PROFIT PLANNING AND CONTROL (PPC) OF MACHHAPUCHHRE BANK LIMITED - MADHAV NEPAL 2011

PROFIT PLANNING AND CONTROL (PPC) OF MACHHAPUCHHRE BANK LIMITED

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Kathmandu, Nepal

July, 2011

RECOMMENDATION

This is to certify that the Thesis

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has been prepared as approved by this Department in the prescribed format of the Faculty of Management. This thesis is forwarded for examination.

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VIVA-VOCE SHEET

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And found the thesis to be the original work of the student and written according to the prescribed format. we recommend the thesis to be accepted as partial fulfillment of the requirement for the

Degree of Master's in Business studies (M.B.S.)

Viva-Voce Committee

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Member (External Expert)	..……………………………

Date: …………………

DECLARATION

I, hereby, declare that the work reported in this thesis entitled **"PROFIT PLANNING AND CONTROL (PPC) OF MACHHAPUCHHRE BANK LIMITED"** submitted to office of the Dean, Faculty of Management, Tribhuvan University, is my original work done for the partial fulfillment of the requirement for the Masters of Business Studies (MBS) under the supervision of Associate Professor Prakash Singh Pradhan, Shanker Dev Campus.

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Date:- July 2011

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Finally, due to limitations of resources constraint and others the study may be shortcoming. So I do not heart to declare that the study is comprehensive. I hereby, take responsibility of any defects of analysis or error in this thesis.

Madhav Nepal
July, 2011

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ABBREVIATIONS

A/C =	Account
ACP=	Average collection Period
BEP=	Break Even Profit
CPPC=	Comprehensive Profit Planning and control
CVP=	Cost Volume Profit
CWIP=	Capital Work in Progress.
DTR=	Debtors Turnover Ratio
e.g =	Example
EOQ=	Economic Order Quantity
FC=	Fixed Cost
Fy=	Fiscal Year
GDP=	Gross Domestic Production
MBL=	Machhapuchhre Bank Limited
Mgmt.=	Management
MOS=	Margin of Safety
NEA=	Nepal Electricity Authority
NEC=	Nepal Electricity Corporation
NPV=	Net Present Value
P.E=	Probable Error
P/L =	Profit and Loss
P/V=	Profit Volume
PEs=	Public Enterprises
PP=	Profit Planning
PPC=	Profit Planning and Control
R and D =	Research and Development
S.D =	Standard Deviation
V.C =	Variable cost
Vs =	Via-a-Vis

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Profit planning is comprehensive plan expressed in financial terms by which operating programs can be made effective for a given period of time. It is a tool of direction coordination and control and as such it is the most important administrative device for this purpose. Profit planning and control (PPC) is the latest invention in the field of Modern management. "Comprehensive profit planning and control is viewed as a process designed to help management effectively perform significant phases of planning and controlling functions. Profit planning is now an important responsibility of financial manager, while activities of this sort require an accounting background. They also set heavily upon the knowledge of business, economics, statistics and mathematics." Hence, from organization's viewpoint, "Any efforts to continue profit planning activities within the framework of accounting procedure would be to determine the long range interest of the firm. Therefore in both of the definition, we could find a bit similar rigor that is it is the business decision making which is the mainly exercised by financial manager, in other to achieve good prospect in business in terms of returns to investment" (Glen, 1998).

In fact, profit does not acquire immediately. It is managed. The technique of managing profit is called profit planning. For the long run stability of a firm every task should be performed according to long-term vision. Profit planning directs organization towards achieving the targets on profit. Therefore, it is the part of overall planning process of an organization. Budget is the primary operating document in this regard. Profit planning requires commitment on the performance of budgeting. To be more specific various functional budget are the basic tools for proper profit planning. Therefore later is, in fact a management technique. It is a formal statement of policy plan, objectives and goals of the organization established by the top management. So commercial bank has to make reasonable profit for its survival. Most of the commercial banks are registered as a company with joint stock and the share being traded at stock actions. Therefore profit made by them has also remained as are of vital parameter for measurement of the efficiency of these banks (Glen, 1998).

Development of Banking Sectors in Nepal

During the prime minister ship of Ranoddip Shing around 1877 AD. a numbers of economics and financial returns were introduced. The establishment of the 'Tejarath Adda' fully subscribed by the government in the Kathmandu valley was one of them the 'Tejarath Adda' disbursed credit to the people, especially on the collateral of gold and silver (Khadka and Singh, 2066/67).

The history of modern financial system in Nepal was begun in 1937 with establishment of Nepal bank ltd as the first commercial bank of Nepal. The bank was established to render services to the people and for economic progress of the country prior to the establishment of Nepal Rastra Bank. It played the role of central bank also with the establishment of NRB in 1959 the development of financial system took a momentum. After than, the Nepal Rastra Bank came into existence as the central bank on April 26 1956. It had authorized capital of Rs. 10 million fully subscribed by the government. It was empower by act to have direct control over financial institutions with in the country .it started issuing currency in 1959 A D the second commercial bank Rastriya Banijya Bank was established in 1966 A D beside Nepal bank ltd and RBB other commercial bank did not come in to existence until 1984 A D. The commercial banking act 1974 was amended in 1984 A.D. to increase the competition between commercial bank .as per the provision made in this act private sectors (including foreign investment) was given freedom in opening commercial bank. Subsequently, embarked upon the structured adjustment program encompassing measuring to increase domestic resources mobilization strengthen financial sectors and liberalize industrial and trade policy. Since then, several financial institution and commercial private banks have been established in the process of development and liberalization policy for the economic development of the nation (Khadka and Singh, 2066/67).

The banking sectors to create healthy competition for future development of already existing old banks. To introduce new technological efficiency in banking sectors. GON has made an umbrella act called "bank and financial institution ordinance 2060" to promote the trust of public over banking and financial system. Promote the rights of depositors and provide reliable and quality services through healthy competition among the financial institution to strengthen the national economy through liberalization of banking and financial sectors and establishment operation and hording and monitoring of the financial institution. This act has freeze the all-previous acts relating to banks and financial institution. At a present there are 29 ‘A’ class commercial banks (along with 6 joint ventures with foreign investors), 73 ‘B’ class development banks, 78 ‘C’ class finance companies, 17 ‘D’ class licensed rural and micro-credit development banks, 16 other financial institutions licensed by NRB (Non-classified) and a central bank. Accordingly Nepal Rastra Bank has given approval to operative following twenty-five commercial banks (NRB Bulletin, 2010).

