an insight into working capital management and give a birds eye view of different experts thought regarding the theory of working capital. This chapter aimed is to review the available literature on working capital management in the context of Nepalese enterprises including available literature on Kumari Bank Ltd.

2.10.2 Review of Books:

For the purpose of the study made easy, related review from some books on working capital management are studied.

In the concern of working capital, the well-known professors

Weston and Brigham have given the concept of working capital as: "The term working capital originated at a time when most industries were closely related to agriculture, processor would by crops in the fall. Process them, sell the finished product and end

up just before the next harvest with relatively low inventories. Bank loan with maximum maturities of one year were used to finance both the purchase and the processing costs and these loans were retired with the process from the sale of the finished products" (*Fred & Brigham:267*)

As per the theoretical concepts on the components of working capital from Van Horne's book:

"Working capital management is usually described as involving the administration of these assets namely cash, marketable securities, receivables and inventories and the administration of current liabilities. It means the working capital management is concerned with problems they arise in attempting to manage the current assets, the current liabilities and the inter-relationship that exist between them" (*Van Horne:373*)

For the working capital management a well-known Indian professor I.M. Pandey has described some conceptual ingredients as:

There are specially two concepts of working capital: Gross concept and Net concept. The gross working capital simply called as working capital, refers to the firms investment in current assets. Current assets are those assets which can be converted into cash within an accounting year and include cash, short-term securities, debtors, bills receivables, stock (inventory) and prepaid expenses. The term net working capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders, which are expected to mature for payment within an accounting year, the include creditor, bills payable, bank overdraft and outstanding expenses or accrued income. Net working can be negative or positive. A positive net working capital will rise when current assets exceed current liabilities. A negative net working capital occurs when current liabilities are in excess of current assets" (*Pandey: 325*)

In the view of N.K. Agrawal:

Working capital management is the effective lifeblood of any business. Hence the management of working capital plays a vital role for existing of any public enterprises successful while study it. It is the centers on the routine day-to-day administration of current assets and current liabilities. Therefore, working capital in public enterprises is very important mainly for four reasons. Firstly public enterprises must need to determine the adequacy of investment in current assets other wise it could seriously erode their liquidity base. Secondly they must select the type of current assets, suitable for investment so far as to raise their operational efficiency. Thirdly, they are required to ascertain the turnover of current assets, which determine the profitability of the concerns. Lastly, they must find out the appropriate sources of funds of finance the current assets.

Proper management of working capital must ensure, adequate amount of working capital as per need of business firms. It should be in efficient circulation of working capital it is necessary that working capital be properly determined and allocated to its various segments, effectively controlled and regularly reviewed" (*Agrawal:8*)

"Most of the selected enterprises have been achieving a trend off between risks and return there by following neither an aggressive nor a conservative approach. He further stated that the low level of current and quick ratio need not indicate poor liquidity position. They may still be considered good if the enterprises can generate cash flows sufficient to pay their current debts. Therefore, the liquidity measure that consider cash flows have been employed in the study for all those enterprises for which current liabilities are greater than current assets and quick assets" (*Pradhan:1986*).

2.10.3 Review of Related Journals/Articles

Articles, Journals and bulletins are of great significance for thesis writing. So, various published and unpublished articles by

different experts and journals and bulletins relating to working capital management have been revised. The study is only related with working capital management thus I have considered with working capital only. Dr. Manohar K. Shrestha, in an article "ISDOC" bulletin has considered ten selected PEs and studied the working capital management in those public enterprises. He has focused on the liquidity, turnover and profitability position of those enterprises. In this analysis he found that four PEs has excessive and the remaining four had failed to maintain desirable. Liquidity position Dr. Shrestha had brought certain policy-issues such as lack of suitable financing' planning, negligence of working capital management, deviation between liquidity and turnover of assets and in ability to show positive relationship between turnover and the return on net working capital. At the end, he had made some suggestive manure to over conform the above policy issues, viz; identification of needed funds, development of management information system, positive attitude toward risk and profit and determination of right combination of short-term and long term sources of funds to finance working capital needs. (*Shrestha: ISDOC Vol.8:1982*). Pradhan and Koirala had jointly conducted a study on "Working capital Management in Nepalese Corporations". They had focused on, evaluation of working capital of selected manufacturing and non-manufacturing public companies. This study was concentrated in the size of investment in current assets, significance of current assets management.

The major findings of the study were as follows:

- Investment on total assets had declined over a period of time in both manufacturing corporations. However, the manufacturing corporations had consistently more investment in cash and receivable as compared to non manufacturing corporations.
- Inventory management was of great significance in manufacturing corporations and the management of cash

receivable was of great significance in non manufacturing corporations.

- Management of working capital was more difficult than that of fixed capital and the major motive for holding cash in Nepalese corporation was to provide a reserve for routine net outflows of cash to keep on the production process. (*Pradhan and Koirala; 1982*).

Another article published by Dr. K. Acharya was relating to working capital management. He has described the two major problems-operational problems and organizational problem regarding the working capital management in Nepalese public enterprises. In the operational problems, he found the increase of current liabilities than current assets, not allowing the current ratio 2:1 and slow turnover of inventory. Similarly, change in working capital in relation to fixed capital had very low impacts over the profitability, thin transmutation of capital employed; to sales, absence of apathetic management information, system, break even analysis, funds flow analysis and ratio analysis were ineffective for performance evaluation. Finally, monitoring of the proper functioning of working capital management has never been considered a managerial job.

In the second part, he has listed the organization problem in the public enterprises. In most of the public enterprises there is lack of regular external and internal audit system as well as evaluation of financial results. Similarly, very far public enterprises have been able to present their capital requirement. Functioning of finance department is not satisfactory and some public enterprises are even facing the underutilization of capital. (*Acktarya; ISDOC, Vol10:1985*)

R.S. Pradhan has prepared another article relating to working capital management: He has studied on "The demand" of working capital by Nepalese enterprises". For the analysis, he has selected nine manufacturing companies with the twelve years data.

Regression equation has been adopted for the analysis. From the study he has concluded that the earlier studies concerning about the demand for cash and inventories by business firm didn't report unanimous findings. A lot of controversies exists with respect to the presence of economies of scale, roles of capital cost; capacity utilization rates, and the speed with which actual cash and inventories are adjusted to describe cash and inventories by business firm didn't report unanimous findings. A lot of controversies exists with respect to the presence of economies of scale, roles of capital cost; capacity utilization rates, and the speed with which actual cash and inventories are adjusted to describe cash and inventories respectively. The pooled "regression result shows the presence of economics of scale with respect to the demand for working capital and its various components. The regression results suggest strongly that the demand for working capital and its components is function of both scale and their capital cost.

The estimated results show that the inclusion of capacity utilization variable in model seems to have contributed to the demand function of cash and networking capital only. The effects of capacity utilization on the demand for inventories, receivable, and gross working capital is doubtful. (*Pradhan; Vol. 8, No. 1:1988*).

When we're making a request for a working capital-related loan, be sure our business plan reflects our specific goals. "Bankers are more receptive if we show that we know exactly how we want to use the working capital and where it will bring our company down the road." says Valier's. Whether it's R & D to commercialize new products, implementing quality standards or simply buying inventory, small business owners need to demonstrate that an injection of working capital will help them grow. Another piece of advice of the offer entrepreneurs is to avoid using working capital to pay for fixed assets, such as equipments. Ultimately, he says

companies are better to use long-term borrowing to pay those long-term assets.

(www.bdc.ca/en/my-project/growth/working_capital.html)

2.10.4 Review of Related Thesis

Lastly, the views of various items of thesis and dissertation relating to my study which have already been furnished can be reviewed as under some of the dissertation relating to working capital management. Mr. Suresh Pradhan, in his study on working capital policy of manufacturing public enterprises in Nepal sought to sort out of the problems of low economic performance and financial management in manufacturing public enterprises. He also examined the association between the various aspects of working capital policy in financial management and the poor financial performance of manufacturing public enterprises. Hence, this study deal with liquidity position, utilization of working capital, profitability position, source of financing of current assets and determinants of working capital in manufacturing public enterprises. The main findings of the study are as follows:

- The selected manufacturing public enterprises had sufficient liquidity.
- The use of CA selects in selected public manufacturing public enterprises was satisfactory and there was high turnover of cash and receivable in comparison of inventory.
- Most of the manufacturing public enterprises were-racer-ring losses and were unable to meet even the operating expenses with their sales revenue.
- There was higher use of long-term funds followed by trade creditors, short-term bank loans and operating profit in CA financing.

Ultimately, he had made some suggestions for improvement of working capital management and efficiency in the manufacturing public enterprises. The manufacturing public enterprises should

follow aggressive working capital policy. (*Pradhan; MBA Thesis:1989*)

Rajendra Sapkota, in his study on short term financing of Nepalese manufacturing companies examined, the mix financing pattern has followed by Nepalese manufacturing companies. They have not planned how much funds to be rise from which sources. They did not analysis the source and rise the fund what ever they get. They did not race any other things regarding to this sources. The main findings of the study are as follows.

- The liquidity position of Nepalese manufacturing companies is not good.
- Working capital management of Nepalese manufacturing companies have to lower and most of the companies have negative working capital.
- The account receivable is in increasing trend during the study period due to poor collection policy of Nepalese manufacturing companies.
- Cash and the ratio of inventory to short-term financing are widely varied among the manufacturing companies during the study period.
- Most of the companies have commonly usage the account payable in financing but they have not effective utilize the account payable. (*Sapkota; T.U. Thesis:1998*)

Other study relating to working capital management was made by Arjun Lal Joshi analyzed the poor liquidity. Position, stock loads, minimum cash balance, heavy dependency of bank credit. He focused his study to give an insight into the problem of working capital management. The major findings of his study were inventories, insufficient cash balance and negative working capital. He made some suggestions for the future course action. He has suggests planning, realistic turnover target specimen, use of short-term bank credit, maintain optimum cash balance. (*Joshi; MBA Thesis: 1986*)

Narendra Bahadur Amatya, in his thesis entitled "An appraisal of financial position of Nepal Bank Ltd." has analyzed, examined and interpreted the financial position of the bank. Main findings of his study were as follows:

- The liquidity position of the bank is better position. But the bank has been following a uniform policy to finance current assets and current liabilities.
- The bank is successful in deposit collection but it has always adopted conservative and traditional credit policy.
- The trade and commerce advances are playing major role in the credit composition of the bank. Although the reserve of the bank is increasing gradually the reserve plays a nominal role in the credit expansion control.
- The major portion of investment of the bank is in government's securities. And the volume of transaction is high in all respect but the bank does not show higher ratio of profit or it shows a decreasing trend of profit. (*Amatya;T.U Thesis:19.93*)

Pradeep Kumar Pathak had carried out a research study on "Financial evaluation of working capital management on Nepal Tube oil limited." The objectives of his study were to appraise the working capital management of Nepal tube oil limited with respect to cash, credit and inventory management, to study the relationship between sales and different variables of working capital and to suggest the appropriate working capital management for the Nepal. Lube oil limited. The methodologies used in this study are ratio analysis, correlation analysis and test of hypothesis. He derived the following conclusions from his studies.

- There is significant positive correlation between investment in CA and investment in total assets which means both of them are going hand in hand. This growing tendency of investment over current assets could have adverse effect in Nepal Lube Oil Ltd's wealth maximization goal in the long run.

- Cash is relatively holding tiny portion of total assets and if we only consider the position of cash we can see that the cash is increasing every year during the study period.
- As an important aspect of current assets, inventory is holding the highest portion of total assets in comparison to its rest partners.
- Portion of receivable to total assets is in increasing trend which indicates the growing inefficiency in credit collection.
- The inventory turnover ratio is in increasing trend and receivable turnover ratio is in decreasing trend.
- The company's current ratio and quick ratio both are lower than the standard.
- Nepal Lube Oil limited is presently following the conservative policy in financing its total capital and is forwarding towards following moderate policy in financing its total capital. *(Pathak;SDC Thesis:1995)*

A research working entitled "A study on working capital management of Dairy Development Corporation" had been carried out by Basudev Shrestha. He conducted his study on the basis of different year's data. The objectives of his study were to present overall picture of Dairy Development Corporation; to analyze the current assets and current liabilities of corporation and their impact and relationship to each other. During his study, he had basically used the secondary data and mainly financial tools are embodied for analyzing the working capital management of DDC. He had derived following major findings from his study:

- The corporation's investment in the form of working capital has been increasing and DDC followed the conservative working capital policy with respect of current assets management.
- The average investments in current assets is lower with respect to net fixed assets during the study period and DDC has no clear vision about the investment in current assets portion Cash

and bank balance holds the second largest portion of the current assets and has fluctuating trend.

- Other major components of current assets i.e. inventories and receivable are in fluctuating trend. The company does not follow credit sales policy.
- The company has been able to maintain its current ratio in an average 1.78:1 during the study period which is regarding satisfactory level.
- The gross and net profit margin in DDC shows that company is suffering from a heavy loss during the study period.
- The overall return position of DDC is negative, not in favorable condition. It is because of inefficient utilization of current assets, total assets and shareholders wealth. (*Shrestha; S.K; Thesis:2001*)

Hirmain Ghimire in his thesis entitled "A study on working capital position of Arihant Multi-fibers Limited" has covered the period of five years data. In this study he had kept the following objectives like to show the working capital position of the selected company with respect to cash, credit and inventory management to examine the nature of company's current assets and current liabilities properly, to see the affect of working capital on profitability and to examine the nature of funds, their sources and utilization. The methodologies used in his study are ratio analysis, trend analysis and correlation analysis. He had drawn the following conclusion from his study:

- The company's current asset consists of mainly stock of raw material, finished products, packing materials, sundry debtors, advance and receivables, cash and bank balances and so on. The inventory occupies major share i.e. 61.04%.
- The company's CL mainly consists of sundry creditors, advance, payable and provision. Sundry creditor occupies and largest share i.e. 51.15%.

- The overall percentage of current assets on total assets is in increasing trend. The percentage investment in the current assets of fixed assets is in increasing trend during the period.
- The ratio in current assets to sales is in increasing trend for first three years and decreasing trend for last two years.
- The percentage of cash and bank balance to current assets is sometimes in increasing and sometimes in decreasing.

Many research studies have been conducted by the different students, experts and researchers about working capital management. Some studies are related to a case study of a single manufacturing company and some are comparative in nature. Keeping in view, the fact that there is no study of working capital management particularly in Nepalese Development bank. Thus, "Working capital management", a case study of Biratlaxmi Development Bank Limited has been taken for the study of working capital position and to suggest overcoming from such difficulties.

CHAPTER – THREE

RESEARCH METHODOLOGY

Research is systematic and organized effort to investigate facts and methodology is the method of doing research in well manner and also the research for gaining the knowledge about method of goal achievement, which we desire is known as research methodology. So research methodology means the analysis of specific topic by using proper method. In other works research methodology is a process of arriving to the solution of problem through planned and systematic dealing with collection, analysis and interpretation of the facts and figures. "Research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objectives in view". Therefore, we can conclude that research methodology tries to make clear view of the method and process adopted in the entire aspect of the study. It is also considered as the path from which researcher can systematically solve the research problem.