Listed Commercial Bank in Nepal

S.N.	Names	Head Office
1	Nepal Bank Limited	Kathmandu
2	Rastriya Banijya Bank	Kathmandu
3	Agriculture Development Bank Ltd.	Kathmandu
4	NABIL Bank Limited	Kathmandu
5	Nepal Investment Bank Limited	Kathmandu
6	Standard Chartered Bank Nepal Limited.	Kathmandu
7	Himalayan Bank Limited	Kathmandu
8	Nepal SBI Bank Limited	Kathmandu
9	Nepal Bangladesh Bank Limited	Kathmandu
10	Everest Bank Limited	Kathmandu
11	Bank of Kathmandu Limited	Kathmandu
12	Nepal Credit and Commerce Bank Limited	Siddharthanagar, Rupendehi
13	Lumbini Bank Limited	Narayangadh, Chitwan
14	Nepal Industrial & Commercial Bank Limited	Biaratnagar, Morang
15	Machhapuchchhre Bank Limited	Pokhara, Kaski
16	Kumari Bank Limited	Kathmandu
17	Laxmi Bank Limited	Birgunj, Parsa
18	Siddhartha Bank Limited	Kathmandu
19	Global Bank Ltd.	Birgunj, Parsa
20	Citizens Bank International Ltd.	Kathmandu
21	Prime Bank Ltd	Kathmandu
22	Sunrise Bank Ltd.	Kathmandu
23	Bank of Asia Nepal Ltd.	Kathmandu
24	Development Credit Bank Ltd.	Kamaladi, Kathmandu
25	NMB Bank Ltd.	Babarmahal, Kathmandu
26	KIST Bank Ltd.	Kathmandu
27	Janata Bank Ltd.	Kathmandu
28	Mega Bank Ltd.	Kathmandu
29	Nepal Trust and Commerz Bank Ltd.	Kathmandu
30	Civil Bank Limited	Kathmandu
31	Century Bank Ltd.	Kathmandu

Sources**:** NRB, Mid-July, 2010.

Importance of Financial Institutions

As a result, developing countries are trapped into vicious circle of poverty. In order to collect the enough saving and put them into productive sectors. So banking sector is necessary. It will be utilizing within the economy and will either divert abroad or used for unproductive consumption speculative activities. Commercial banks are suppliers of finance for trade and industry, which play an essential role in acceleration of the economy growth in nation. They help in formation of the capital by investing the saving in productive area. Rural people of underdeveloped countries like Nepal need various banking facilities to enhance its economy.

In Nepal there are several kinds of financial institutions such as commercial banks, developments, rural development bank, finance companies, co-operatives involving in saving and credit activities etc. Most of the financial institutions are under regulation Nepal Rastra bank (NRB) the central Bank of Nepal (Khadka and Singh, 2066/67).

Profile of Machhapuchchhre Bank Limited

Machhapuchchhre bank, the first commercial bank in the western part of the kingdom has been established by Nepalese promoters and begin its operations on 17th Aswan 2057 B.S. MBL fully computerized bank. It has the most sophisticated GLOBUS banking software with modern banking facilities like tale banking, internet banking, mobile banking, ATM facilities and many more. The branches are interlinked by centralized database system and enable the bank to provide anywhere facilities to its valuated customer. At the time of establishment of MBL with total authorized capital 240 million and issued and paid up capital Rs. 84 million. At the present of MBL with authorized capital 1000 million and issued and paid up capital 550 million. (MBL bank, annual reports 2009/10). The shareholders of the bank are as follows.

a. Promoters, 70% shareholders
b. Public share issue, 25% shareholders
c. Employees, 5% shareholders

The success of business largely depends on management quality. Generally the management body of any business organization has two fold major objectives, first to manage the firm well and second, to maximize profit and enhance shareholder's wealth.

Machhapuchchhre bank limited is managed by chief executive officer (CEO) under the supervision and control of board of directors. Board of directors appoints the chief executive officer. The board of directors of Machhapuchchhre bank limited is constituted by the body of seven (7) member altogether. Directors are appointed as follows.

1. Director (Chairman)	MR.	Surya Bahadur K.C.
2. Director	MRS.	Gita Shrestha
3. Director	MR.	Kishor Kumar Shah
4. Director	MR.	Ajad Shrestha
5. Director	MR.	Prakash K. C.
6. Director	MR.	Praneshower Pokharel
7. Director	MR.	Naresh Bahadur Malla
Chief Executive Officer (CEO)	Mr.	Bhai Kaji Shrestha

The management under the board is entrusted to nominate CEO under which corporate office at various branch operations. Currently there are 42 numbers of branch offices of the bank (Annual Report of MBL 2009/10).

1.2 Statements of the Problem

Profit is the primary measure of business success. At least normal profit is necessary for the operations of any kind of organizations. But commercial bank must make profit out of its operations for its survival and fulfilment of the responsibilities assigned. The commercial bank has to maximize profit as well as to render service. Both of these objectives have their linkage with the management of an organization. A manager generally says that profit is the return of good management. Therefore we can say that management is the part of the profit planning.

Profit planning and control (PPC) model provides a tool for more effective supervision of individuals operations and practical administration of a business as a whole. So, the successful operations of any it largely depend upon the planning system that it has adopted. Profit plan is one of the most important managerial devices that play key role for the effective formations and implementation of strategic as well as tactical plans of an organization. Profit planning system requires the effective coordination between various functional budgets of an organization like as sales plan, production, material requirement budget, labour cost budget, cash budget and capitals expenditures budget.

The major activities are including in commercial bank to mobilize of resources, which involves cost, and profitable deployment of those resources, which generates income. The differential interest income over the interest, which is popularly called as interest margin can be considered as the contributed margin in the profit of the bank.

The present study has tried to analyse and examine the PPC side of commercial bank taking a case of MBL bank. This research report attempt to show the relationship between these various functional budgets their achievement and their effective application with in the conceptual framework of profit planning for solving the problems that have occurred. If MBL bank is found to have been earning profits over the years. This study will answer, whether it is under a planning or not. If the profit has not been realized under the technique of profit planning. Then this study will explore-

a. How the profit MBL is occurring?
b. How far MBL bank has been able to mobilize the deposit and other resources at optimum cost?
c. How far the variance between budgeted and actual has been occurring?
d. Does the bank deploy the resources generating satisfactory yield?

1.3 Objective of the Study

The main objective of the present study is to exam the main approaches of profit planning and to test the extant of achievement of planning of MBL with consistently to this objectives the present research will try to meet following.

a. To examine the present profit planning measures adopted by MBL.
b. To analyse the variance of budgeted and actual achievement.
c. To analyse the various functional budgets and formulation and implementation of financial plans in Machhapuchchhre Bank Limited.
d. To analyze the financial performance of Machhapuchhre Bank Ltd.

1.4 Limitations of the Study

Every principle rule and formula and conditions are applied with in the limitations like wise, this study can not escape from limitations the study is confined only to profit planning and budgeting in MBL. Following factors have limited the scope of this study.

a. The study is limited to the related profit planning of MBL.
b. Secondary data is analyzed to delineate result.
c. Analysis evaluated comparing Fiscal Year 2062/063 to 2066/067.
d. Only Machhapuchchhre Bank limited is taken into consideration in this study.

1.5 Focus of the Study

This research study is focused in evaluating the use of different types pf functional budgets and corporate planning system for the effective implementation of profit planning in MBL. This study is designed to describe the purpose of the different kind of budget used, how they are apply and finally settled and how they assist in policy making and in financial control. The study is intended to clarify the purpose of different budgets and to identify the person responsible for different items in the problems.

Generally two types if profit-planning practices are used in an organization; they are strategic long-range profit plan and tactical short-range profit plan. Long-range profit covers the horizon of two years of more and short-range profit plan made generally for coming year. Both of these plans are equally important for the successful operations of the organization but this study is designed so us to give more consideration in short range planning.