In this chapter, efforts have been made to present and explain specific research design for the shake of attaining the research objective. In describes the methods and process applied in the entire subject of the study. It is the plan, structure and strategy of investigation conceived to answer the research questions. It covers quantitative methodology using financial and statistical tools. The study is mainly based on secondary data gathered from respective annual reports of concerned banks especially from profit and loss account, balance sheet and other publications made by the banks. It consists of research design, population and sample study, sources of data, data processing procedure and tools and technique of analysis of data.

3.1 Research Design

Selection of appropriate research design is necessary to meet the study objectives of any research. "Research design is a plan

structure and strategy of investigation conceived so as to obtain answer to research questions and to control variances".

The study aims to portraying, accurately on the working capital (or current assets and current liabilities) and its impact on overall financial position of the bank. It is based on recent 5 years data from *F/Y 2061-62* to *F/Y 065/66*. The study has been conducted to assess the existing situation of working capital management of Development banks of Nepal and describe the situation and events occurring a present. The research design followed for this study is basically a historical, empirical and descriptive cum-analytical.

3.2 Population and Sample

At present there are 10 Development banks including government owned, private and joint venture banks in Nepal. Due to time and resource factors, it is not possible to study all of them regarding the study topic. Therefore, sampling will be done selecting from population. Biratlaxmi Development Bank Ltd. is selected as a sample for the study an analysis.

3.3 Nature and Sources of Data

The study is mainly based on the secondary data. The main sources of data are the financial statements and reports of BDBL different circular regarding rules and regulation of BDBL, NRB's directives to the Development banks, reports of the corporations coordination council, other published and unpublished materials, magazines and newspapers, some ideas and information have been collected from the discussion with managers of BDBL.

3.4 Data Gathering Procedures

As this study is mostly based on secondary data, therefore, data were directly collected from the information department of

concerned bank, research department of the Nepal Rastra Bank and from different web sites.

3.5 Data processing Procedure

Data collected from various sources were in raw form. They were classified and tabulated as per the nature of the study and in accordance of the data. A sample percentage tool was used as arithmetic tools and different financial and statistical were also used to analyze the collected data.

3.6 Tools and Techniques of Analysis

Under this study, financial as well as statistical tools have been used to analyze the gathered data and information.

Financial Tools

In this research study various financial tools are employed for the analysis. The analysis of this study is based on following financial tools.

a) Working Capital

Working capital is used by lenders to help gauge the ability for a company to weather difficult financial periods. Working capital is calculated by subtracting current liabilities from current assets. Due to differences in businesses and the fact that working capital is not a ratio but an absolute amount, it is difficult to predict what the ideal amount of working capital would be for the business. (www.planware.org). Therefore:

Working capital (WC) = Current Assets (CA) – Current Liabilities (CL)

b) Liquidity Ratios

Liquidity ratios indicate the firm's ability to meet its maturing short-term obligations. Your liquidity ratios measure your company's ability to generate cash to meet your short term financial

commitments. The current ratio measures debts over the next 12 months, while the quick ratio measures liquidity available for immediate demands. As stated, a ratio of 1.0 or greater is generally acceptable, but depends on the nature of the company. A comparatively low ratio can mean that your company might have difficulty meeting your obligations and may not be able to take advantage of opportunities that require quick cash. Paying off your liabilities can improve this ratio-you may want to delay purchases or consider long-term borrowing to repay short-term debt. A too-high ratio may mean that your capital is being under employed. You may want to invest your capital.

(Source: www.bdc.ca/en/my_project/projects/growth/working_capital.html)

- i) Current ratio:** Current ratio measures the short-term solvency, i.e. its ability to measure short-term obligation. In other words, current ratio measures raise ability to pay debts. As a measure versus creditors versus current assets, it indicates each type of current assets available by dividing current assets by current liabilities.

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}}$$

Current assets include cash, and those assets which can be converted into cash within a year, such as debtor, receivable, cash and bank balance, prepaid expenses inventory etc. Current liabilities mean all obligations maturing within a year. Under the current liabilities include secondary creditor, provision for taxation, bank loan, miscellaneous current liabilities and provision.

- ii) Quick Ratio:** Quick ratio establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Cash is the most liquid asset. Other assets which are considered to be relatively liquid and included in quick assets are

book debts and marketable securities. Thus QA includes the all or current assets except inventory or stock. Inventory can not be converted into cash immediately. This quick ratio can be found out by dividing the total of quick assets by total current liabilities.

$$\text{Quick Ratio (QR)} = \frac{\text{Quick Asset (QA)}}{\text{Current Liabilities (CL)}}$$

iii) Cash and Bank Balance to Deposit (Excluding fixed deposit)

Ratio: This ratio-is employed to measure whether bank and cash balance is sufficient to cover its current calls margin including deposits. It is calculated by dividing cash and bank balance by saving margin and current deposits (excluding fixed deposit). This ratio is calculated by using following formula:

$$\text{Cash and Bank balance of Deposit Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Deposit (Except Fixed Deposit)}}$$

iv) Saving and Bank to Total Deposit Ratio: Saving deposit is interest bearing short-term deposit, the ratio is developed in order to find out the proportion of saving deposit; which is interest bearing and short-term in nature. It is find out by dividing the total amount of saving deposits by the amount of total deposit, which is given as follows:

$$\text{Saving Deposit to Total Deposit Ratio} = \frac{\text{Saving Depositi}}{\text{Total Deposit}}$$

c) Activity or Turnover Ratio

Activity ratios are intended to measure the effectiveness to employment to the resources in a business concern. Throughout these ratios, it is known whether the funds employed have been used effectively into the business activities or not. The following are

the ratios employed to analyze the activeness of the concerned bank.

- i) Loan and Advances to Total Deposit Ratio:** This ratio assesses to what extent, the banks are able to utilize the depositor's funds to earn profit by providing loans and advances. It is computed dividing the total amounts of loans and advances by total deposited funds. The formula used to compute this ratio is as:

$$\text{Loan and Advance to Total Deposit Ratio} = \frac{\text{Loan and Advances}}{\text{Total deposit}}$$

High ratio is the symptom of higher or proper utilization of funds and low ratio is the signal of balance remained utilized or idle.

- ii) Loan and Advances to Saving Deposit Ratio:** This ratio examines that how many times the funds is used in loans and advances against fixed deposits. For development banks, fixed deposits are long-term interest bearing obligations, whereas investment in loans and advances are the main sources of earning. This ratio is computed dividing loans and advances by fixed deposit as under. A low ratio indicates idle cash balance. It means total funds not properly utilized. This ratio is computed as follows:

$$\text{Loan and Advance to fixed Deposit Ratio} = \frac{\text{Loan and Advances}}{\text{Fixed Deposit}}$$

This ratio examines to what extent the fixed deposits are utilized for income earning purpose.

- iii) Loan and Advances to Saving Deposit Ratio:** This ratio assesses, how many times the fund is used to loans and advances against saving deposits. Saving deposits are interests bearing short-term obligation and the major sources of investment in loan and advances for income generation and the major sources of investment in loan and advances for income generating purpose by CBs. This ratio indicates how many times the short-term interest

bearing deposits are utilized for Venerating the income, is calculated, divining the amount of loan and advances by total deposit is saving account. The following formula is used to determine this ratio as:

$$\text{Loan and Advance to Saving Deposit Ratio} = \frac{\text{Loan and Advances}}{\text{Total Saving Deposit}}$$

d) Leverage Ratio

Leverage refers to the ratio of debt to equity in the capital structure of the firm. Debt and equity and long-term obligations and remaining parts in the liability side of the balance sheet are termed as short-term obligations. Both types of obligations are required in forming the capital structure of the firm. The long-term financial position of the firm-is determined by the leverage or capital structure. The different leverage ratios are maintained to measure the financial risk or proportion of outsiders fund and owner's capital used the firm.

i) Long term Debt to Net worth Ratio: Long term debt refers to the amount of fixed deposits and loans of the banks. The ratio measures the proportion of outsiders and owner's fund employed in the capitalization of bank. It is calculated by dividing the fixed obligations of the banks by owner's claim. It is calculated by using following formula:

$$\text{Long term Debt to Net worth Ratio} = \frac{\text{Long Term Debt}}{\text{Net Worth}}$$

ii) Net Fixed Assets to Long term Debt Ratio: Net fixed assets are applied to both physical and financial assets. This ratio is calculated to find out how many times net fixed assets are compared to the fixed liabilities. It is calculated as follows:

$$\text{Net Fixed Assets to Long term Debt Ratio} = \frac{\text{Net Fixed Asset}}{\text{Long Term Debt}}$$

e) Profitability Ratio

Profitability ratios indicate the degree of success in achieving desired profit. Various profitability ratios are calculated to measure the operating efficiency of business enterprises. These ratios are mostly used to compare the performance of the bank in different years. Through profitably ratios the lender and investors want to decide whether to invest in a particular business or not. Some of the important profitability ratios used is a follows:

- i) Interest Earned to Total assets Ratio:** It is the ratio, which formed to find out the percentage of the interest earned to total assets. This is derived by dividing the amount of interest earned by the total assets of the firms.

$$\text{Interest Earned to Total Assets' Ratio} = \frac{\text{Interest Earned}}{\text{Total Assets}}$$

- ii) Net Profit to Total Assets Ratio:** This ratio is very much crucial for measuring the profitability of funds invested in the bank's assets. It measures the return on assets is computed by using following formula:

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

- iii) Net Profit to Total Deposit Ratio:** This ratio is used to measuring the internal rate of return from deposits. It is computed dividing the net profit by total deposits. Higher ratio indicates the return form investment on loans and advances are desirable and lower ratio indicates the funds are not properly mobilizing. The following formula is used as:

$$\text{Net Profit to Total Deposit Ratio} = \frac{\text{Net Profit after Tax}}{\text{Total Deposit}}$$

- iv) Cost of Services to Total assets Ratio:** A sound management always tries to utilize its lager amount of assets with minimum cost. This ratio is useful in measuring the assets utilization with cost of services. The ratio can be expressed as below.

$$\text{Cost of Services to Total Assets Ratio} = \frac{\text{Cost of Services}}{\text{Total Deposit}}$$

Statistical Tools

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

- i) Trend Analysis:** It is important to analyze trends in ratio as well as their absolute levels, for the trends give clue to whether the financial situation is improving or whether it is deteriorating. In other words trend analysis of ratios indicates the direction of changes. The significance of a movement is whether the movement is favorable or not. Thus, the tools that are used to show grandly increase or decrease of variables over a period of time is known as trend analysis. With the help of trend analysis the tendency of variables over the period can be seen clearly.
- ii) Correlation Analysis:** The correlation analysis is the technique used to measure the closeness of the relationship between the variables. It helps us in determining the degree of relationship between two or more variables. It describes not only the magnitude of correlation but also its direction. The coefficient of correlation is a number, which indicates to what extent two variables are related with each other and to what extent variations in one leads to the variation in the other and it is denoted by 'r'.

The value of coefficient of correlation always lies between ± 1 . A value of -1 indicates of perfect negative relationship between the variables and a value of $+1$ indicates a perfect positive relationship. A value of zero indicates that there is no relation between the variables. The zero correlation coefficient means the variables are uncorrelated. The closer r is $+1$ or -1 , the closer the relationship between the variables and closer r is to zero (0), the less close relationship. The algebraic sign of the correlation coefficient indicates the direction of the relationship between two variables,

whether direct or inverse, while the numerical value of the coefficient is concerned with the strength, or closeness of the relationship between two variables. The correlation coefficient can be calculated as:

$$r = \frac{\text{Cov}(XY)}{\sigma_x \sigma_y}$$

Or

$$r = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{(N-1)\sigma_x \sigma_y}$$

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

Where,

σ_x σ_y are the standard deviation of the distributions of X and Y values respectively.

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

CHAPTER – FOUR

DATA PRESENTATION AND ANALYSIS

The major objective of this study is to evaluate the working capital position of Biratlaxmi Development Bank Ltd. The other objectives of this study are to throw light on the importance of the proper management of working capital and to make suggestion about how to manage working capital of Biratlaxmi Development Bank Ltd. from the long-range view point. In this chapter relevant data and information of working capital as well as financial performance of BDBL are presented and analyzed accordingly. Data of the year 061/62 to 2065/66 have been presented and analyzed. It covers to analyze the ratio as well as trend and composition of working capital which means current assets, liquidity, current liabilities, turnover, leverage and profitability of BDBL. It also uses correlation analysis. With the help of these analyses, we can know the working capital as well as financial position of BDBL.

4.1 Working Capital

Working capital means current assets minus current liabilities. Working capital measures how much in liquid assets a company has available to build its business. The number can be positive or negative; depending on how much debt the company is carrying. In general, companies that have a lot of working capital will be more successful since they can expand and improve their operations. Companies with negative working capital may lack and funds necessary for growth also called net current assets or current capital. Therefore,

Working Capital = Current Assets – Current Liabilities

4.1.1 Components of Current assets

To operate the business, different kinds of assets are needed. For the day-to-day business operation different types of current assets are required. The composition of current assets or the main components of current assets of BDBL are cash and bank balance,

loan and advances and government securities. Miscellaneous current assets are also a component of current assets. Prepaid expenses, outstanding income like interest receivable and other current assets are included in miscellaneous current assets.

The following table shows the amount of cash and bank balance, loan and advances, government securities and miscellaneous current assets of Biratlaxmi Development Bank Ltd.

Table 4.1
Components of Current assets of BDBL

(Rs. In Thousand)

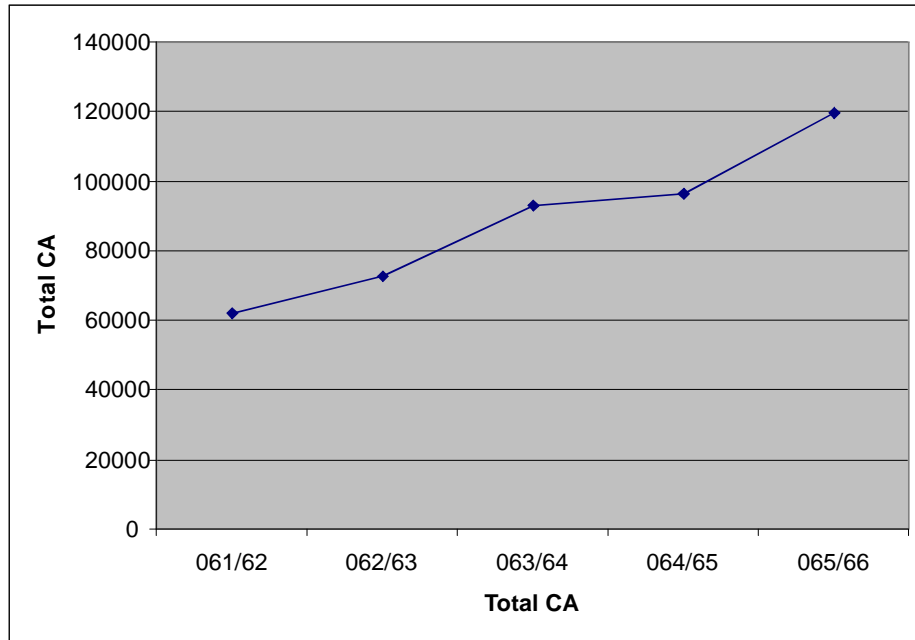
Fiscal Year	Cash & Bank Bal.	Loan and Advances	Government Securities	Misc. CA	Total CA
061/62	6830.65	46130.70	5222.65	3721.12	62205.12
062/63	6921.71	45422.70	15102.71	5040.65	72487.77
063/64	7822.88	56461.70	23710.78	4826.02	92821.38
064/65	7403.51	59124.57	21471.00	8519.78	96518.86
065/66	7289.68	72591.09	26580.37	13334.32	119795.46

Source: Appendix S – Financial Summary of Biratlaxmi Development Bank Ltd.

Above table 4.1 depicts that the components of current assets of BDBL consists cash and bank balance, loan and advances, government securities and miscellaneous current assets. In fiscal year (F/Y) 2061/62, total current assets of the bank was amounted to Rs. 62205.12 thousand which included Rs. 6830.65 thousand of cash and bank balance, Rs. 46130.70 thousand of loan and advances, Rs. 5222.65 thousand of government securities and Rs.3721.12 thousand of miscellaneous current assets. The CA of the bank increased drastically if fiscal year 062/63 and reached amounted to Rs. 72487.77 thousand. Similarly, in F/Y 063/64 it also increased amounted to Rs. 92821.38 thousand an in F/Y 064/65 is slightly increased to Rs. 96518.86 thousand. Finally the CA of the bank is 065/66 increased drastically and reached up to 119795.46, which included Rs. 7289.68 Thousand, Rs. 72591.09 Thousand, Rs. 26580.37 Thousand and Rs. 13334.32 Thousand cash

and bank balance, loan and advances, government securities and miscellaneous current assets respectively.

Figure 4.1
Components of Current Assets of BDBL



As stated in above figure 4.1 the current assets of the BDBL increasing gradually up to final year i.e. up to fiscal year 063/64 but in fiscal year 064/65 its increasing ratio slightly decreased and in fiscal year 2065/66 is again also started to increased.

4.1.2 Components of Current Liabilities

Current liabilities is a short-term obligation which is payable with in a year. The composition of current liabilities or the main components of current liabilities at BDBL are deposit, short term loan, bills payable and miscellaneous current liabilities. Tax provision, staff bonus, dividend payable and other current liabilities are included in miscellaneous current liabilities. The following table shows the amount of deposit and other accounts, short term loans, bills payable and miscellaneous current liabilities of BDBL.

Table 4.2
Components of Current Liabilities of BDBL

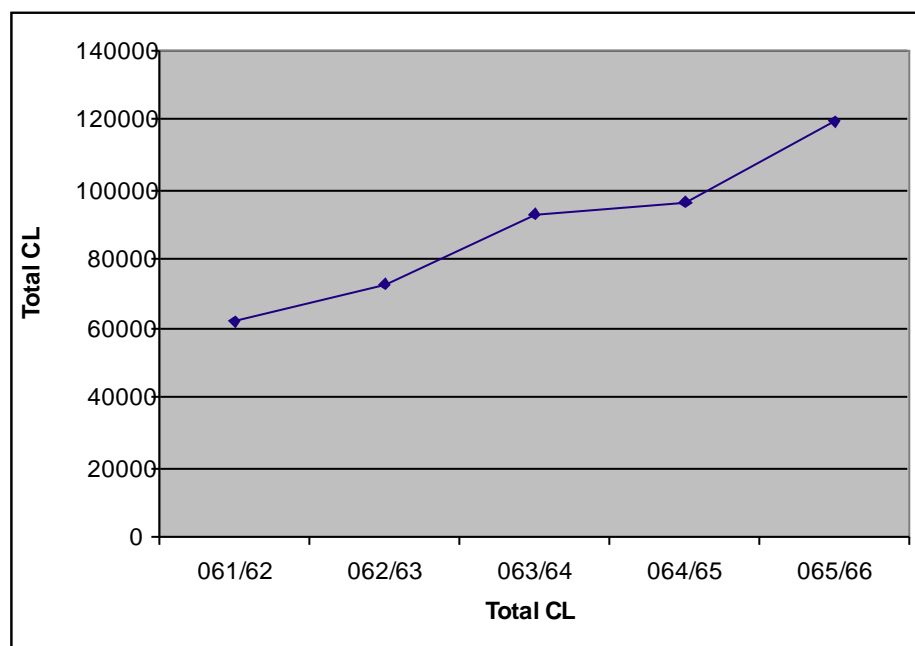
(Rs. In Thousand)

Fiscal year	Deposit & Other A/C	Bills Payable	Short term Loans	Misc. CL	Total CL
061/62	57230.28	00.00	121.57	1000.62	58352.47
062/63	61700.70	4981.24	350.14	1610.59	68642.67
063/64	77416.65	9124.15	385.71	1533.09	88459.6
064/65	89759.70	63.00	193.87	1677.77	91694.34
065/66	104850.33	5530.18	111.62	4101.73	114593.86

Source: Appendix S – Financial Summary of Biratlaxmi Development Bank Ltd.

In above table 4.2 we can find that the component of current liabilities will consists deposit and other accounts, short term loan, bills payable and miscellaneous CL. As stated in above table total CL of BDBL was Rs. 58352.47 thousand in fiscal year 061/62. The CL increased in F/Y 062/63 and reached amounted to Rs. 68642.67. Likewise, in fiscal year 063/64, the current liabilities of BDBL was also increased amounted to Rs. 88459.60 thousand but in fiscal year 064/65 it slightly increased and reached amounted to Rs. 91694.34 thousand. At the end of F/Y 065/66, the current liabilities of BDBL is Rs. 114593.86 thousand, which increased drastically and it consists of Rs. 104850.33 thousand, Rs. 5530.18 thousand, Rs. 1111.62 and Rs. 410.73 thousand of deposit and other accounts, bills payable, short term loan and miscellaneous current liabilities respectively.

Figure 4.2
Components of Current liabilities of BDBL



As stated in above figure 4.2 the current liabilities of the BDBL increasing gradually up to fiscal year 065/66. But in the middle of F/Y 063/64 and 064/65 its increasing ratio is less than before and after.

4.1.3 Working Capital of BDBL

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

Table 4.3
Working Capital of BDBL

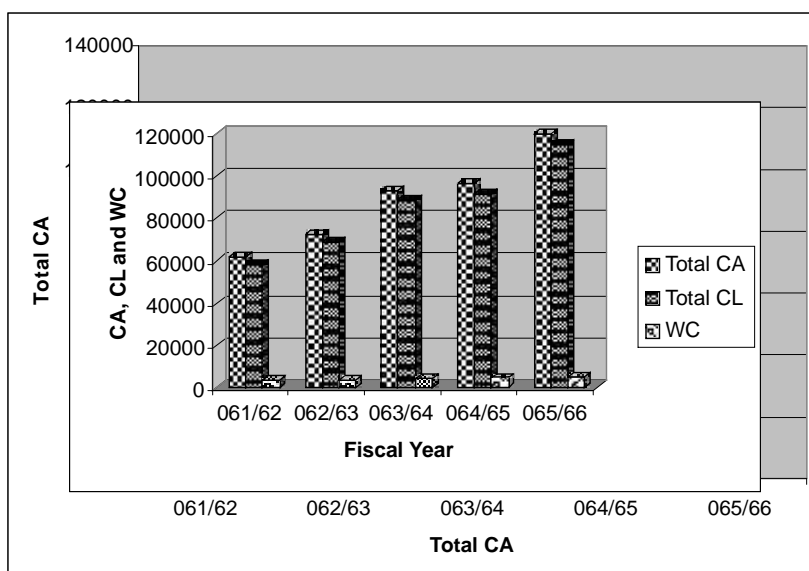
(Rs. In Thousand)

Fiscal Year	Total CA	Total CL	WC=CA-CL
061/62	62205.12	58352.47	3852.67
062/63	72487.77	68642.67	3845.10
063/64	92821.38	88459.60	4361.78
064/65	96518.86	91694.34	4824.52
065/66	119795.46	114593.86	5201.6

Source: Appendix S – Financial Summary of Biratlaxmi Development Bank Ltd.

In above table 4.3, no doubt it shows that the increment or decrement of working capital in different study period by different level. The BDBL was able to increase working capital from Rs. 3852.67 thousand to Rs. 5201.6 thousand from the fiscal year 061/62 to 0665/66. In F/Y 062/63, the bank increased its working capital from Rs. 3852.67 thousand to Rs. 3845.10 thousand, which is drastically increased than previous year. Similarly, in F/Y 063/64 and F/Y 064/65 the working capital of the bank was also in increasing position and reach to Rs. 4824.52 at the end of year 064/65. But at the end of study period, working capital of the bank was increased to Rs. 5201.6 thousand.

Working Capital of BDBL



As stated in above figure 4.3, the current asset of the BDBL is increasing gradually up to fiscal year 065/66. Similarly, in above figure the current liabilities of the BDBL are increasing gradually up to fiscal year 065/66. As shown in the above table, the working capital of the BDBL has been increasing up to F/Y 065/66. The working capital depicts the liquidity position of any organization i.e. higher the working capital higher the liquidity and vice versa. Therefore, above figure states that the liquidity of the BDBL has been increasing gradually over different fiscal year.

4.2 Ratio and Trend Analysis:

Ratios are used to create comparisons within any company's performance or within any particular industry, by region, country, or globally. Comparisons may say a lot about any company's financial health and can uncover trends as well as pinpoint possibilities for improvement. In other words, to evaluate the financial conditions and performances for a firm, the financial analyst needs certain yardsticks. Experienced and skilled analysts would obtain a better understanding to the financial conditions and performance of the firm from the analysis and interpretation of various ratios than from analysis of the financial data. Thus, we can conclude that the ratio analysis is the powerful financial tools to measure the financial performance of the bank.

It is important to analyze trends in ratio as well as their absolute levels, for the trends give clue to whether the financial situation is improving to whether it is deteriorating. In other words trend analysis of ratios indicates the direction of changes. The significance of a trend analysis of ratio lies in the fact that the analyst can know the direction of movement, i.e. whether the movement, is favorable or not.

4.2.1 Liquidity Ratio

Liquidity, ratio indicates the company's ability to pay its short term debts, by measuring the relationship between current assets i.e. those which can be turned into cash against the short-term debt

value. Liquidity of any business organization is directly related with working capital or current assets and current liabilities of the organization. In other words, one of the main objectives of working capital management is keeping should liquidity position. Bank is a different organization which is engaged in mobilization of funds. So, without sound liquidity position, bank is not able to operate its function. To measure the bank's solvency position of ability to meet its short-term obligation, various liquidity ratios are calculated and to know the trend of liquidity, trend analysis of major liquidity ratios have been considered.

4.2.2 Current Ratio

This ratio indicates the current short terms solvency position of bank. Higher current ratio indicates better liquidity position. In other words, current ratio represents a margin of safety, i.e. a caution of protection for creditors and the highest the current ratio, greater the margin of safety, large the amount of current assets in relation to current liabilities more the banks ability to meet its current obligations. It is calculates as follows:

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}}$$

The following table shows the current ratio to compare the working capital management of Biratlaxmi Development Bank Limited.

Table 4.4
Current Ratio of BDBL

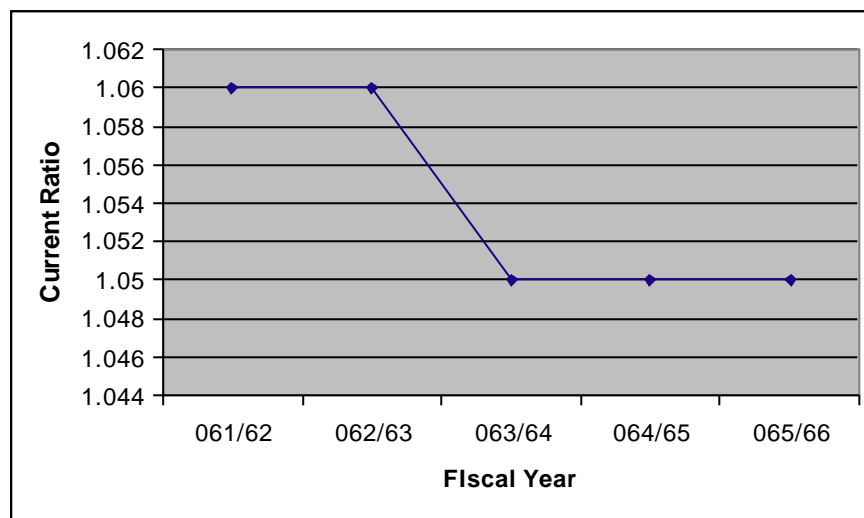
(Rs. in Thousand)

Fiscal Year	Total CA	Total CL	Current Ratio
061/62	62205.12	58352.47	1.06
062/63	72487.77	68642.67	1.06
063/64	92821.38	88459.60	1.05
064/65	96518.86	91694.34	1.05
065/66	119795.46	114593.86	1.05
Average			1.054

Source: Appendix S – Financial Summary of Biratlaxmi Development Bank Ltd.

The above table 4.4 depicts that the current assets of BDBL are constant for the first two years of the study period than it has decreased in third year and remains constant up to last three year. Similarly, a current liability of the bank has also been gradually increasing up to first four years and drastically increased in final year. Current ratio of BDBL is fluctuating over different years. The highest current ratio is 1.06 in the fiscal year 061/62 and 062/63. The lowest current ratio is 1.05 in last three years. The average current ratio of BDBL is 1.054.

Figure 4.4
Current Ratio of BDBL



Source:

Appendix S – Financial Summary of Biratlaxmi Development Bank Ltd.

The above figure 4.4 depicts that the trend line of BDBL is constant in first two years and decreased in fiscal year 061/62 and again it remains constant in fiscal year 063/64 and 064/645, which implies the current ratio of BDBL is fluctuating.

The above analysis helps to find out the liquidity position of the bank. It indicates that the bank has sufficient liquidity to remain solvent even at the ratio of 1.06:1 in fiscal year 061/62 and 062/63. It was the maximum ratio during the period of study. It is true that the higher the ratio supposedly the greater the ability of a firm to pay its bills. But if a firm has more than sufficient current

assets which is an indication of unfavorable distribution of current assets.