For the purpose of analysing the short range planning of Machhapuchchhre Bank Limited following plan will be specially analysed. The process and techniques of preparing them responsibility to prepare them their drawback and other relevant facts as well as role in profit planning will be discussed in detailed.

a. Loan disbursement plan.
b. Fund collection plan.
c. The expenses budget.
d. Budgeting.
e. Cash flow budget.

1.6 Significance of the Study

This research study is concerned with the profit planning in commercial bank with case study of MBL bank, which analyze the proper applicability of profit planning system in the bank.

Profit planning process significantly contributes to improve the profitability as well as the overall financial performance of an organization by the help of the best utilization of resources .the financial performance of an organization depends purely on the use of its resources. Budgeting is the key to productive financial planning so all the organizations running under commercial principle have to give regard to these most important single tools while managing their physical and financial target. If planning process of an organization is effective and result oriented the pace of development naturally steps forward.

Profit planning is the heart of management. It tells us profit is the most important indicators for judging managerial efficiency and do not just happened for this every organization has to manage it s profit. Various functional budgets are the basic tools for proper planning of profit and control over them. it may be useful for those who wants to know the PPC in the MBL bank and may also be help the for future researchers as a reference material.

In many of the PES and commercial bank limited companies of Nepal. Budgets are prepared at random and profit-planning process is not applied in the real sense. In its consequence, most of the PES and commercial banks suffer from poor performance. The significance of the study is really to examine whether the MBL is applying profit planning system properly or not and analyse if there is any drawback in profit planning system of bank.

1.7 Chapter Plan/Scheme of the Study

According to the objectives of this study, the study has been classified into five chapters and the chapters are as follows.

Chapter – I: Introduction
Chapter – II: Review of Literature
Chapter – III: Research Methodology
Chapter – IV: Data Presentation and Analysis
Chapter – V: Summary, Conclusion and Recommendation

At the end of the chapters, bibliography and appendices have been incorporated.

CHAPTER -II

REVIEW OF LITERATURE

In this section, the researcher has reviewed various literatures in the form of books written by various prominent authors, published news papers, journals browsing materials from the concerned websites, previous dissemination in the relevant subject matters etc.

2.1 Conceptual Review of Commercial Bank

2.1.1 Commercial Banks

The word "Bank" is derived from the Italian word "BANCA" which means a counter tables are bench used by medieval money exchanges. Oxford dictionary defines bank as "an establishment for the custody of money". The Bank operates in the modern and competitive business environment. It is an account of this reason that different economists have offered different definitions, such as:

According to the American Institute of Banking "Commercial Bank is corporation which accepts demand deposits subjects to check and to makes short-term loans to business enterprises regardless of the scope of its other services." The institution also laid down the four functions of commercial banks and handling of deposit (deposit function), handling of payment of money (payment function) making loans and investments (loan function) and creation of money by extending credit (money function).

Commercial Bank Act.2031 B.S. of Nepal has defined commercial bank as" an organization which exchanges money ,deposits money, accepts money, grants loans and performs commercial banking functions and which is not a bank meant for co-operative, agriculture, industries or for such specific purpose" (Commercial Bank Act, 2031)

"A Bank is an institution whose debts (bank deposits) are widely accepted in settlement of their peoples debts to each others" (Sayers, 2000).

"A banker is defined as an individual, partnership or corporation, whole sole or predominating business, is banking that is the receipt of money on current or deposit amount and payment of cheques paid in by a costumer" (Halsbury's Laws of England, 1998).

This Act has also, laid emphasis on the functions of commercial banks while defining the commercial banks which provides short-term debts necessary for the trade and commerce. They take deposit to provide short-term loans in different forms. They purchase and discount bills for exchange, promissory notes and exchange foreign currency. They discharge various functions on the behalf of their costumer and in exchange they are paid for their services.

Generally, commercial bank finance short term needs of trade and industry. They provide working capital to trade and industry and even to agriculture. The commercial bank of developing country finance small and cottage industries under priority sectors investment scheme. The main purpose of this scheme is to uplift the backward sectors of the economy.

Commercial bank are controlled and regulated by the central bank of the nation. In Nepal, Nepal Rastra Bank as a central bank, control and regulates all the commercial banks in the country.

From the various definitions made and opinion produced regarding commercial banking. We can conclude that a commercial bank is set up to collect scattered funds and employ them to productive sector of economy.

2.1.2 Evolution of and Development of Commercial Bank

The word bank is derived from the Italian word banco, which means a bench on which the merchant of Italy put on different types of currencies to show that they transact their business. In French language, people used to call it banque and Englishmen did bank. Some writers are of the opinion that the word 'Bank' came from the German Word 'Banc' meaning joint stock fund (Varshney, 1993).

In its native from, banking is as old as the authentic history and origins of the modern commercial banking are transferable in ancient times. In ancient Greece, around 2000 B.C. The famous temple of Ephesus, Delphi and Olympia were used, as depositories for people surplus fund and these temples were the centres for money lending transactions. The priests of these temples acted as financial agents until public confidence was destroyed by the spread of disbelief in the religion. Later, however, for a few countries, banking is an organised system of money lending receded because of religious belief that the charging of interest was immoral. However, the banking as we know today, made its first beginning around the middle of 12^{th} Century in Italy. The Bank of Venice founded in 1157 A.D. was the first public banking Institution following this 14th Century, the Bank of Barcelona and the Bank of Genoa were established in 1401 A.D. and 1407 A.D. respectively (Pandey, 1996).

In England, start of Banking can be accounted for as for back as the reign of Edward III. Those days The Royal Exchanger used to exchange the various coins into British money and also used to supply foreign money to the British men going out of the country. The bankers of Lombardy were famous in medieval Europe as the credit planting the seed of modern banking in England goes to them when they settled in London in the locality now famous as the Lombard Street.

The goldsmiths can be considered as the initial Banker in England as they used to keep strong rooms with watchmen employed. People entrusted their cash to them. The goldsmiths used to issue daily signed receipt of the deposits with the undertaking to return the money on demand charging some fee for safekeeping. These undertaking helped in growing a further confidence of the public there for the money were kept with them for become profitable business to them. Therefore they started offering interest on deposits to attract more funds. In the course of time independent banking concerned were set up. The bank of England was established in 1694, under a special Royal Charter, further in 1833 legislative sanction was granted for establishment of Joint Stock Bank in London, which served as a big impetus to the development of Joint Stock Banking (Pandey 1996) These bank take the initiative of extending Current Account facilities and also introduced the facilities of withdrawals through cheques.

In India, the ancient Hindu Scriptures refer to the money lending activities in the Vedic Period. During the Ramayana and Mahabharata eras, banking has become a full-fledged business activity and during the Smriti period (after the Vedic period) the business of banking was carried on by the member of Vaisha Community. Manu the great lawgiver of the time speaks of the earning of interest as the business of Vishyas. The bankers in the Smriti period performed most of those functions with the back in modern times performs such as the accepting of deposits, granting loans, acting as the treasure, granting loans to the Kings in times of grave crises and banker to the state and issuing and managing the currency of the country (Pandey, 1996).

Due to the Lack of post historical records on banking it is quiet impossible to give a correct Chorological history of development of bank in Nepal. However the history of development

Banking and currency in Nepal dates back to the fifth century i.e. in the Lichhavi Period, when the first coins are minted. It is known the history of banking in Nepal in the form of money lending was started during the reign of Gunakama Dev towards 8^{th} century. In 723A.D. Gunakama Dev borrowed money to rebuilt Kathmandu. It showed that there was also transaction of money in the form of lending from the times of Gunakama Dev. Towards the end of 14^{th} century Jayasthiti Malla the ruler of Kantipur classified the people in 64 classes according to their occupation. The categories of the people who worked as moneylender. Tankadhari invested his money to the needy people charging some percentage as interest.

Development of banking and currencies in Nepal become more consistent after the Gorkha conquest in 1768 B.S. in 1846 B.S. the first Rana Prime Minister Shree Jang Bahadur brought the diplomatic relation of Nepal with the western world especially with Britain. One of his younger brother, Ronadip Sing, got interested in problem. Tejarat Adda was established in 1980. It used to lend the public the money on security of gold, silver and other precious metals.

Nepal Bank Limited the first commercial bank of Nepal was established in 1937 A.D. (30^{th} Kartik 1994 B.S.) as a semi government organization, which solved to the great extent, the problem of commercial banking in Nepal. It replaced Tejrath Adda. In the way, Nepalese Banking history has begun systematically. At this time this bank had Rs.10 million authorised capital and Rs.0.842 million paid up capital. Private shareholders have majority ownership of this bank. Government had very in significant amount of share till 1951 A..D. Government of Nepal held control over the Bank Management by increasing its shares up to 51% of the total share capital in 1952. Nepal Rastra Bank was established in 1956 A.D. under the Nepal Rastra Bank Act. 1955. It marked another milestone in the history of the Banking development in Nepal. Rastriya Banijya bank was established on July 23, 1966 A.D. under a special charter act, Rastriya Banijya Bank Act.1965. It was set up public sectors with Rs.10 million authorised capital and 2.5 million paid up capital.

In the beginning, function of commercial bank was limited to accepting deposits and giving loans. However at a present, these include wide rang of worldwide activities. In the early of 1980 Bs. When the government of Nepal permitted three joint venture like Nepal Arab Bank Ltd., Nepal Grinlays Bank Ltd, Nepal Indosues Bank Ltd, the movement of commercial Bank was increased rapidly. After the restoration of democracy in 1990, the elected government adopted liberal and market oriented economic policy. As a result more and more commercial Banks were opened in foreign joint venture and private sectors in Nepal, which has contributed a lot to bring the commercial banking at present day position. Machhapuchchhre Bank has established in the year 2057 B.S.

2.1.3 Functions of Commercial Bank

Traditionally the primary activities of a bank are essentially deposits and making loans and advances. Commercial banks are found to be having been defined by their activities.

As per the commercial Banking Act.2031 a 'Bank' is a commercial established under Act and 'banking transactions' are the activities of accepting deposits from the others for the purpose of lending or Investing, repayable on demand or after some stipulated time period by means of generally accepted procedure (Commercial Bank Act 2031).

In the book 'Banking law of Practice written by Gulshan & Gulshan has quated H.P. Sheldon's opinion as "The function of receiving money from his customers and repaying it by honouring their cheques as and when required is the function, above all function, which distinguish a banking business from any other kind of business."

Similarly the same book has also quoted sir John Paget's saying as "No person or body or corporate, or otherwise, Can not be a banker who does not (i) take deposit account (ii) take current account. (iii) Issue and pay cheques drawn on himself and (iv) Collect cheques for his customer" (Gulshan & Gulshan 1994).

From above points, it is clear that a commercial bank's primary activities are two fold viz. One that of accepting deposit from public, which is the major source of the resources of the bank and another making loans and investments which is basically creating income yielding assets of the bank for fulfilment of its commercial objectives. The function of commercial bank are as following.

Commercial bank performance a variety of functions, which can be divided as: (i) accepting deposits, (ii) advancing loans, (iii) credit creation, (iv) financing foreign trade, (v) agency services and (vi) miscellaneous services.

2.1.3.1 Deposit Collection

This is the oldest function of a bank and the banker used to charge a commission for keeping the money in its custody when banking was developing as an institution. Now a days, a bank accepts three kinds of deposits from its customers. The first is the 'Savings' deposits on which the bank pays interest relatively at low rate to the deposits, who are usually small savers. Depositors are allowed to draw their money by cheques up to a limited amount during a week or a year. Businessmen keep their deposits in current accounts. They can withdraw any amount standing to their credit in current deposits by cheques without notice. The bank does not pay interest on such accounts but instead levies services charges to its customers. Current accounts are known as demand deposits. A bank accepts fixed or time deposits. Severs who do not need money for a stipulated period from 6 months to longer periods ranging up to 10 years or more are encouraged to keep it in fixed deposits. The rate of interest increases with the length of the time period of the fixed deposit. But there is always the maximum limit of the interest rate on fixed deposit.

2.1.3.2 Advancing Loans

One of the primary functions of a commercial bank is to advance loans to its customers. A bank leads a certain percentage of the cash lying in deposits at a higher interest rate than it pays on such deposits. This is how it earns profits and carries on its business.

2.1.3.3 Credit Creation/Loan and advances

Credit creation is one of the most important functions of the commercial banks. Like other financial institutions, they aim at earning profits. For this purpose, they accept deposits and advance loans by keeping small cash in reverse for day-to-day transactions. When a bank advances a loan, it opens an account in the name of the customers and does not pay him in cash but allows him to draw money by cheques according to his needs. By granting a loan, the bank creates credit or deposit.

2.1.3.4 Financing Foreign Trade

A commercial bank finances foreign trade of its customers by accepting foreign bills of exchange and collecting them from foreign banks. It also transacts other foreign exchange business-buying and selling of foreign currency.

2.1.3.5 Agency Services

A bank acts as an agent of its customers in collecting and paying cheques, bills of exchange, drafts, dividends etc. It also buys and sells shares, securities, debentures etc. for its customers. Further, it pays subscription, insurance premium, rent, electricity and water bills and other similar charge on behalf of its clients. It also acts as trustee and executor of the property and will of its customers. Moreover, the bank acts as consultants to its clients. For some of these services, the bank charges a nominal fee while it renders other free of charge.

2.1.3.6 Miscellaneous Services

Besides the above noted services, the commercial bank performs a number of other services. It acts the custodian of the valuables of its customers by providing them lockers where they can keep their jewellery and valuable documents. It issues various forms of credit instruments, such as cheque, drafts and travels cheques etc, which facilitate transactions. The bank also issues letters of credit and acts as a referee to clients. It underwrites shares and debentures of companies and helps in the collection of funds from the public. More ever, it provides statistics on money market and business trends of the economy.

2.1.4 Role of Commercial Banks in the Development of the Economy

Commercial banks play an important role in directing the affairs of the economy in various ways. So, commercial banks are major financial institutions, which occupy quite importance place in the frame work of every economy because they provide capital for he development of industry, trade and business and other resource sectors by investing the saving colleted as deposits. In this way they contribute to the economic growth of nation. Besides this, commercial banks render numerous services to their customer in view of facilitating their economic and social life all economic activities of each country are greatly influenced by the commercial banking business of that country. Thus, commercial banks have become heart of financial system.