4.2.3 Quick Ratio (Acid-Test Ratio)

Quick ratio is the relationship between current assets readily convertible into cash (usually current assets less stock) and current liabilities. A sterner test of liquidity, in other words, quick ratio is the same as the current ratio, except that it excludes inventories which are considered the least liquid portion of current assets. It provides a more penetrating measure of liquidity than does the current ratio. Rule of thumb is 1:1 for the quick ratio or acid test ratio so that, if a business has quick ratio for at least 100%, it is considered a fairly good current financial position. Quick ratio is a more rigorous test of liquidity than the current ratio and when used in conjunction with it, it gives a better picture of the firm's ability to meet its short-term debts out of short-term assets. There is on difference in current ratio and quick ratio BDBL because, bank do not have any stock or inventory. Quick ratio is calculated by dividing the quick assets by the current liabilities i.e.

$$\text{Quick Ratio (CR)} = \frac{\text{Quick Assets (QA)}}{\text{Current Liabilities (CL)}}$$

Table 4.5
Quick Ratio of BDBL

(Rs. in Thousand)

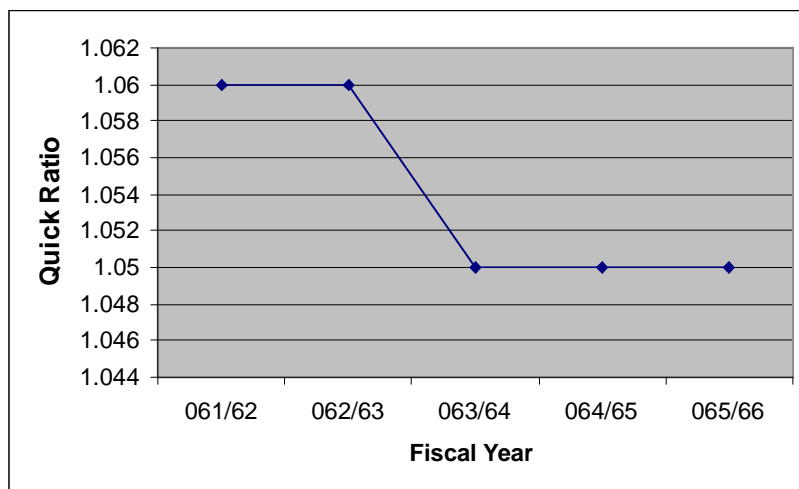
Fiscal Year	Total QA	Total CL	Quick Ratio
061/62	62205.12	58352.47	1.06
062/63	72487.77	68642.67	1.06
063/64	92821.38	88459.60	1.05
064/65	96518.86	91694.34	1.05
065/66	119795.46	114593.86	1.05

Source: Appendix S – Financial Summary of Biratlaxmi Development Bank Ltd.

The above table 4.5 depicts that the quick assets, which is same as current assets of BDBL where generally constant for the

first two years of study period i.e. 1.06, and in fiscal year 063/64 quick ratio of BDBL decreased to 1.05 and remains constant for the last study period. Similarly, current liabilities of the bank were increased over the study period which was highest in 065/66 and lowest in 061/62. Quick ratio of BDBL is fluctuating over different years. The highest quick ratio was 1.06 in the fiscal year 061/62 & 062/63 and the lowest quick ratio was 1.05 in last three years.

Figure 4.5
Quick Ratio of BDBL



The above figure 4.5 displays the trend line of quick assets of BDBL which was increasing in the first two study periods and was started to decrease in 063/64 which remains constant upto last years. In case of BDBL all current ratios are considered as a quick ratio of the bank because there is no any inventory at the bank over the study period.

4.2.4 Cash and Bank Balance to Total Deposit Ratio

We ratio shows the ability of banks immediate funds to cover their (current, margin, called and saving) deposits. It can be calculated by dividing cash and bank balance by deposit, excluding fixed deposits. The ratio can be expressed as:

$$\text{Cash and Bank Balance to Deposit Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Total Deposits}}$$

The following table and figure shows the cash and bank balance to total deposit ratio of the BDBL over the study period.

Table 4.6

Cash and Bank Balance to Total Deposit Ratio of BDBL

(Rs. in Thousand)

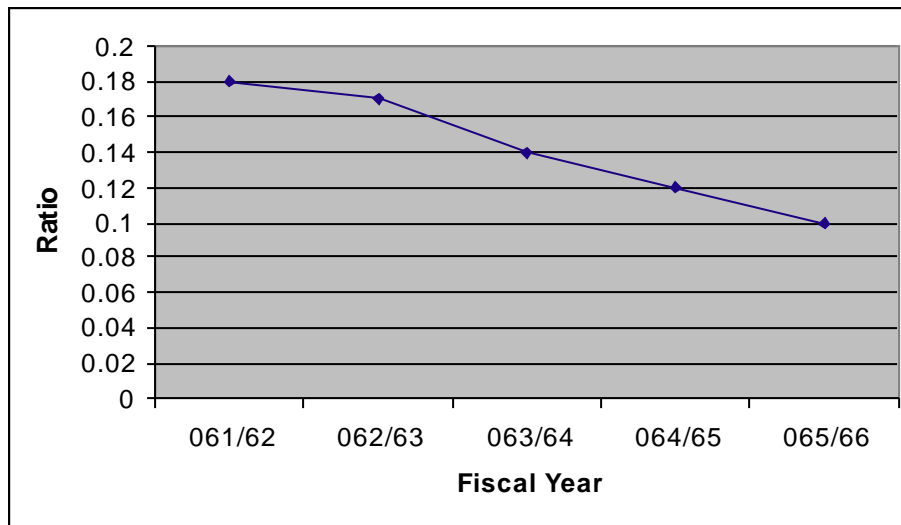
Fiscal Year	Cash and Bank	Total Deposit	Ratio
061/62	6830.65	37640.43	0.18
062/63	6921.71	41791.77	0.17
063/64	7822.88	54612.93	0.14
064/65	7403.51	60961.85	0.12
065/66	7289.68	77750.52	0.10
Average			0.14

Source: Appendix S – Financial Summary of Biratlaxmi Development Bank Ltd.

The above table shows that the cash and bank balance to deposit (except fixed deposit) of BDBL have been slightly decreasing in the study periods. Cash and bank balance of the bank is fluctuating over the study period. Similarly, there is no consistency in total deposit of the bank. Total deposit of the bank is drastically increasing. The bank has average ratio of 0.14.

Figure 4.6

Cash and Bank Balance to Total Deposit Ratio of BDBL



Source: Appendix S – Financial Summary of Biratlaxmi Development Bank Ltd.

The above figure also depicts that the cash and bank balance to deposit ratio excluding fixed deposit ratio has been slightly decreasing up to fiscal year 065/66. The above analysis helps to find out the ability of banks immediate funds to cover its current margin, call and saving deposit of the bank, in other words the liquidity position of the bank. But the large amount of idle cash and bank balance badly affect the profitability of the bank. The position of BDBL seems as satisfactory level over the study period.

4.2.5 Saving Deposit to Total Deposit Ratio

Saving deposit is interest bearing short-term deposit. The ratio is developed in order to find out the proportion of saving deposit, which is interest bearing and short-term in nature. It is found out by dividing the total amount of saving deposits by the amount of total deposit, which is given as follows.

$$\text{Saving Deposit to Total Deposit Ratio} = \frac{\text{Saving Deposit}}{\text{Total Deposit}}$$

The following table and figure shows the BDBL's saving to total deposit ratio.

Table 4.7

Saving Deposit to Total Deposit Ratio of BDBL

(Rs. in Thousand)

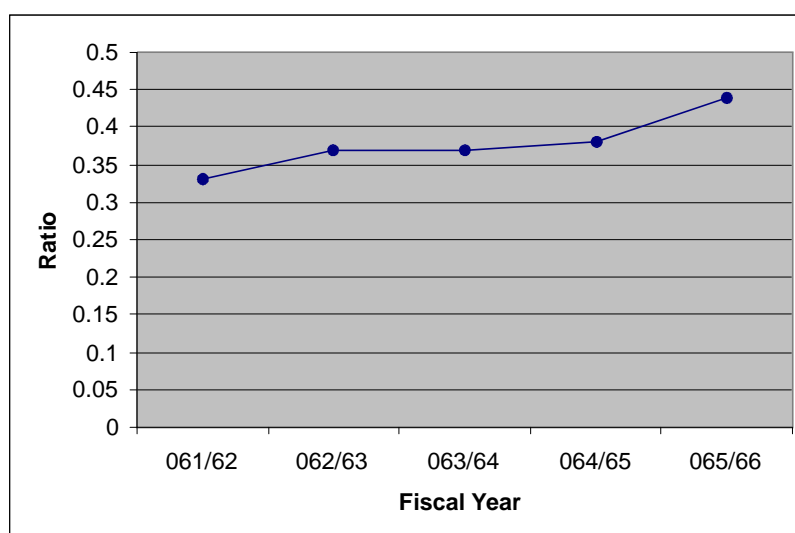
Fiscal Year	Saving Deposit	Total Deposit	Ratio
061/62	18500.02	57230.28	0.33
062/63	22680.55	61700.70	0.37
063/64	28730.81	77410.65	0.37
064/65	34470.43	89750.70	0.38
065/66	45810.96	104850.33	0.44
Average			0.38

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

The above table 4.7 depicts that the amount of saving deposit has been gradually increasing up to last fiscal 065/66. Similarly the total deposit has been increased over the study period i.e. from 061/62 to 65/66. Likewise, the saving deposit to total deposit ratio of BDBL was 0.33 in fiscal year 061/62 and remain constant is 062/63 to 063/64 and has started to increase up to final years whereas the average ratio was 0.38.

Figure 4.7

Saving Deposit to Total Deposit Ratio of BDBL



As stated in above in above figure, the saving deposit to total deposit ratio of BDBL was constant in fiscal year 062/63 and 063/64 than gradually increased thereafter during the study period. Although, saving deposit is short-term liability but its nature is long-term than current, margin and other deposits. So, the large portion of saving deposit in total deposit shows the liquidity of the bank. Bank also pays interest on saving deposit but current, margin and other deposits are nominal cash fund. It means higher the ratio higher the liquidity position of the bank and vice versa. In other hand, the higher saving deposit increased interest obligation to the bank. Therefore, the higher ratio of saving deposit to total deposit decreased the profitability of the bank. From the view point of profitability, the lower ratio is preferable than higher ratio. The ratio of BDBL seems satisfactory level over the study period.

4.2.6 Activity or Turnover Ratio

Activity ratios are used to evaluate the efficiency with which the firm manages and utilizes its, assets. These ratios are also employed to evaluate the speed with which assets are being converted and turnover. These ratios moreover, help in measuring the banks ability to utilize their available resources.

4.2.7 Loan and Advances to Total Deposit Ratio:

This ratio assesses to what extent, the banks are able to utilize the depositor's funds to earn profit by providing loans and advances. It is computed dividing the total amounts of loans and advances by total deposited funds. The formula used to compute this ratio is as:

$$\text{Loan and Advance to Total Deposit Ratio} = \frac{\text{Loan and Advances}}{\text{Total Deposit}}$$

The following table and figure shows the effectiveness in utilization of total deposits of BDBL

Table 4.8

Loan and Advances to Total Deposit Ratio of BDBL

(Rs. in Thousand)

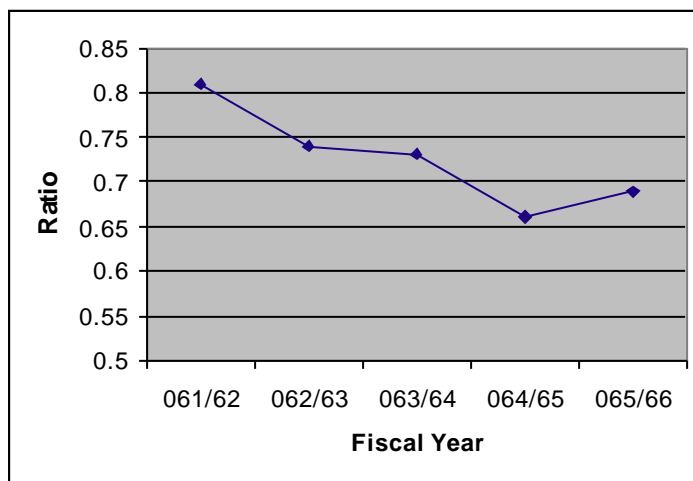
Fiscal Year	Loan and Advances	Total Deposit	Ratio
061/62	46130.70	57230.28	0.81
062/63	45422.70	61700.70	0.74
063/64	56461.70	77410.65	0.73
064/65	59124.57	89750.70	0.66
065/66	72591.09	104850.33	0.69

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

The above table shows the position and ratio of loan and advances to total deposit of BDBL from fiscal year 061/62 to fiscal year 065/66. The loan and advances of the bank was initially decreased in F/Y 062/63 but from F/Y 063/64 it has started to increase up to final year. Similarly, total deposit of the bank has increased over the study period. Likewise, the loan advances to total deposit ratio was 0.81 in fiscal year 061/62 and stated to decrease up to fiscal year 064/65 and in final year it has slightly increased and stands 0.69. It means the ratio is fluctuating.

Figure 4.8

Loan and Advances to Total Deposit Ratio of BDBL



Above figure 4.8 states that the loan and advances to total deposit ratio was 0.81 in fiscal, year 061/62, which was started to decrease up to fiscal year 064/65 i.e. the ratio was 0.66. In fiscal year 065/66 it was increased and reached to 0.69.

From the above analysis, loan and advances to total deposit ratio clearly shows the low capacity of the bank to mobilize its deposit. The bank has the responsibility of collecting a huge amount of deposit for the purpose of leading a great amount of fit to needy people. It collects money not for keeping it idle, but for using it in a creative work. If it cannot utilize its deposits more profitably, it is better to reduce the volume of deposits. So, the volume of deposits has some limit, which is affected by loans. But there is no limit to the volume of loans. However, the rate of interest as well as the volume of deposits highly affects the volume of loan. However, the rate of interest as well as the volume of deposits highly affects the volume of loans. Once the deposit is more than sufficient, there is no need to pay higher rate of interest on it. On the contrary, if the volume of deposit is insufficient for meeting the need of borrowers the interest rate should be increased.

4.2.8 Loan and Advances to Fixed Deposit Ratio:

This ratio examines that how many times the funds is used in loans and advances against fixed deposits. For commercial banks, fixed deposits are long-term interest bearing obligations, whereas investment in loans and advances are the main sources of earning. This ratio is computed dividing loans and advances by fixed deposit as under. A low ratio indicates idle cash balance. It means total funds not properly utilized. This ratio is computed as follows:

$$\text{Loan and Advance to Fixed Deposit Ratio} = \frac{\text{Loan and Advances}}{\text{Fixed Deposit}}$$

The following table and figures shows the effective loan and advances to fixed deposit ratio of BDBL

Table 4.9

Loan and Advances to Fixed Deposit Ratio of BDBL

(Rs. in Thousand)

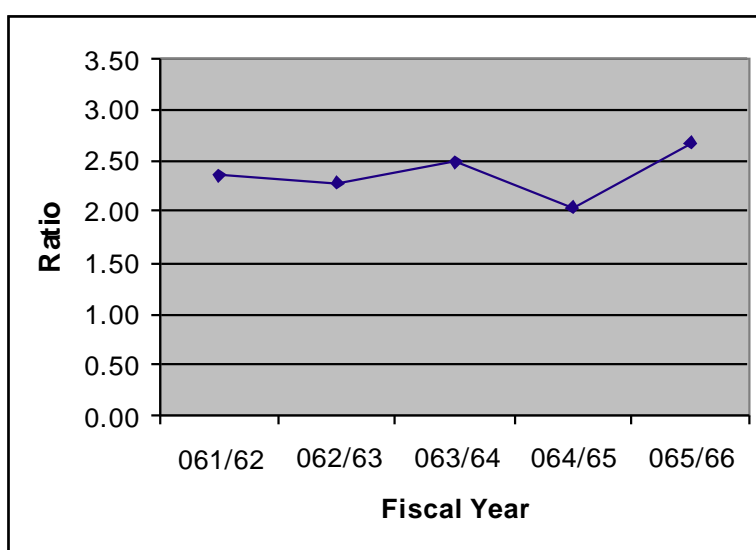
Fiscal Year	Loan and Advances	Fixed Deposit	Ratio
061/62	46130.70	19580.85	2.36
062/63	45422.70	19902.93	2.28
063/64	56461.70	22791.72	2.48
064/65	59124.57	28784.85	2.05
065/66	72591.09	27091.75	2.68

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

The above table depicts that the loan and advances to total fixed deposit ratio BDBL was decreased in fiscal year 062/63 in comparison to previous year 061/62. In fiscal year 063/64 it increased and reached to 2.48. It was slightly decreased in fiscal year 062/63 and reached up to 2.36 at the end of fiscal year 061/62 but it was decreased in fiscal year 062/63 and but increased in final year and stand at 2.68. It indicates that the loan and advances to fixed deposit ratio of BDBL is fluctuating.