“Commercial banks bring in to being the most important ingredient of the money supply demand deposits, through the creation of credit in the firm of loan and investment (H.D. Crosse. P.110, Cited in Pradhan, 1980) commercial banks also provides the flexibility and mobility to the customer because the payment can be mostly speedy and efficiently carried out. Through their advances, banks also help the creation of income out of which further saving by the community and further growth potentials emerge for the good of the economy.

In a planned economy banks make the entire planned productive process possible by providing funds to the public sectors, joint sectors or private sectors for any types of organization. All employment income distribution and other objectives of the plan as per as possible subsumed in to the productive plan which banks finance (Pandey, 1996).

The role of commercial banks in economy is obviously prime requisite in the formulation of bank's policy. A key factor in the development in the country is the mobilization of domestic resources and their investment for productive use to various sectors. To make it more effective commercial banks formulate sound investment policies, which eventually contribute to the economic growth of a country. The sound policies help commercial banks maximize quality and quantity of investment and there by achieve the own objective of profit maximization and social welfare. Therefore most of the economic activities particularly of organized sectors are bank based. In a Nutshell it can be said that the growth of the economy is tied up with growth of the commercial banks in the economy (Business Age, 2007).

2.2 Managerial Accounting: Profit Planning and Control

2.2.1 Managerial Accounting

Although published financial statements are the most widely visible products of business accounting systems and the ones with which the public is most concerned, they represent only a small portion of all the accounting activities that support an organization. Most accounting data and most accounting reports are generated solely or mainly for the company's managers. Reports to management may be either summaries of past events, forecasts of the future, or a combination of the two. Preparation of these data and reports is the focus of managerial accounting, which consists mainly of four broad functions: (1) budgetary planning, (2) cost finding, (3) cost and profit analysis, and (4) performance reporting.

2.2.2 Profit Planning and Control

a. Profit

Generally, profit is the amount of money which is available after paying the costs of producing and selling the goods and services. but the different economists and scholars have the different opinion in term of profit usually profit does not happen itself, profit is managed when management makes plans is known as profit planning. Profit planning is the part of overall process of organizations. Usually, profit does not just happen, profit is managed when management makes plans, it is known as profit planning (Lynch and Williamson, 1992: 99).

Some statement about profit by economists are chalk out as, Schumpeter opines that an enterprises earn profit as reward for introducing innovation. J. M. Keynes holds the view that profit results form the favorable movement of general prices levels. In the view of Mrs. Joan Robinson and chamberlain the greater the degree of monopoly power the greater will be the profit made by the entrepreneur. Similarly "profit is the reward for risk locking in business" (Joshi, 1993: 170).

The accounting concept of company profit is a concept of net business income. Profit is thus, the surplus income that remains after paying expenses and providing for that part of capital that has been consumed in producing revenue. It is the ultimate objectives of management to maximize profit over the long term consistent with its social responsibility. A business from is organized mainly with a motive of making profit and it is the primary measure of business success. Profit is the ultimate yardsticks of management's net in the interest of the consumer. Social criteria of business performance productions, rate of progress and behavior of prices. "Profit is a signal for allocation of resources and a yardstick for judging managerial efficiency" (Lynch and Williamson, 1993: 99). In fact earning is the primary objective of a business.

b. Planning

The meaning of planning is the decision about how to do something in the future planning opens the expenses for action. It is the method of thinking of work.

According to Roy-A Gentles, "The planning process, both short and long term, is the most crucial component of the whole system. It is both the foundation and the bond for the other elements because it is through the planning process that we determine what we are going to do now we are going to do and who is going to do it. It operates as the brain center of the organization and like the brain in both reasons and communicates” (Roy, 1983: 32).

Planning is essential to get the target. it reduces the potential crisis and helps to take the preventive way. Formal planning indicates the responsibility of management and provides an alternative to grouping without direction. It is a rational way, a systematic way of perceiving how business, individual or any other organization will get where it should be examining future alternative course of action open to any organization.

Profit planning can be defined as the set of steps that are taken by firms to achieve the desired level of profit. Planning is accomplished through the preparation of a number of budgets, which, when brought through, from an integrated business plan known as master budget. The master budget is an essential management tool that communicates management's plan throughout the organization, allocates resources, and coordinates activities.

Profit planning is the process of developing a plan of operation that makes it possible to determine how to arrange the operational budget so that the maximum amount of profit can be generated. There are several common uses for profit planning, with many of them focusing on the wise use of available resources. Along with the many benefits of this type of planning process, there are also a few limitations.

The actual process of profit planning involves looking at several key factors relevant to operational expenses. Putting together effective profit plans or budgets requires looking closely at such expenses as labor, raw materials, facilities maintenance and upkeep, and the cost of sales and marketing efforts. By looking closely at each of these areas, it is possible to determine what is required to perform the tasks efficiently, generate the most units for sale, and thus increase the chances of earning decent profits during the period under consideration. Understanding the costs related to production and sales generation also makes it possible to assess current market conditions and design a price model that allows the products to be competitive in the marketplace, but still earn an equitable amount of profit on each unit sold.

There are several advantages to engaging in profit planning. The most obvious is evaluating the overall operation for efficiency. If profits for the most recently completed period fall short of projections, this prompts an investigation into what led to the lower returns. Changes can then be made to the operation in order to increase the chances for higher profits in the next period.

Necessary changes that may be uncovered as part of the profit planning process include increasing or decreasing the employee force, changing vendors of raw materials, or upgrading equipment and machinery that are key to the production of goods and services. In like manner, the need to restructure marketing campaigns so that more resources are directed toward strategies that are providing the greatest return, while minimizing or even eliminating allocations to strategies that are not producing significant results, may also become apparent as a result of this type of planning. Even issues such as changing shippers or making slight changes to packaging that trim expenses may be identified as part of the profit planning process.

- Profit Planning
- Non Profit Plan
- Business Plan Profit
- Non Profit Strategic Planning
- Profit Planning And Budgeting
- Sample Business Plan For Non Profit
- Small Business Planning

While profit planning is a useful process in any business setting, there are some limitations on what can be accomplished. The effectiveness of the planning is only as good as the data that is assembled for use in the process. Should the data be incorrect or incomplete, the results of the planning are highly unlikely to produce the desired results. In addition, if the findings of the process do not result in the implementation of procedures and changes in the relevant areas of the business, the time spent on the profit planning is essentially wasted. For this reason, profit planning should be seen as a starting point for operations and not simply recommendations of what should be done in order to increase profit margins.

Planning is the first function of management. It is performed continuously because the passages of time demand both re-planning and making new plans. Moreover, current feed back often necessary nearly planned action to

a) Correct performance deficiencies
b) Establishing enterprises objectives and goals
c) Developing premises about the environment of the entity
d) Making decision about course of action
e) Evaluating performance feed back for re-planning

There are three types of planning i.e. long term planning, medium term planning and short term planning. It can be corporate planning or tactical planning. The types of planning depend upon the time period covered by it.

Long Range Planning

Long range planning is such type of planning which covers a period of five to ten years depending upon the size and nature of enterprises. Long range planning is most important basically for broad and long living enterprises. Peter Drucker says that long range planning decisions systematically and with the best, possible knowledge of their futurity, organizing systematically the efforts needed to carry out these decisions and measuring the results of those decisions against the expectation through organized, systematic feed back" (Drucker, 1950: 338).