Figure 4.9

Loan and Advances to Fixed Deposit Ratio of BDBL



The above figure 4.9 clearly shows that the loan and advances to fixed deposit of BDBL was decreased in fiscal year 062/63. If F/Y

063/64 it was increased but in fiscal year 064/65 it was slightly decreased and again increased in final year. The above analysis implies that the utilization of fixed deposit in loan and advances efficient or not. The higher ratio implies the efficient mobilization of fixed deposit and vice versa. From the above trend analysis we can conclude that the BDBL has been mobilizing its fixed deposit quite satisfactory.

4.2.9 Loan and Advance to Saving Deposit Ratio:

This ratio assesses how many times the fund is used to loans and advances against saving deposits. Saving deposits are interests bearing short-term obligation and the major sources of investment in loan and advances for income generation and the major sources of investment in loan and advances for income generating purpose by CBs. This ratio indicates how many times the short-term interest bearing deposits are utilized for generating the income, is calculated, dividing the amount of loan and advances by total deposit in saving account. The following formula is used to determine this ratio as:

$$\text{Loan and Advance to Saving Deposit Ratio} = \frac{\text{Loan and Advances}}{\text{Total Saving Deposit}}$$

The following table and figure shows the loan and advance to saving deposit ratio of BDBL

Table 4.10
Loan and Advances to Saving Deposit Ratio of BDBL

Rs. In Thousand

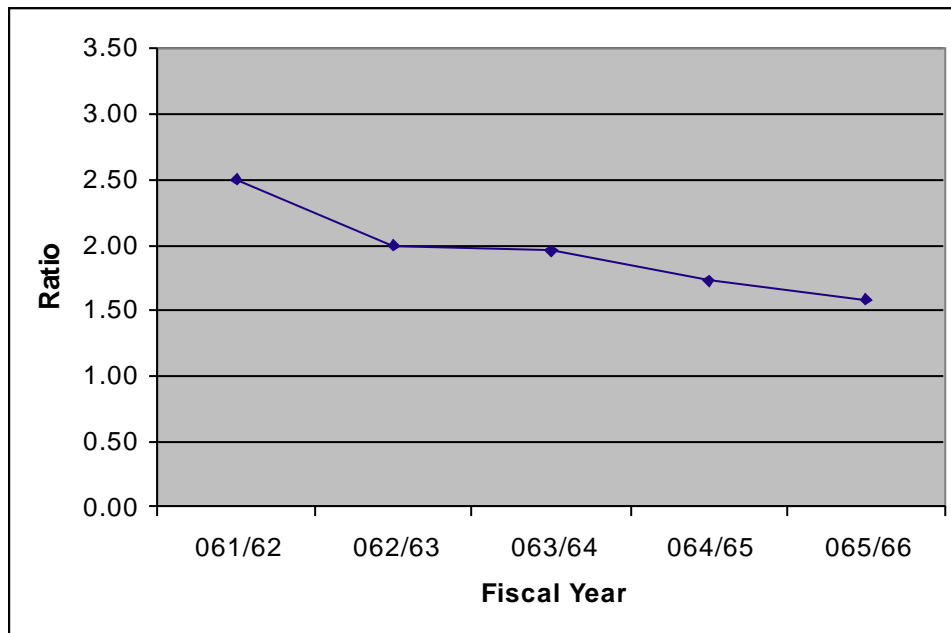
Fiscal Year	Loan and Advances	Saving Deposit	Ratio
061/62	46130.70	18500.02	2.49
062/63	45422.70	22682.55	2.00
063/64	56461.70	28731.81	1.96
064/65	59124.57	34474.43	1.72
065/66	72591.09	45811.96	1.58
Average			1.95

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

As depicted by above table, the saving deposit of BDBL has been gradually increasing from Rs. 1,8500.02 thousand in F/Y 060/62 and reached to Rs. 4,5811.96 thousand in F/Y 065/96. In other hands the loan and advances was slightly decreased in F/Y 062/63 but gradually increased from F/Y 063/64 to final year of the study period. Likewise, the ratio of loan and advance to saving deposit is seems quite fluctuating. It was 2.49 in the first fiscal year 061/62 and decreased up to final year 065/66. The average ratio stands at 1.95.

Figure 4.10

Loan and Advances to Saving Deposit Ratio of BDBL



The above figure clearly shows that the loan and advance to saving deposit ratio of BDBL is very fluctuating. From the above analysis it can be concluded that the saving deposit of the bank has been effectively utilized in loan and advances.

4.2.10 Capital Structure or leverage Ratio

Leverage refers to the ratio of debt to equity in the capital structure of the firm. Debt and equity are long-term obligations and remaining parts in the liability side of the balance sheet are termed as short-term obligations. Both types of obligations are

required in forming the capital structure of the firm, the long-term financial position of the firm is determined by the leverage or capital structure. The different leverage ratios are maintained to measure the financial risk or proportion of outsiders fund and owner's capital used the firm. The bank often uses these ratios to see how the assets are financed i.e. by creditors or through their own investments. In general, a bank will consider a lower ratio to be an indicator of the ability to repay the creditors. The ratios will vary from industry to industry, and over time, interpreting ratios requires knowledge of the business, industry, and the reasons for fluctuations.

4.2.11 Long-term Debt to Net worth Ratio

Long term debt refers to the amount of fixed deposits and loans of the banks. The ratio measures the proportion of outsiders and owner's fund employed in the capitalization of banks. It is calculated by dividing the fixed obligations of the banks by owner's claim. It is the relationship between owned funds and borrowed funds, long term debt includes long term borrowing from government agencies or financial institutions, deferred payment, liabilities etc. It is calculated by using following formula:

$$\text{Long Term Debt to Net worth Ratio} = \frac{\text{Long Term Debt}}{\text{Net Worth}}$$

The following table shows the long-term debt to net worth ratio of the BDBL over the study period.

Table 4.11
Long-term Debt to Net worth Ratio of BDBL

(Rs. In Thousand)

Fiscal Year	Long-term Debt	Net Worth	Ratio
061/62	0.00	5200.18	0
062/63	0.00	5790.13	0
063/64	0.00	6500.74	0
064/65	0.00	7190.13	0
065/66	0.00	8170.45	0

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

The above 4.11 depicts that the Biratlaxmi Development Bank Limited has not any outsider's fund. Therefore, the ratio of long-term debt to net worth cannot be calculated. It indicates that there is not outsiders claims in total capitalization of the bank. There are only insider's claims. It shows that the BDBL was not risky capital structure because the ratio of long term debt to net worth ratio reflects the relative contribution of creditors and owners of the bank in its financing. Net worth of the BDBL was increasing drastically over the study period. Which shows that the high efficiency of the bank.

4.2.12 Net Fixed Assets to Long-term Debt Ratio

Here, net fixed assets are applied to both physical and financial assets. The ratio is calculated to find out how many times net fixed assets are compared to the fixed liabilities. It is calculated as follows:

$$\text{Net Fixed Assets to Long-term Debt Ratio} = \frac{\text{Net Fixed Assets}}{\text{Long Term Debt}}$$

The following table shows the net fixed assets to long-term debt ratio of the BDBL.

Table 4.12

Net Fixed Assets to Long-term Debt Ratio of BDBL

(Rs. in Thousand)

Fiscal Year	Net Fixed Assets	Long-term Debt	Ratio
061/62	940.21	0.00	0
062/63	930.64	0.00	0
063/64	830.62	0.00	0
064/65	950.23	0.00	0
065/66	1100.74	0.00	0

The above table clearly show that the net fixed assets of BDBL has been decreasing gradually from fiscal year 061/62 to

fiscal year 063/64 i.e. Rs. 940.21 thousand to Rs. 830.62 thousand. But from the fiscal 064/65 to fiscal year 065/66 net fixed assets of the bank started to increase and reach to amount Rs. 950.23 thousand to Rs. 1100.74 thousand. The above clearly indicates that the bank has not any long-term obligations. So, the ratio can not be calculated i.e. zero.

4.2.13 Profitability Ratio

Profitability ratios indicate the degree of success in achieving desired profit. Various profitability ratios are calculated to measure the operating efficiency of business enterprises. These ratios are mostly used to compare the performance of the bank in different years. Through profitability ratios the lender and investors want to decide whether to invest in a particular business or not. For instance, the business may have experienced a downturn in its net profit margin by 10% over the last 3 years, which may seem worrying. If the years have experienced an average downturn of 21%, the business is actually performing better than the years as a whole. Nonetheless, it will still need to analyze the underlying data in order to establish the cause of the downturn as well as create solutions for improvement.

4.2.14 Interest Earned to Total Assets Ratio

It is the ratio, which formed to find out the percentage of the interest earned-to total assets. This is derived by dividing the amount of interest earned by the total assets of the firm.

$$\text{Interest Earned To Total Assets Ratio} = \frac{\text{Interest Earned}}{\text{Total Assets}}$$

The following table and figure shows the interest earned to total assets ratio of the BDBL

Table 4.13

Interest Earned to Total Assets Ratio of BDBL

Fiscal Year	Interest Earned	Total Assets	Ratio (%)
061/62	4730.30	63560.65	7.44

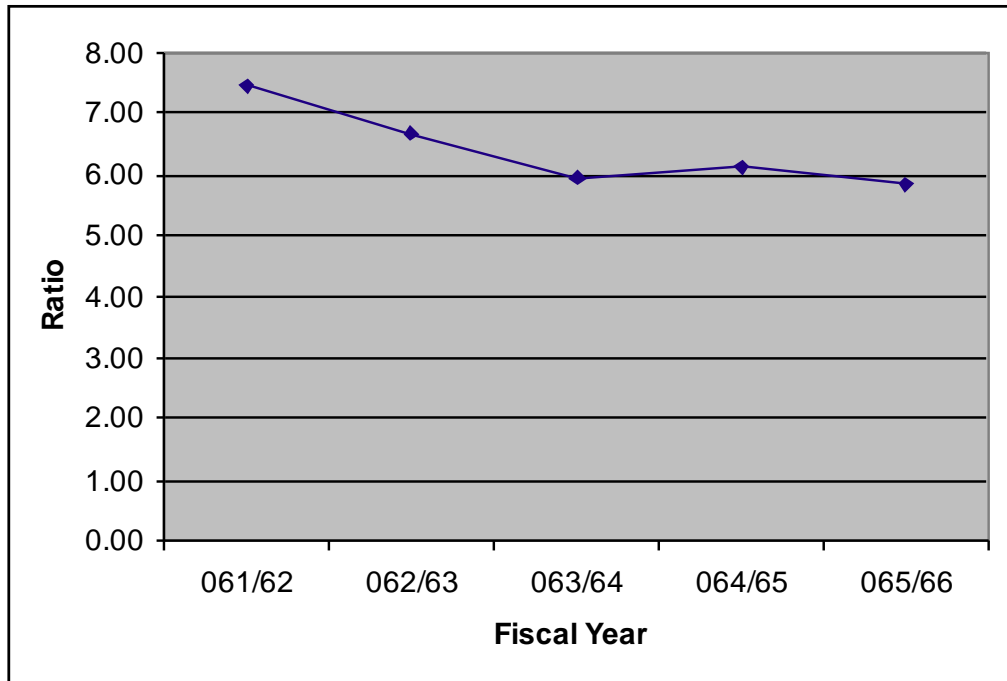
062/63	4960.81	74440.81	6.67
063/64	5670.10	94960.35	5.97
064/65	6700.10	98880.47	6.14
065/66	7180.12	122780.229	5.85
Average			6.52

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

The interest earned has been following increasing trend, i.e. the interest earned of BDBL has been gradually increasing every year. The total asset of the BDBL has been also increasing gradually over the study period. Interest earned to total assets ratio of the bank was quite fluctuating. It stands at 7.44% in fiscal year 061/62. It was slightly decreased in fiscal year 062/63 and 063/64 and reached up to 5.97% at the end of F/Y 063/64. Finally, it is increased in fiscal year 064/65 but decreased in F/Y 065/66 and stands at 5.85%. The average ratio of the BDBL was 6.52 over the study period. The following figure shows the ratio of interest earned to total assets of the bank.

Figure 4.11

Interest Earned to Total Assets Ratio of BDBL



The above figure depicts that the interest earned to total assets ratio of BDBL seems quite fluctuating over the study period. From fiscal year 061/62 to fiscal year 063/64 the trend line of the bank was in declining position. But at the end of fiscal year 064/65 it seems to be in growing position than previous year and again at fiscal year 065/66 it started to decline.

From the above analysis we can conclude that the interest earned to total assets of the BDBL is not so much satisfactory, it is quite ok. It implies that the bank might not be able to use its total assets of funds to earned interest.

4.2.15 Net Profit to Total Assets Ratio

This ratio is very much crucial for measuring the profitability of funds invested in the bank's assets. It measures the return on assets is computed by using following formula:

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

The following table and figure shows the net profit to total assets ratio of BDBL

Table 4.14
Net Profit to Total Assets Ratio of BDBL

(Rs. In Thousand)

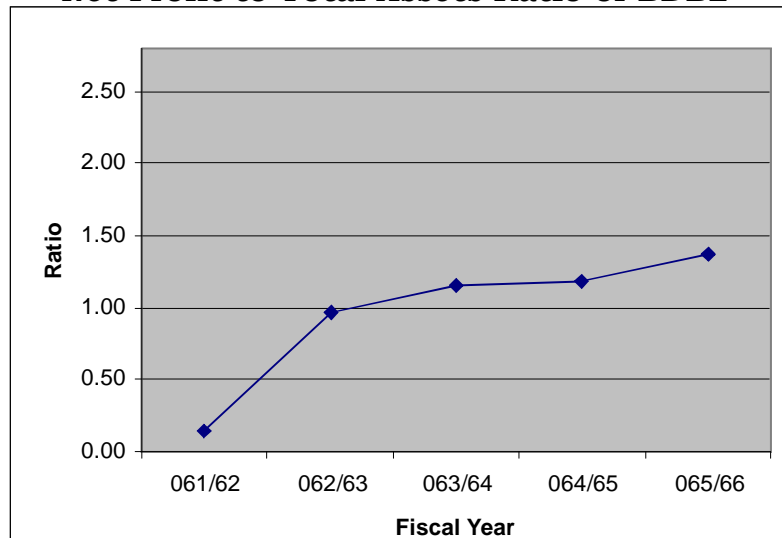
Fiscal Year	Net Profit	Total Assets	Ratio (%)
061/62	90.30	63560.65	0.14
062/63	710.52	74440.80	0.96
063/64	1090.59	94960.35	1.15
064/65	1170.99	98880.47	1.19
065/66	1680.08	122780.29	1.37
Average			0.964

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

As shown in the above table 4.14 the net profit of the bank was Rs. 90.30 thousand in F/Y 061/62, Rs. 710.52 thousand in F/Y 062/63, Rs. 1090.59 thousand in FY 063/64, Rs. 1170.99 thousand in F/Y 064/65 and Rs. 1680.08 thousand in F/Y 065/66. Like wise the ratio of net profit to total assets is also falling, the trend of net profit is very fluctuating. The lowest net profit to total assets is 0.15 in fiscal year 061/62 and the highest is 1.37 in fiscal year 065/66. The average of net profit to total assets ratio is 0.964 over the study period.

Figure 4.12

Net Profit to Total Assets Ratio of BDBL



The above figure implies that the fluctuating net profit to total assets ratio in percentage of BDBL. Above analysis helps to find out whether the bank efficiently used its working funds or total assets to earned higher rate of profit or not. The ratio of net profit to total assets of BDBL implies that the bank could not able

to use its available working funds affectively over the study period which signify towards the slow growth of the bank.

4.2.16 Net Profit to Total Deposit Ratio

This ratio is used to measuring the internal rate of return from deposit. It is computed dividing the net profit by total deposits. Higher ratio indicates the return from investment on loans and advances are desirable and lower ratio indicates the funds are not properly mobilizing the following formula is used as:

$$\text{Net Profit to Total Deposit Ratio} = \frac{\text{Net Profit}}{\text{Total Deposit}}$$

Table 4.15
Net Profit to Total Deposit Ratio

(Rs. in Thousand)

Fiscal Year	Net Profit	Total Deposit	Ratio (%)
061/62	90.30	57230.28	0.16
062/63	710.52	61700.70	1.16
063/64	1090.59	77410.65	1.42
064/65	1170.99	89750.70	1.32
065/66	1680.08	104850.33	1.60
Average			1.132

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

The above table shows that the total deposit of BDBL has been gradually increasing over the period of study period. In other hands, the net profit is also in increasing trend like wish the ratio has been gradually increased in first three years, slightly decreased in fiscal year 064/65 and reached to 1.32 and again started to increase and reached to 1.60 in fiscal year 065/66. The ratio stands at 0.16 at the end of fiscal year 061/62 is minimum whether is stands at 1.60 in fiscal year 065/66 which is maximum and the average of net profit to total deposit ratio is 1.132 over the study period.

The above analysis helps to find out whether the bank could be able to mobilize of outsiders funds properly or not. The mobilization of outsiders fund is very important to earn profit for a commercial bank. The efficient mobilized its deposit as efficiently as possible. As shown in above table we can easily conclude that the bank could not be able to mobilize its deposit or outsiders funds efficiently. The bank should mobilize its deposit properly to increase profit.

4.2.17 Cost of Service to Total Asset Ratio

A sound management always tries to utilize its larger amount of assets with minimum cost. This ratio is useful in measuring the assets utilization with cost of services. The ratio can be expressed as below:

$$\text{Cost of services to Total Deposit Ratio} = \frac{\text{Cost of Service}}{\text{Total Assets}}$$

The following table shows the cost of bearing of taking by Biratlaxmi Development Bank Limited.

Table 4.16
Cost of Service to Total Ratio of BDBL

(Rs. In Thousand)

Fiscal Year	Cost of Service	Total Assets	Ratio (%)
061/62	3350.16	63560.65	5.27
062/63	3280.37	74440.80	4.41
063/64	3340.00	94960.35	3.52
064/65	2950.25	98880.47	2.99
065/66	3670.26	122780.29	2.99
Average			3.836

Source: Appendix 5 – Financial Summary of Biratlaxmi Development Bank Ltd.

From the above table 4.16 shows that the total asset of the BDBL has been increasing gradually over the study period. The cost of service included interest paid on borrowings and on deposit as well as salaries, allowances and provident fund. The cost of service of the BDBL has been decreased in fiscal year 063/64 but slightly

increased in fiscal year 064/65 and again decreased in F/Y 065/66 it increased and reached up to 3670.26. The cost of service to total assets ratio has been gradually decreased over the period of study, which was 5.27% in fiscal year 061/62, it decreased to 2.99% at the end of fiscal year 063/64. The average ratio of cost of service to total assets is stands at 3.836%. From the above analysis we can conclude that the ratio of cost of service to total assets of BDBL has been gradually decreasing, which indicates that the bank could able to decrease its cost of service. It is no doubt that bank can able to decreased total cost which resulted in maximizing the profit.

4.3 Correlation Analysis

Correlation analysis is a statistical relation between two or more variables such that systematic changes in the value of one variable are accompanied by systematic changes in the other. In other words, correlation is the statistical tool that we can use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between two sets of figures. It is denoted by small letter 'r'. The result of coefficient of correlation is always between +1 and -1 when 'r' is equal to +1, it means there is perfect relationship between two variables. Therefore, correlation is a reciprocal relation between two or more things.

4.3.1 Coefficient of Correlation between Investment of Government Securities and Total Deposit

The coefficient of correlation between investment on government securities and total deposit is to measure the degree of relationship between two variables. Although bank utilizes its deposits on loan and advances but some part of idle deposit are invested on government securities. The purpose of computing correlation coefficient is to justify whether the excess deposits are significantly

used in government securities or not or whether there is any relationship between these two variables. In this analysis; government security is dependent variable (X) and total deposit is independent variable (Y). The following table shows the coefficient of correlation between deposits and government securities i.e. 'r'. 'PE'. '6PE r' of BDBL over the study period.

Table 4.17
Coefficient of Correlation between Investment on Government Securities and Total Deposit

Name of Bank	Correlation (r)	PE(r)	6 PE(r)
BDBL	+0.88	0.07	0.41

(Source; appendix-1)

From the above table 5.17, we can find that the coefficient of correlation between government security and total deposit of BDBL value 'r' is +0.88. It shows that the Positive relationship between these two variables government security and total deposit of the bank. By considering the probable error, since the value of 'r' is more than six times of Per then we can say that the value of 'r' is highly significant and vice versa but in case of BDBL, the value of 'r' is more than the value of six times of Per i.e.: $PE(r) < r$ so, there is significant relationship between government security and total deposit of the bank.

Hence, from the above analysis, it can be concluded that there is highly significant relationship between government security and total deposit of the bank over the study period.

4.3.2 Coefficient of Correlation between Loan and Advance and Total Deposit

The coefficient of correlation between loan and advances and total deposits is to measure the degree of relationship between major components of current assets i.e. loan and advances and major sources of fund on bank i.e. total deposits. In correlation analysis, deposit is independent variable (Y) and loan and advances is dependent variable (X). The purpose of computing coefficient of

correlation is to justify whether the deposits are significant used in loan and advances or not and whether there is any relationship between loan and advances and total deposits i.e. r , $PE(r)$, $6PE(r)$ of Kumari Bank Limited.

Table 4.18
Coefficient of Correlation between Loan and Advance to Total Deposit.

Name of Bank	Correlation (r)	$PE(r)$	$6PE(r)$
BDBL	+0.98	0.0127	0.072

(Source: Appendix-II)

From the above table 4.18 depicts that the coefficient of correlation between loan and advances and total deposit value Y of BDBL is +0.98. It shows highly positive relationship between two variables loan and advances and total deposit of BDBL. By considering the probable error, since the value of ' r ' i.e. +0.98 is more than six times of probable error i.e. 0.072, we can say that the value of ' r ' is highly significant i.e. there is significant relationship between total deposit and loan and advances. What this means essentially is that changing the scale of either the X or the Y variable will not change the size of the correlation coefficient, as long as the transformation conforms to the requirements of a linear transformation. Thus from analysis, we can conclude that the bank have utilized its total deposits on loan and advances effectively.

4.3.3 Coefficient of Correlation between Cash and Bank Balance and Current Liabilities

Cash and bank balance is most liquid component of current assets. This is required to meet the unexpected short-term obligation i.e. current liabilities. The coefficient of correlation between cash and bank balance the current liability is to measure the degree of relationship between cash and bank balance and current liabilities. To find out the correlation, various calculations are done. In correlation analysis, cash and bank balance is

dependent variable (X) and current liabilities are independent variable (Y). The following table shows the coefficient of correlation between cash and bank balance and current liabilities i.e. 'r', 'PE(r)' '6PE(r)' of Kumari Bank Limited

Table 4.19
Coefficient of Correlation between Cash and Bank Balance and Current Liabilities

Name of Bank	Correlation (r)	PE(r)	6PE(r)
BDBL	+0.42	0.25	1.50

(Source: Appendix -III)

As stated in above table 4.19, we can find the coefficient of correlation between cash and bank balance and current liabilities of **BDBL** is +0.42 which shows the positive relationship between two variables cash and bank balance and current liabilities. By considering the probable error, since the value of 'r' i.e. +0.42 is less than six times of PE i.e. 1.50, we can say that value of 'r' is not significant.

From the above analysis, it can be concluded that there is significant relationship between cash and bank balance and current liabilities.

4.3.4 Coefficient of Correlation-between Loan and Advances and Net Profit.

The basic function of commercial bank is to collect deposit and invest these funds on loan and advance to generate higher profit. Large amount of loan and advance generate higher profit. The coefficient of correlation between loan and advances and net profit is to measure the degree of relationship between loan and advances and net profit. In correlation analysis, loan and advances is independent variable (Y) and net profit is dependent variable (x). The purpose of computing the correlation of the coefficient is to justify whether and loan and advances are significantly generate profit of not and whether there is any relationship between these

two variables. The following table shows the calculated amount of 'r', 'PE(r)' and **BDBL** over the study period.

Table 4.20

Coefficient of Correlation between Loan and Advance and Net Profit

Name of Bank	Correlation (r)	PE(r)	6PE(r)
BDBL	+0.91	0.03	0.18

(Source: Appendix –IV)

As stated in above table 4.20, the coefficient of correlation between loan and advances and net profit of **BDBL** over the study period is +0.91. It shows positive relationship between two variables loan and advances and net profit. Similarly, considering the value of probable error and six times of probable error which value are 0.03 and 0.18 respectively. By considering the probable error, since the value of 'r' i.e. +0.91 is greater than six times of PE i.e. 0.18, we can say that value of 'r' is significant.

Thus from the above analysis, it can be conclude that there is significant relationship or relationship is positive between loan and advances and net profit.

4.4 Regressions Analysis:

Regression Analysis is a statistical device with help of estimate or prediction of the unknown value of one variable from the known value of other variable. It is one of the scientific techniques and is considered as a useful tool for determining the strength of relationship between two or more variable. Prediction or estimation has an important role in the financing sector; this tool has been employed for the study purpose. The regression line describes the employed for the study purpose. The regression line describes the average relationship between the two series. In fact there is no difference between the lines of best fit is generally used when x series related to time and y series to the value of a variable.

If both x and y series are variable, the line of best fit is known as line of regression. The equation describing the regression lined is called regression equation.

Here, regression analysis is divided into two parts: simple and multiple. The analysis used to describe the average relationship between only two variable at a time is known as simple regression analysis. It is used to study how independent variable influences dependent variables. The extension of simple regression techniques i.e. the use of two or more independent variables are used to estimate the value of a dependent variable is known as multiple regression analysis. For the study purpose, simple regression analysis is applied to find out the effect between the following variables.

1. Investment in government securities[GS] as dependent variable and independent variable is total deposit [TD]

Simple regression analysis:

One of the most powerful statistical tools; to explain the relationship between two or more variables, is no doubt regression analysis. This tool is employed here to determine within the variable of total deposit is related with investment government securities. Here, two variable total deposit[Y] and investment on government securities [X] are assumed as independent and dependent variable respectively.

Regression analysis has to be including three tools explained below:

Regression Constant:

The value of constant, which is the intercept of the model, indicates the average level of dependent variable when independent variable is zero. In other words, it is better to understand that constant indicates the mean or average effect on dependent variables if all omitted from the model.

$$a = \frac{\sum y}{N} - b \frac{\sum x}{N}$$

a = Regression constant

$\sum x$ = The total value of independent variable

$\sum y$ = The total value of dependent variable

N = Number of observation

2. Regression Coefficient:

The regression coefficient of each independent variable indicate the marginal relationship between that variable, holding constant the effect of all other independent variables in the regression model. In other words, the coefficient describes how

3. Standard Error of Estimates :

With the help of regression equations perfect prediction is practically impossible. A measure of precision of the estimates so obtained from the regression equation is provided by the standard error of analogous to standard deviation [which is a measure of dispersion of the observations about the mean of the distribution] and gives us a measure of the rather of observation about the line of regression the formula for calculation the standard error of estimate is

$$S_{yx} = \sqrt{\frac{1}{N} \sum (y - y_c)^2}$$

Where,

S_{yx} = The S.E. of regression of y value form y_c

y_c = The estimated value of y for given value of x obtained from the line of regression of y and x

N = Number of observation

Regression Analysis between Investment and Government Securities (G.S) and total Deposit (T.D)

G.S is depended variable and T.D is in depended variable which is denoted by X and Y respectively.

BIRAT LAXMI DEVELOPMENT BANK LIMITED HANUMAN DAS ROAD, BIRATNAGAR FINANCIAL RATIOS FOR FIVE YEARS

Calculation of Regression Coefficient of between Investment on Government Securities (G.S.) and Total Deposit (T.D.)

GS (X)	TD (Y)	$x(x - \bar{X})$	x^2	$y(y - \bar{Y})$	Y^2	xy
5222.62	57230.28	-13194.876	174104752.7	-20958.252	439248326.9	276541536.3
15102.71	61700.70	-3314.786	10987806.23	-16487.832	271848604.1	5465364.68
23710.78	77410.65	5293.284	28018855.5	777.882	605100.41	4117550.344
21471.00	89750.70	3053.5	9323862.25	11562.168	133683728.9	35305079.99
26580.37	104850.33	8162.874	66632511.94	26661.798	710851472.6	217636897.7
$\Sigma X=92087.48$	$\Sigma Y=338942.66$		$\Sigma x^2=289067788.6$		$\Sigma Y^2=1556237233$	$\Sigma XY=588254699$

$$1. \quad \bar{X} = \frac{\Sigma X}{N} = \frac{92087.48}{5} = 18417.496 \quad 2. \quad \bar{Y} = \frac{\Sigma Y}{N} = \frac{390942.66}{5} = 78188.532$$

Calculation of value of 'a'

$$a = y - bx$$

$$a: 78188.532 - b \cdot 18417.496 \dots \dots \dots \text{(Equ. No.1)}$$

Calculation value of 'b'

$$b = \frac{N\sum xy - (\sum x)(\sum y)}{N\sum x^2 - (\sum x)^2}$$
$$= \frac{5(588254699) - (92087.48)(338942.66)}{5 \times 289067788.6 - (92087.48)^2}$$
$$= 0.02$$

Putting the value of 'b' in equation 1 we have

$$a = 78188.532 - b(18417.496)$$
$$a = 78188.532 - 0.02 \times 18417.496$$
$$= 77783.347$$

The required equation is,

$$Y = a + bx$$
$$= 77783.347 + 0.22 X$$

Calculation of S. E. E.

$$S_{yx} = \sqrt{1/N \sum (y - yc)^2}$$
$$\sqrt{1/5 (1556237233)}$$
$$5578.947$$

The above table shows the simple regression between investment on government securities and total deposit of Biratlaxmi Development Bank Ltd. we found the regression coefficient of beta (b) is positive, which indicated that one rupee increase in total deposit to an average increase of 0.2 in investment on government securities. The value of constant (a)

indicate that the mean or normal effect on dependent variable 77783.347.