The objectives of long range planning given by George R. Tery are as follows: (Tery, 1964: 12).

i. To provide a clear picture of whether the enterprises is handed
ii. To keep enterprise strong
iii. To focus on long range opportunities
iv. To evaluate management personnel
v. To expenditure new financing

Medium Term Planning

Medium term planning is such type of planning which covers two or three years of period. This type of planning is to establish interim objective between long range goals and for use in the development of annual program and budget. In these causes, target with specific results and definite time tables must be developed. it is used mainly to determine the allocation of resources among competing activities and revised long ranged plans in view of more recent developments. Medium range planning after takes form of budgeting in which each divisions, department or units is allocated certain resources during the coming year. Medium term planning most correctly predicts general levels of economic activities. Since that affects such factors as revenues profit, costs and expenditures. More detail is involved in it than with short range but less than for long-range plans. While resources allocation in important final approval will only be required for the short-range and a consideration of alternatives is still possible (Tery, 1964: 21).

Short Range Planning

The short range planning is such a planning which is within one year of period. The short range planning is selected to confirm to fiscal quarters or one year. Because of the practice needed for conforming plans to accounting periods, short range planning concerned with limited time period. Usually it cover one year time period. It is used by the management as substantial part of long range and medium range plan.

Comprehensive Profit Planning and Control

Comprehensive profit planning and control is a new term in the literature of business. Though it is a new term, it is not a new concept in management. The other terms, which can be used the other terms, which can be used in same context are comprehensive PPC. The PPC can be defined as process or technique of management that enhances the efficiency of management.

Some definition given by various scholars are:

"Comprehensive profit planning and control is a systematic and formalized approach for accomplishing the planning, co-ordination and control responsibilities of management" (Glenn, 1998: 870).

Similarly, According to the I.M. Pandey "A profit plan or budget is the formal expression of the enterprises plans and objectives stated in financial terms for a specified future period of time.

Profit planning and control involves development and application of:

i) Broad and long range objectives for the enterprises
ii) Specification of goals
iii) Long range profit plan in broad terms
iv) Tactical short range profit plan detailed by assigned responsibilities
v) A system of periodic performance reports detailed by assigned responsibilities
vi) Control system
vii) Follow up procedures

c. Control System

Control means by which a variable quantity or set of variable quantities is made to conform to a prescribed norm. It either holds the values of the controlled quantities constant or causes them to vary in a prescribed way. A control system may be operated by electricity, by mechanical means, by fluid pressure (liquid or gas), or by a combination of means. When a computer is involved in the control circuit, it is usually more convenient to operate all of the control systems electrically, although intermixtures are fairly common.

There are various cases in industrial control practice in which theoretical automatic control methods are not yet sufficiently advanced to design an automatic control system or completely to predict its effects. This situation is true of the very large, highly interconnected systems such as occur in many industrial plants. In this case, operations research, a mathematical technique for evaluating possible procedures in a given situation, can be of value.

In determining the actual physical control system to be installed in an industrial plant, the instrumentation or control-system engineer has a wide range of possible equipment and methods to use. He may choose to use a set of analogue-type instruments, those that use a continuously varying physical representation of the signal involved—*i.e.,* a current, a voltage, or an air pressure. Devices built to handle such signals, generally called conventional devices, are capable of receiving only one input signal and delivering one output correction. Hence they are usually considered single-loop systems, and the total control system is built up of a collection of such devices. Analogue-type computers are available that can consider several variables at once for more complex control functions. These are very specific in their applications, however, and thus are not commonly used.

The number of control devices added to an industrial plant may vary widely from plant to plant. They may comprise only a few instruments that are used mainly as indicators of plant-operating conditions. The operator is thus made aware of off-normal conditions and he himself manually adjusts such plant operational devices as valves and speed regulators to maintain control. On the other hand, there may be devices of sufficient quantity and complexity so that nearly all the possible occurrences may be covered by a control-system action ensuring automatic control of any foreseeable failure or upset and thus making possible unattended control of the process.

With the development of very reliable models in the late 1960s, digital computers quickly became popular elements of industrial-plant-control systems. Computers are applied to industrial control problems in three ways: for supervisory or optimizing control; direct digital control; and hierarchy control.

In supervisory or optimizing control the computer operates in an external or secondary capacity, changing the set points in the primary plant-control system either directly or through manual intervention. A chemical process, for example, may take place in a vat the temperature of which is thermostatically regulated. For various reasons, the supervisory control system might intervene to reset the thermostat to a different level. The task of supervisory control is thus to “trim” the plant operation, thereby lowering costs or increasing production. Though the overall potential for gain from supervisory control is sharply limited, a malfunction of the computer cannot adversely affect the plant.

In direct-digital control a single digital computer replaces a group of single-loop analogue controllers. Its greater computational ability makes the substitution possible and also permits the application of more complex advanced-control techniques.

Hierarchy control attempts to apply computers to all the plant-control situations simultaneously. As such, it requires the most advanced computers and most sophisticated automatic-control devices to integrate the plant operation at every level from top-management decision to the movement of a valve.

The advantage offered by the digital computer over the conventional control system described earlier, costs being equal, is that the computer can be programmed readily to carry out a wide variety of separate tasks. In addition, it is fairly easy to change the program so as to carry out a new or revised set of tasks should the nature of the process change or the previously proposed system prove to be inadequate for the proposed task. With digital computers, this can usually be done with no change to the physical equipment of the control system. For the conventional control case, some of the physical hardware apparatus of the control system must be replaced in order to achieve new functions or new implementations of them.

Control systems have become a major component of the automation of production lines in modern factories. Automation began in the late 1940s with the development of the transfer machine, a mechanical device for moving and positioning large objects on a production line (*e.g.*, partly finished automobile engine blocks). These early machines had no feedback control as described above. Instead, manual intervention was required for any final adjustment of position or other corrective action necessary. Because of their large size and cost, long production runs were necessary to justify the use of transfer machines.

The need to reduce the high labour content of manufactured goods, the requirement to handle much smaller production runs, the desire to gain increased accuracy of manufacture, combined with the need for sophisticated tests of the product during manufacture, have resulted in the recent development of computerized production monitors, testing devices, and feedback-controlled production robots. The programmability of the digital computer to handle a wide range of tasks along with the capability of rapid change to a new program has made it invaluable for these purposes. Similarly, the need to compensate for the effect of tool wear and other variations in automatic machining operations has required the institution of a feedback control of tool positioning and cutting rate in place of the formerly used direct mechanical motion. Again, the result is a more accurately finished final product with less chance for tool or manufacturing machine damage.

2.2.2.1 Budgeting as a Tool of Profit Planning

Once a firm's general goals for the planning period have been established, the next step is to set up a detailed plan of operation—the budget. A complete budget system encompasses all aspects of the firm's operations over the planning period. It may even allow for changes in plans as required by factors outside the firm's control.

Budgeting is a part of the total planning activity of the firm, so it must begin with a statement of the firm's long-range plan. This plan includes a long-range sales forecast, which requires a determination of the number and types of products to be manufactured in the years encompassed by the long-range plan. Short-term budgets are formulated within the framework of the long-range plan. Normally, there is a budget for every individual product and for every significant activity of the firm.