Similarly, the value of standard error of estimate (SEE) has recorded as 5578.947.365.S.E.E shows the scattered Ness of variables taken for study of BDBL.

4.4 Major Findings of the Study

The following are the major findings of the study:

- 1) The working capital of **BDBL** has been following increasing trend in over all study period. The working capital depicts the liquidity position of the organization. It means higher the working capital higher the liquidity of the firm and vice versa. Total working capital of the bank was limited to Rs. 3852.65 thousand, Rs. 3845.10 thousand, Rs. 4361.78 thousand, Rs. 4824.52 thousand and Rs. 5201.6 thousand at the end of F/Y 061/62, 062/63, 063/64, 064/65 and 065/66 respectively
- 2) The current ratio of the bank was quite fluctuating, which stands 1.06 at F/Y 061/62, 1.06 at F/Y 062/63, 1.05 at F/Y 063/64, 1.05 at F/Y 064/65 and 1.05 at F/Y 065/66 respectively. The average CR of the bank stands at 1.054 over the study period. As stated by the result, the bank has enough liquidity to remain solvent at the ratio of 1.05:1, which is minimum in F/Y 063/64, 064/65, 065/66. In this case, the bank has enough idle money, which cannot generate inflow to the bank. Higher current ratio shows the idle fund of the bank.
- 3) The quick ratio of the bank is also represented by the current ratio. The Q.R. of the bank is same as C.R. It means, quick ratio is also fluctuating and the bank has enough idle funds which is unproductive to the bank. So, bank has to reset ratio to meet its current liabilities.
- 4) The cash and bank balance slightly increasing up of fiscal year 063/64 and was decreased in F/Y 064/65 and 065/66. It indicates the how much funds available with the bank to cover its current margin, call and saving deposit of the bank immediately. But the large amount of idle cash and bank balance affects profitability of the bank. This ratio stands

average 0.14% over the study period which means bank is in satisfactory level.

- 5) The saving deposit to total deposit ratio of the bank has been gradually increasing over the study period. It stands at average 0.38% over the study period. Thus, the ratio indicates the bank's liquidation position. Higher level of this ratio of the bank indicates to the idle fund. From profitability point of view, the bank should minimize the ratio. As depicted by the study BDBL's position seems satisfactory over the study period.
- 6) The loan and advances to total deposit ratio of BDBL was slightly decreased in fiscal year 062/63, 063/64, 064/65, 065/66 respectively during the study period. The ratio stands 0.81 in fiscal year 061/62, 0.74 in fiscal year 062/63, 0.73 in fiscal year 063/64, 0.66 in fiscal year 064/65, and 0.62 in final year 065/66. The ratio indicates the capacity of the bank to mobilize its deposits. As stated by the study, the mobilization of deposits of the bank is not satisfactory level over the study period.
- 7) The loan and advances to fixed deposits ratio of the BDBL was slightly decreased in fiscal year 062/63 but it increases of fiscal year 063/64. Thereafter it again slightly decreases in fiscal year 064/65 and later on in final year it increase up to 2.68. The ratio indicates the capacity of mobilizing its fixed deposit to loan and advances. It means, these ratios implies to the utilization of fixed deposits in loan advances efficiently or not. From the study, it is found that the bank has been mobilizing its fixed deposits quite satisfactory.
- 8) The loan and advances to saving deposits of the bank has been in decreasing trend. There was not consistency in the ratio. It stands at average ratio 1.95 over the study period. These ratios imply that the bank either able to mobilize its

saving deposits or not. As per the study, the bank is in satisfactory position over the study period.

- 9) The long term debt to net worth ratio of the bank did not exist because the bank did not use any outsider funds. It means the debt to net worth ratio is zero over the study period. It indicates that the bank is not risky from the view point of investor.
- 10) The net fixed asset to long-term debt ratio of the bank was also same as long-term debt to net worth ratio.
- 11) Interest earn to total assets ratio of any organization indicates the profitability ratios. The ratio of bank is very fluctuating during the study period. It was 7.45 in fiscal year 061/62 which is maximum and 5.85 at fiscal year 065/66 is minimum. It stands at average 6.52 over the study period. From the study, it is concluded that the interest earn to total assets ratio of BDBL is not so much satisfactory. It means the bank could not able to use its total assets properly to earn interest.
- 12) Net profit to total assets ratio of the bank was also very fluctuating. It was 0.15 in F/Y 061/62 which is minimum and 1.37 in F/Y 065/66, which is maximum over the study period. It stands at average 0.964 over the period of study. The study shows that the bank could not able to utilized its total assets to generate profit.
- 13) Net profit to total deposit ratio of the bank was also fluctuating. It stands at 0.16 at the end of F/Y 061/62, which is minimum and 1.60 at the end of F/Y 065/66 which is maximum. It stands at average 1.32 over the study period. This ratio is used to find out whether the bank could able to mobilize outsider's funds properly or not. The mobilization of outsider's funds is very important for a commercial bank. The efficient mobilization of deposit indicates the better performance of the bank. Therefore, the bank should mobilize

its deposit as efficiently as possible. But from the above study, we can easily found that the bank could not bale to mobilize its total deposit efficiently.

- 14) Cost of services to total assets ratio of the bank has been gradually decreasing over the year. It was 5.27% at the end of F/Y 061/62. It is limited to 2.99% at the end of F/Y 065/66. It stands at average 3.836% over the study period. Form the above study we can easily found that the bank has been given effort to decrease its cost of service. There is not doubt that, the decrement of cost of service will result in maximizing profit of the bank. It is quite satisfactory but the bank has to give attention towards further decline of the cost of service.
- 15) The coefficient of correlation between investment and government securities and total deposit was +0.88, which is significant over the study period.
- 16) The coefficient of correlation between loan and advances and total deposit stands at +0.98, which is significant. It means thee is positive relationship between loan and advances and total deposit of the bank i.e. perfectively correlated. The bank should increased total deposit to increase loan and advances and vice versa.
- 17) The coefficient of correlation between cash and bank balance and current liabilities was +0.42. It means low degree of correlation, which is insignificant.
- 18) The coefficient of correlation between loan and advances and net profit was +0.91. It means high degree of positive relationship between loan and advances and net profit, which is significant.

CHAPTER – FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary and Conclusion:

Finance is a business term which deals with the study of fund management. If finance is to be accepted as weapon which enables an organization to pay its bills promptly, it is necessarily linked with the flow of fund. The management may accept or reject a business provision on the basis of financial viabilities. It guides investment where opportunity is the greatest, producing relatively uniform yardstick for judging most of a firm's operations and projects continually concerned with achieving an adequate rate of return on investment as this is necessary for survival and the attracting of new capital.

The function of finance involves there major decisions which, the firm must make the investment decision, financing decision and the dividend decision. An optimum combination of the three will maximize the value of the firm. In other words entries activities relating the finance are done with the help of financial management. So in this area of management there are two main functions, firstly to assemble the funds necessary to initiate a new business economically and secondly to provide the basis of continue new operation.

It will not be an exaggeration to say that the success of any business organization depends upon its entire environment. Financial management is one of them which the organization can control to some extent. It is concerned with the decision making regarding the size and composition of assets, and the level and structure. The cheaper source of fund and to invest it at the best opportunities etc. comes under the heading of financial decision making. The management of short-term assets and source of

finance which entails an analysis of the effect of risk and profitability can not be overlooked.

The working capital has to be regarded as one of the conditioning factors in the long range analysis and decision making. To achieve the goal of overall business, the determinants of working capital should be neither more nor less because both the position of working capital affects not only liquidity but also profitability of the organization. The investment decision should be made on any type of current assets by considering their role in corporation, and determine which one is more beneficial to the corporation and which is not.

Firms need cash to pay for all their day-to-day activities. They have to pay wages, pay for raw materials, pay bills and so on. The money available to them to do this is known as the firm's working capital. The main sources of working capital are the current assets as these and the short-term assets that the firm can use to generate cash. However, the firm also has current liabilities and so these have to be taken on account of when working out, how much working capital a firm has at its disposal.

According to gross concept, WC refers to the capital invested in current assets of a firm. It focuses only the optimum investment on current assets and financing of current assets. It includes cash, short-term securities, and inventory and account receivables. Similarly, according to net concept, working capital refers to the difference between current assets and current-liabilities. In other words, it is that part of current assets financed with long-term funds. It focuses on the liquidity position of the firm and suggests extending which working capital need-to be financed by permanent sources of funds.

The working capital of BDBL has been following increasing trend over the study period. The working capital depicts the liquidity position of the organization. It means higher the working capital higher the liquidity of the firm and vice versa. Total working

capital of the bank was limited to Rs. 3852.65 thousand, Rs. 3845.1 thousand, Rs. 4361.78 thousand, Rs. 4824.52 thousand and Rs. 5201.6 thousand at the end of F/Y 061/62, 062/63, 063/64, 64/65 and 065/66 respectively.

The current ratio of the bank was quite fluctuating, which stands 1.06 at F/Y 061/62, 1.06 at F/Y 062/63, 1.05 at F/Y 063/64, 1.05 at F/Y 064/65 and 1.05 at F/Y 065/66 respectively. The average CR the bank stands at 1.054 over the study period. As stated by the result, the bank has enough liquidity to remain solvent at the ratio of 1.05:1, which is minimum in F/Y 063/64 to 065/66. In this case, the bank has enough idle money which can not generate inflow to the bank. Higher current ratio shows the idle fund of the bank. The quick ratio of the bank is also representing by the current ratio. The Q.R. of the bank is same as C.R. It means, quick ratio is also fluctuating and the bank has enough idle funds which is unproductive to the bank. So, bank has to reset ratio to meet its current liabilities.

The cash and bank balance to total deposit ratio excluding fixed deposit of the bank slightly decreases during the study period. It indicates that how much funds available with the bank to cover its current margin, call and saving deposit of the bank immediately. But the large amount of idle cash and bank balance affects profitability of the bank. This ratio stands average 0.14 over the study period which means bank is in satisfactory level.

The saving deposit to total deposit ratio of the bank has been gradually increasing over the study period. It stands at average 0.38% over the study period. Thus, the ratio indicates the banks' liquidation position. Higher level of this ratio of the bank indicates to the idle fund too. From profitability point of view, the bank should minimize the ratio. As depicted by the study, BDBL's position seems satisfactory level over the study period.

The loan and advances to total deposit ratio of BDBL was in decreasing trend. The ratio stands 0.81% in fiscal year 061/62,

0.74% in fiscal year 062/63, 0.73% in F/Y 063/64, 0.66% in fiscal year 064/65 and again remains at 0.69% in fiscal year 065/66. The ratio indicates the capacity of the bank to mobilization its deposit. As stated by the study, the mobilization of deposit of the bank is not satisfactory level over the study period.

The loan and advances to fixed deposit ratio of BDBL was slightly decreased in fiscal F/Y 062/63 but it increases in F/Y 063/64 and again slightly decreased in F/Y 064/65. It stands at 2.68 at the end of study period. These ratios indicate the capacity of mobilizing its fixed deposit to loan and advances. It means, these ratios implies to the utilization of fixed deposit in loan and advances is efficient of not. From the study; it is fund that the bank has been mobilizing its fixed deposit quite satisfactory.

The loan and advances to saving deposit ratio of the bank has been in decreasing trend. There was not consistency in the ratio. It stands at average 1.95 over the study period. These ratios implies that the bank either able to mobilize its saving deposit or not. As per the study, the bank is in satisfactory position over the study period.

The long-term debt to net worth ratio of the bank did not exist because the bank did not use any outsider's funds. It means the debt to-net worth ratio is zero over the study period indicates the bank in not risky from the view point of the investors. The net fixed asset to long-term debt ratio of the bank was also same as long-term debt to net worth ratio.

Interest earned to total assets ratio of any organizations indicates the profitability ratio. This ratio of the bank is very fluctuating. It was 7.45 at F/Y 061/62, which is maximum and 5.85 at F/Y 065/66, which is minimum. It stands at average 6.52 over the study period. From the study, it is concluded that the interest earned to total assets ratio of BDBL is not so much satisfactory. It means the bank could not able to use its total assets properly to earned interest.

Net profit to total assets ratio of the bank was in increasing trend. It was 1.37 in F/Y 065/66, which is maximum and 0.15 in, F/Y 061/62, which is minimum over the study period. It stands at average 0.964 over the period of study. The study shows that the bank could not able to utilize its total assets to generate profit.

Net profit to total deposit ratio of the bank was also fluctuating. It stands at 0.16 in F/Y 061/62, which is minimum and 1.60 at the end of F/Y 065/66, which is minimum over the study period. It stands at average 3.836% over the study period. From the above study we can easily find that the bank has been given effort to decrease its cost of service. There is not doubt that, the decrement of cost of service will result in maximizing profit of the bank. It is quite satisfactory but the bank has to give attention towards further decline of the cost of service.

The coefficient of correlation between investment and government securities and total deposit was +0.88, which is significant over the study period. The coefficient of correlation between loan and advances and total deposit stands at +0.98 that is significant. It means there is positive relationship between loan and advances and total deposit of the bank i.e. perfectly correlated. The bank should increased total deposit to increases loan and advances and vice versa. The coefficient of correlation between cash and bank balance and current liabilities was +0.42. It means low degree of correlation, which is insignificant. The coefficient of correlation between loan and advances and net profit was +0.91. It means high degree of positive relationship between loan and advances and net profit, which is significant.

5.2 Recommendation

Based on the major findings of this study, some recommendations have been made so as to overcome some shortfalls regarding the issue of working capital management of the bank.

- Working capital is essential to meet short-term obligations. But high level of working capital increase idle fund which affects the profitability of the bank. Therefore, the bank should maintain sound working position. It means neither more nor less. The working capital of BDBL has been following increasing trend. Thus, the bank should try to maintain sound working capital.
- The current and quick ratio of the bank is more than one. It means, the bank has sufficient liquidity to remain solvent even at the ratio of 1.06:1 in fiscal year 061/62, which was maximum ratio during the study period. It is true that such higher ratio supposed by the greater ability of bank to pay its bills. But if a bank has more than sufficient current assets, it is an indication of unfavorable distribution of current assets than current liabilities. Therefore, there is quite higher idle fund which may result unproductive for bank. Thus, the bank should try to reduce its current assets to increase its profitability.
- The loan and advances to total deposit ratio indicates the capacity of bank to mobilize its deposit into loan and advances. It also majors the efficiency of management of utilize their available resources. As found in the above study, the bank could not able to mobilize its total deposit through loan and advances. Therefore, the bank should disburse its total deposit as much as possible means of loan and advances.
- Till now the bank is utilizing only net worth but not any debt capital. The utilization of debt capital somehow helps to increase the profitability of the bank. Therefore, the bank should try to issue long-term debt or debentures or maintain leverage capital ratio.
- From the above study we can easily find that the bank's interest earned to total assets ratio is not satisfactory so far. It indicates the bank could not able to utilize its total assets to earned interest. Therefore, the bank should utilize its available assets as properly as possible to earned interest. For this the bank

should lend only in performing loan, which makes sure to recovery of principle as well as interest.