Establishing budgetary controls requires a realistic understanding of the firm's activities. For example, a small firm purchases more parts and uses more labour and less machinery; a larger firm will buy raw materials and use machinery to manufacture end items. In consequence, the smaller firm should budget higher parts and labour cost ratios, while the larger firm should budget higher overhead cost ratios and larger investments in fixed assets.

If standards are unrealistically high, frustrations and resentment will develop. If standards are unduly lax, costs will be out of control, profits will suffer, and employee morale will drop (*MLA and APA Style*: Encyclopaedia Britannica, 2009).

A budget is a detailed plan for acquiring and using financial and other resources over a specified period of time. It represents a plan for the future expressed in formal quantitative terms. The act of preparing a budget is called budgeting. The use of budgeting to control a firm's activities is called budgetary control.

Master budget is a summary of a company's plan that sets specific targets for sales, production, distribution, and financing activities. It generally culminates in cash budget, a budgeted income statement, and a budgeted balance sheet. In short, it represents a comprehensive expression of management's plans for the future and how these plans are to be accomplished.

Budgeting as a tool of planning and control is closely related to the broader system of planning and control in an organization planning involves the specification of the basis objectives that will guide it. In operational terms, it involves the step of setting objectives, specifying goals, formulating strategies and expressing budgets. A budget is a comprehensive and coordinated plan expressed in financial terms (Kahn, 1994: 206).

A budget is a quantitative expression of a plan of action and aid to coordination and implementation. Budget may be formulated for the organization, as a whole or for any submit. Budgeting includes sales, production, distribution and financial aspects of an organization. budget programs are designed to carry out a variety of functions, Planning evaluating performance coordinating activities, implementing plans, communicating, motivating and authorizing actions" (Horngeen, 1983: 123). A budget is a written plan for the future. The managers of firms who use budgets are forced to plan ahead. A firm without financial goals may find it difficult to make proper decision.

2.2.2.2 Modern Budgeting for Profit Planning & Control

A budget is the formal expression of plans, goals, and objectives of management that covers all aspects of operations for a designated time period. The budget is a tool providing targets and direction. Budgets provide control over the immediate environment, help to master the financial aspects of the job and department, and solve problems before they occur. Budgets focus on the importance of evaluating alternative actions before decisions are actually implemented. This course explains what budgets are, how they work, how to prepare and present them, and how to analyze budget figures and results. The new development and use of budgets at various managerial levels within a business are discussed. The course is intended for business professionals engaged in budgeting, financial planning, profit planning, and control.

This course is intended for business professionals engaged in budgeting, financial planning, forecasting, profit planning, and control. A budget is the formal expression of plans, goals, and objectives of management that covers all aspects of operations for a designated time period. The budget is a tool providing targets and direction. Budgets provide control over the immediate environment, help to master the financial aspects of the job and department, and solve problems before they occur. Budgets focus on the importance of evaluating alternative actions before decisions are actually implemented. This course explains what budgets are, how they work, how to prepare and present them, and how to analyze budget figures and results. The development and use of budgets at various managerial levels within a business are discussed, as well as active financial planning software that combines budgeting, forecasting analytics, business intelligence, and collaboration. (Source: American CPE: americancpe.com/Merchant2/merchant.mvc?Screen=PROD&...).

2.2.2.3 The Fundamental of Profit Planning and Control

The concept of PPC was originally established with the function of an account. At its origin, the function of PPC was designed to the accountant. But in modern day PPC is given much more importance and is regarded as a way of management and in more important sense is regarded as a basic technique of decision-making. The major fundamentals are mentioned as below:-

i. Managerial Involvement and Commitment:- Managerial involvement entails managerial support, confidence, and participation and performance orientation. In order to engage competently in comprehensive PPC, all level of management, especially top management

1) Understand the nature and characteristics of PPC.

2) Be convinced that this particular approach to managing is to devote the effort required to make it operative

3. Support the program in all its planning process as performance commitments. For a comprehensive PPC program each member of management, starting from the president, the impetus and direction must came from the very top.

ii. Organizational Adaptation:- A PPC program must rest upon sound organizational structure for the enterprise and a clear cut designation of lines of authorities and responsibilities. The purpose of organizational structure and the assignment of authority is to establish a framework within which enterprises objectives may be attained in a coordinated and effective way on a continuing basis. This scope and interrelationship of the responsibilities of each individual manager and specified to increase the management and operational efficiency, particularly all enterprises, except perhaps the very smallest ones, should be structurally disaggregated into organizational subunits. The manager of each subunit would be assigned specific authority and responsibility for the operational activities of that subunit. These subunits are further classified in respect to the extent of responsibility as follows:

- Cost center
- Profit center
- Investment center

iii. Responsibility Accounting:- In order to set-up PPC on a sound basis, there must be a responsibility accounting system, that is one tailored first and foremost to the organizational responsibilities. Within this primary accounting structure, secondary classification of costs, revenues and other financial data that are relevant may be utilized in accordance with the needs of the enterprises. A responsibility accounting system can be designed and implemented on a relevant basis regardless of the other features of the accounting systems standards cost systems, direct costing systems, and so on. When the accounting system is established on a responsibility basis, the historical data generated become especially pertinent for planning and control purposes.

iv. **Full Communication: -** communication can be defined as an interchange of thought or information to bring about a mutual understanding between two or more parties, communication from working together. Although the management gives least importance to communication, it is most important thing for any organizational observation and control. Most of the organization faces lot of problems due to bad communication system.

Communication is needed for both the forward and backward process which is most important for operation of any organization. Role of communication can be justified in all aspect of management. It is needed either for decision making or for supervision or for evaluation flows of information must be adequate in all side. For PPC, effective communication means development of well-defined objective, specification of goals, development of profit plans and reporting and flow up activities related to performance evaluation for each responsibility center. Communication for effective planning and control requires same understanding of responsibilities and goods in both the executives and subordinates.

v. **Realistic Expectation: -** PPC must be based on realistic approach or estimation. Management must use realistic assumption and must not take either irrational optimism or unnecessary conservatism. Perfection on setting goals or objectives of the future sales, production levels, costs, capital expenditures, cash flow and so on determines the success of PPC program. So, for PPC purpose, a realistic approach reared with time dimension and external and internal environment that will prevail during the time span should be considered. This is called realistic expectation.