- The net profit to total assets ratio of the bank is not satisfactory. From the above study, it is easily found that the bank could not able to utilize its available sources properly to earn profit. Therefore the bank should utilize its total assets as possible as much.
- Although, the cost of service to total assets, ratio has been decreasing, it is not in satisfactory level. Therefore, the bank should try to decline its cost of services as possible as it can.

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Apendix-I

**BIRATLAXMI DEVELOPMENT BANK LIMITED
HANUMANDAS ROAD, BIRATNAGAR
COMPERATIVE BALANCE SHEET FOR FIVE YEARS**

Particular/Years	061/62	062/63	063/64	064/65	065/66
A. Cash & Bank Balance	6830.65	6921.71	7822.88	7403.51	7289.68
B. Money at Call & Short Notice	1270.39	300.35	2720.32	3280.87	5940.04
C. Loans/Advances/Bills Payable	46130.70	45422.7	56461.7	59124.57	72591.09
i) Loans/Cash/Over Drafts	4324.77	4494.45	5336.97	5831.07	7239.1
ii) Bills Discounts/Purchase	288.93	48.54	309.73	81.51	19.99
D. Investments	6190.45	18160.14	24770.41	25980.65	33740.71
i) Govt. Securities	5222.65	15102.71	23710.38	21471.00	26580.37
ii) Other (Foreign Bank)	960.80	2670.43	820.83	3590.00	6220.89
iii) Bonds, Shares, Deb & Others	***	38.00	22.81	92.65	93.45
E. Others	1470.93	1680.87	1040.06	710.26	220.94
i) Interest Receivable	990.04	700.37	450.09	430.35	120.78
ii) Misc. Current Assets	480.89	100.00	330.49	30.83	20.81
1. Total Current Assets (A+B+C+D+E)	62205.12	72487.77	92821.38	96518.86	119795.46
2. Fixed Assets	940.21	930.64	830.62	950.23	1100.74
Gross Block	1370.74	1840.57	1550.40	1830.44	2180.99
Less Depreciation	(430.53)	(540.93)	(710.78)	(880.21)	(1080.25)
Miscellaneous Assets	220.31	1000.39	1290.35	1420.00	1880.09
Total Assets (1+2+3)	63560.65	74440.80	94960.35	98880.47	122780.29
F. Deposits & Others	57230.28	61700.7	77410.65	89750.70	104850.33
i) Saving	18500.02	22682.55	28731.81	34474.43	45811.96
ii) Fixed	19580.85	19902.93	22791.72	28784.85	27091.75
iii) Current	7890.56	9350.73	9970.90	13020.62	14090.1
iv) Call & Short Deposits	9950.02	8540.66	14500.74	11620.11	16180.55
v) Other+ Margin	1290.83	1200.83	1390.48	1840.69	1650.97
G. Short Term Loan	***	4980.24	9120.15	60.00	5530.18
H. Bills Payable	120.57	350.14	380.71	190.87	110.62
I. Staff Bonus	20.99	130.57	200.51	220.69	300.12
J. Dividend Payables	40.76	30.92	80.58	110.93	980.71
K. Other Liabilities	710.58	1440.10	1240.00	1330.15	590.60
L. Treasury Bills & Bond	-	-	-	-	2000.00
M. Deferred Liabilities	210.29				220.30
4. Total Current Liabilities (F+G+H+I+J+K+L)	58352.47	68642.67	88459.60	91694.34	114593.84
5. Set Worth (6+7)	5200.18	5790.13	6500.74	7190.13	8170.45
6. Share Capital:	4630.58	4630.58	4630.58	4630.58	4630.58
i) Ordinary Share	4630.58	4630.58	4630.58	4630.58	4630.58
ii) Bonus Share	***	***	***	***	***
iii) Preference Share	***	***	***	***	***
7. Reserve Fund	560.60	1150.55	1870.16	2550.55	3530.87
i) Proposed Bonus Share	***	***	***	***	1390.11
ii) General Reserve	340.99	510.42	760.91	1040.81	1450.30
iii) Capital Adjusted Reserve Fund	80.52	460.36	920.71	1370.52	460.36
iv) Capital Reserve fund	0.16	0.16	0.16	0.15	0.16
v) Other Reserve Fund	***	80.75	100.88	120.10	140.63
Add: Accumulated P/L	120.93	80.86	60.49	0.97	80.31
Total Liabilities (4+5)	63560.65	74440.80	94960.34	98880.47	122780.29

Source: Annual report of BDBL

APENDIX-II
BIRATLAXMI DEVELOPMENT BANK LIMITED
HANUMANDAS ROAD, BIRATNAGAR
COMPERATIVE PROFIT & LOSS A/C FOR FIVE YEARS

Particular/Years	061/62	062/63	063/64	064/65	065/66
A. Operating Income	570.58	636.22	710.81	756.02	884.80
1. Interest Earned	4730.30	4960.81	5670.10	6070.10	7180.12
2. Comm. & Discounts	470.87	600.74	770.71	720.35	700.77
3. Exchange Income	480.64	670.44	640.04	720.11	780.95
4. Dividends	0.74	110.23	10.96	40.46	160.96
5. Others	***	***	***	***	***
B. Costs Of Services	3350.16	3280.37	3340.00	2950.25	3670.26
6. Interest Paid	2850.01	2760.69	2860.28	2410.63	3080.15
i) On Borrowing	20.59	20.93	60.79	80.98	130.64
ii) On Deposit	2820.42	2730.76	2790.49	2320.65	2940.51
7. Salaries & Allowances	500.15	510.68	470.72	530.82	590.11
C. Provision For Bonus	20.99	130.57	200.51	220.69	300.12
D. Other General Expenses	1900.46	1680.32	1840.23	2330.62	1950.97
E. Gross Profit	410.97	1250.96	1720.07	2040.46	2910.45
F. Depreciation	160.01	140.45	200.77	210.76	250.70
G. Operating Profit	250.96	1110.51	1510.30	1820.70	2650.75
H. Income From Other Sources	0.93	0.02	150.46	0.05	10.09
I. Pre Tax Profit	260.89	1110.53	1660.76	1820.75	2660.84
J. Provision For Taxes	170.59	400.01	570.17	640.76	980.76
K. Net Profit	90.30	710.52	1090.59	1170.99	1680.08

Source: Annual report of BDBL

BIRAT LAXMI DEVELOPMENT BANK LIMITED
HANUMAN DAS ROAD, BIRATNAGAR
FINANCIAL RATIOS FOR FIVE YEARS

Appendix III

Calculation of Coefficient of Correlation between Investment on
Government Securities (G.S.) and Total Deposit (T.D.)

GS (X)	TD (Y)	X(X- \bar{X})	x ²	y (Y- \bar{Y})	
5222.62	57230.28	-	174104752.7	-	439248
		13194.876		20958.252	
15102.71	61700.70	-3314.786	10987806.23	-	271848
				16487.832	
23710.78	77410.65	5293.284	28018855.5	777.882	605100
21471.00	89750.70	3053.5	9323862.25	11562.168	133683
26580.37	104850.33	8162.874	66632511.94	26661.798	710851
$\Sigma X=92087.48$	$\Sigma Y=338942.66$		$\Sigma X^2=289067788.6$		$\Sigma Y^2=15$

$$1. \quad \bar{X} = \frac{\Sigma X}{N} = \frac{92087.48}{5} = 18417.496 \quad 2. \quad \bar{Y} = \frac{\Sigma Y}{N} = \frac{390942.66}{5} = 78188.532$$

$$3. u_x = \sqrt{\frac{\Sigma(x-\bar{x})^2}{n}} = \sqrt{\frac{289067788.6}{5}} = 7603.52 \quad u_y = \sqrt{\frac{\Sigma(y-\bar{y})^2}{n}} = \sqrt{\frac{1556237233}{5}} = 17642.21$$

$$4. \quad C.V._{(x)} = \frac{u_x}{x} \times 100 = \frac{7603.52}{18417.496} \times 100 = 41.28\%$$

$$C.V._{(y)} = \frac{u_y}{y} \times 100 = \frac{17642.52}{78188.52} \times 100 = 22.56\% \quad 5.$$

$$r = \frac{\Sigma XY}{\sqrt{\Sigma x^2 y^2}} = \frac{588254699}{\sqrt{289067788.6 \times 1556237233}} = \frac{588254699}{670714585.7} = 0.88$$

$$6. \quad PE(r) = 0.6745 \frac{1-r^2}{\sqrt{N}} = 0.6745 \frac{1-(0.88)^2}{\sqrt{5}} = 0.6745 \frac{0.2256}{2.24} = 0.068 \quad 7.$$

$$6 PE(r) = 6 \times 0.068 = 0.408$$

Source: Appendix-I & II

Appendix IV

Calculation of Coefficient of Correlation between Loan & Advances (LA)
and Total Deposit (T.D.)

LA (X)	TD (Y)	X(X- \bar{X})	x ²	y (Y- \bar{Y})	
46130.70	57230.28	-9815.45	96343058.7	-	439248
				20958.252	

45422.70	61700.70	- 10523.45	1107230.06	- 16487.832	271848
56461.70	77410.65	515.55	265791.80	777.882	605100
59124.57	89750.70	3178.42	10102353.7	11562.168	133683
72591.09	104850.33	16644.94	277054027.6	26661.798	710851
$\Sigma X=279730.76$	$\Sigma Y=338942.66$		$\Sigma X^2=384872461.9$		$\Sigma Y^2=15$

$$1. \quad \bar{X} = \frac{\Sigma X}{N} = \frac{279730.76}{5} = 55946.15 \quad 2. \quad \bar{Y} = \frac{\Sigma Y}{N} = \frac{338942.66}{5} = 67788.53$$

$$3. \quad u_x = \sqrt{\frac{\Sigma(x - \bar{x})^2}{n}} = \sqrt{\frac{384872461.9}{5}} = 8773.51 \quad u_y = \sqrt{\frac{\Sigma(y - \bar{y})^2}{n}} = \sqrt{\frac{1556237233}{5}} = 17642.21$$

$$4. \quad C.V._{(x)} = \frac{u_x}{x} \times 100 = \frac{8773.51}{55946.15} \times 100 = 17.77\%$$

$$C.V._{(y)} = \frac{u_y}{y} \times 100 = \frac{17642.21}{67788.53} \times 100 = 22.56\%$$

$$5. \quad r = \frac{\Sigma XY}{\sqrt{\Sigma x^2 \Sigma y^2}} = \frac{860158041.4}{\sqrt{384872461.9 * 1556237233}} = \frac{860158041.4}{1306620.4} = 0.98$$

$$6. \quad PE(r) = 0.6745 \frac{1 - r^2}{\sqrt{N}} = 0.6745 \frac{1 - (0.98)^2}{\sqrt{5}} = 0.6745 \frac{0.0396}{2.24} = 0.012$$

$$7. \quad 6 PE(r) = 6 \times 0.012 = 0.072$$

Source: Appendix-I & II

Appendix V

Calculation of Coefficient of Correlation between Investment on Government Securities (G.S.) and Deposit (T.D.)

CB (X)	CL (Y)	X(X- \bar{X})	x ²	y (Y- \bar{Y})	Y ²	
683.65	6192.12	- 42.04	1767.36	-267.93	71786.48	11
692.71	7250.77	- 32.98	1087.68	- 1621.12	2628030.05	53
782.88	9283.38	57.19	3270.70	411.99	169735.76	23
740.51	9651.24	14.82	219.63	779.85	608166.02	11
728.68	11979.46	2.99	8.94	3108.07	9660099.13	92
$\Sigma X=3628.43$	$\Sigma Y=44356.67$		$\Sigma X^2=6354.31$		$\Sigma Y^2=10438000.91$	Σ

$$1. \quad \bar{X} = \frac{\Sigma X}{N} = \frac{3628.43}{5} = 725.69 \quad 2. \quad \bar{Y} = \frac{\Sigma Y}{N} = \frac{44356.97}{5} = 8871.39$$

$$3. \quad u_x = \sqrt{\frac{\Sigma(x - \bar{x})^2}{n}} = \sqrt{\frac{6354.31}{5}} = 35.649 \quad u_y = \sqrt{\frac{\Sigma(y - \bar{y})^2}{n}} = \sqrt{\frac{10438000.91}{5}} = 435.64$$

$$4. \quad C.V._{(x)} = \frac{u_x}{\bar{x}} \times 100 = \frac{35.649}{725.69} \times 100 = 4.91\%$$

$$C.V._{(y)} = \frac{u_y}{\bar{y}} \times 100 = \frac{435.64}{8871.39} \times 100 = 4.91\% \quad 5.$$

$$r = \frac{\Sigma XY}{\sqrt{\Sigma x^2 \Sigma y^2}} = \frac{109140.53}{\sqrt{6354.31 \times 10438000.91}} = \frac{109140.53}{257538.92} = 0.42$$

$$6. \quad PE(r) = 0.6745 \frac{1 - r^2}{\sqrt{N}} = 0.6745 \frac{1 - (0.42)^2}{\sqrt{5}} = 0.6745 \frac{0.82}{2.24} = 0.25$$

$$7. \quad 6 PE(r) = 6 \times 0.25 = 1.50$$

Source: Appendix-I & II

Appendix VI

Calculation of Coefficient of Correlation between Investment on
Government Securities (G.S) and Total Deposit (T.D.)

LA (X)	TD (Y)	X(X- \bar{X})	x ²	y (Y- \bar{Y})	Y ²	
4613.70	9.30	-981.11	962576.83	-86.00	7396.00	843
4542.70	71.52	-1052.11	1106935.45	-23.78	565.49	250
5646.70	109.59	51.89	2692.57	14.29	204.20	741
5912.57	117.99	317.76	100971.42	22.69	514.84	720
7259.09	168.08	1664.28	2769827.92	72.78	5296.93	121
$\Sigma X=27974.06$	$\Sigma Y=476.48$		$\Sigma X^2=4943004.19$		$\Sigma Y^2=13977.46$	ΣXY

$$1. \quad \bar{X} = \frac{\Sigma X}{N} = \frac{27974.60}{5} = 5594.81 \quad 2. \quad \bar{Y} = \frac{\Sigma Y}{N} = \frac{476.48}{5} = 95.30$$

$$3. \quad u_x = \sqrt{\frac{\Sigma(x - \bar{x})^2}{n}} = \sqrt{\frac{4943004.19}{5}} = 994.28 \quad u_y = \sqrt{\frac{\Sigma(y - \bar{y})^2}{n}} = \sqrt{\frac{13977.46}{5}} = 52.87$$

$$4. \quad C.V._{(x)} = \frac{u_x}{\bar{x}} \times 100 = \frac{994.28}{5594.81} \times 100 = 17.77\%$$

$$C.V._{(y)} = \frac{u_y}{\bar{y}} \times 100 = \frac{52.87}{95.30} \times 100 = 55.47\% \quad 5.$$

$$r = \frac{\Sigma XY}{\sqrt{\Sigma x^2 \Sigma y^2}} = \frac{238472.42}{\sqrt{4943004.19 \times 13977.46}} = \frac{238472.42}{262850.99} = 0.91$$

$$6. \quad PE(r) = 0.6745 \frac{1 - r^2}{\sqrt{N}} = 0.6745 \frac{1 - (0.91)^2}{\sqrt{5}} = 0.6745 \frac{0.17}{2.24} = 0.05 \quad 7.$$

$$6 \text{ PE}(r) = 6 \times 0.05 = 0.30$$

Source: Appendix-I & II