Before preparing comprehensive PPC program, management has to take a good care that the goal or objective which is going to be determined neither should be to low nor should be too high but should be attainable with high level of efficiency. This is because goals set very low will destroy motivation as it does not require efforts and goal set high will discourage the implementer as it would not be attained with existing capacity of the units, but the goals which will be of challenging nature, will be of real value and will keep the organization alert which is the main objective of the realistic expectation.

i) **Flexible Application:-**PPC program or any other management techniques should not dominate management slowly. Any of such techniques of management must not be flexible or rigid. These are the techniques or means, which is not only the end of the management itself because the main end or aim of the management is to use the resources in the most effective way and earn high return on investment and for this purpose PPC or other techniques are used as means only.

ii) **Timeless:** - Whether an individual or an entity remains idle or busy, time passes at the same rate. The problem of the manager in one hand is to accomplish the planed activities in a given time and on the other hand is to prepare the plan itself. Phasing of the planning is of two types

a. Timing of planning horizons
b. Timing of planning activities

2.2.2.4 Components of PPC

A PPC should have its components that are required to fulfill the objectives. The outline of the component of a typical PPC program is given below:

a. The Substantive Plan

Broad objectives of the enterprises
Specific enterprises goals
Enterprise strategic
Executive management planning instruction

b. Financial Plan

1. Strategic long range profit plan
    (I) Sales, cost and profit projection
    (II) Major projects and capital additions
    (III) Cash flow and financing
    (IV) Personnel requirement
2. Tactical short range profit plan.
    (I) Sales plan
    (II) Production plan

(III) Administrative expenses budget

(IV) Distribution expenses budget

(V) Appropriation type budget (e.g. P&D, promotion advertising)

c) Financial Position Plan

Planned balance sheet

(I) Assets

(II) Liabilities

(III) Owner's equity

d) Variable expense budget

e) Supplementary data (e.g. cost volume profit analysis, ratio analysis)

f) Performance reports

g) Follow-up, corrective action and re-planning reports

2.2.2.5 Principal and Purpose of Profit Planning

The principal and purpose of profit planning are:

a) To provide a realistic estimate of income and expenses for a period

b) To provide a co-ordinate plan of action which is designed to achieve the estimates reflected in the budget.

c) To provide a comparison of actual results with these budgeted and an analysis and interpretation of deviation by areas of responsibility to indicate course of action and lead to improvement in procedures in building future plans.

d) To provide a guide for management decision in adjusting plans and objectives an uncontrollable condition changes (Jasse and William, 1966: 38).

2.2.2.6 Important of Profit Planning

The profit planning and control is applicable approach to all kinds of organizations whether those are small, huge, manufacturing, service etc. The profit planning program helps the management performs it planning functions by developing a strategic profit plan and tactical profit plan. Both of these plans include monetary expectation for assets, liabilities, profit and return on investment. Besides, the PPC, some significant behavioral implication such as developing reinforcement, improving motivation, developing goals, copes with the effects of budgetary pressure resolving budget and using budget for control. The following advantages can be drawn from PPC program.

a) This programs identifies the changes
b) It forces the management to keep adequate and correct historical data in the business
c) PPC forces early consideration of basic policies
d) It forces the management to take necessary step for getting satisfactory results.
e) It is a process of self-examination and self criticism which is essential for the success of any enterprises.
f) It promotes understanding among member of management of their co-worker problems.
g) It tends to remove the cloud of uncertainly that exists in many basic policies and enterprise objectives.
h) It create among the members of management of considering timely and carefully all the related factors before reaching on a decision
i) It measures efficiency, permits management self evaluation and indicates the progress in attaining the enterprises objectives.
j) It leads to maximum and most economical utilization of material labors, capital and other resources with a view to ensure maximum return.

2.2.2.7 Problem and Limitation of PPC

PPC is a systematic approach to the solution of problems but it is not a prefect itself. It suffers from certain problem and limitations. The major problems of PPC are (Pandey, 1996: 306):

i) Applying the PPC system in flexible manner

ii) Developing meaningful forecast on plans specially the sales plan.

iii) Seeking the support and involvement of all levels of management.

iv) Establishing realistic objectives, policies, procedures and standard of desired performance.

v) Educating all individual to be involved in PPC process and gaining their full participation.

Management must consider the following limitations in using the PPC system to solve managerial problems (Pandey, 1996 : 309).

i) PPC is based on estimation
ii) It is not realistic to write out and distribute goals policies and guidelines to all the suspensors.
iii) A PPC program must be continuously adopted to fit the changing circumstances.
iv) Execution of profit plan will not occur automatically, profit plan will be effective only if all responsible executive exert continuous and aggressive efforts towards their accomplishments.
v) Budgeting places too great a demand on management time especially to revise budgets constantly to much paper work is required.
vi) It creates all kinds of behavioral problems.
vii) It adds a level of complexity that is not needed.
viii) It is too costly.
ix) Danger of rigidity. The PPC must be flexible and dynamic in every sense.
x) Proper evaluation should be made to find out the inefficiencies. On the absence of proper evaluation budgeting will hide inefficiencies.

2.2.2.8 Process of PPC

The processes of PPC are:

i) Identification and evaluation of external variables.
ii) Development of broad objectives of the enterprises.
iii) Development of the specific goals of the enterprises.
iv) Development and evaluation of company strategic.

v) Executive management planning instruction.
vi) Preparation and evaluation of project plan.
vii) Development and approval of strategic and tactical profit plans.
viii) Implementation of profit plans.
ix) Use of flexible expenses budget.
x) Implementation of follow up.

2.2.2.9 Master Budget- Budgeting for Short Range

The master budget is the organization's primary short term budgetary device. This comprehensive budget is often prepared thought a standard cycle of events that occur on a specific timetable each year. Master Budget is a summary budget which incorporates all functional budgets and it may take the form of profit and loss account and balance sheet as at the end of the budget period (Gupta, 1992: 556).

The complete budgets for a firm is often called master budget. The master budget consists of many functional budgets. These budgets include sales budget and cash budget. All these are completed the master budget of entire firm is prepared. It may be recalled that a budget with reference to planning and controls refers to comprehensive and co-ordinate budgets generally know as master budget. A master budget normally consists of three types of budgets:

1) Operating
2) Financial Budgets
3) Special Decision Budgets

The preparation of master budget is major events in any organization. This complex process involves the efforts of many people from all the levels of management. Master budget preparation is a negotiation process in which initial proposal by responsibility center mangers are subject to revision as the different components of the budgets are brought together and reviewed. They are as followed (Gupta, 1992: 559):

i) Forecast demand for products and or services.
ii) Identify cost patterns for responsibility centers.
iii) Estimate production cost
iv) Specify operating objectives.
v) Develop sales budget.

vi) Develop production objectives.
vii) Develop purchasing budget.
viii) Develop budget for responsibility centers.
ix) Formulate profit plan.
x) Compare profit plan with operating objectives.
xi) Formulate projected cash budget.
xii) Prepare projected statement of financial position.

2.2.2.10 Development of Profit Plan

2.2.2.10.1 Sales Plans

The staring point in preparing profit plan is the sales plan, which displays the projected sales in units and rupees. The sales planning process is an essential part of profit plan and control because it provides for the basic management decision about marketing and based on these decisions, it is an organized approach for developing a comprehensive sales plan. If sales plan is not realistic and relevant, most profit plans are also not realistic. Therefore, if the management believes that a realistic sales plan can not be developed there is little justification for PPC similarly if it is really impossible to assess the future revenue potential of a business; there would be little or no incentive to investors and prospective investors. Hence, the sales plan is both ends and means of PPC.

The sales plan is the foundation for periodic planning in the firm because practically all other enterprises planning is built on it. The primary source of cash is sales, the need of capital additions, the plan o expenses, the manpower requirement production level, and other important operational aspects depend on the volume of sales. A comprehensive sales plan includes two separate but related plans, the strategic and tactical sales plans. A comprehensive sales plan incorporates such management decisions as objectives, goals, strategies and premise. Both long term and short-term plans must be developed in harmony with comprehensive profit plan.

The primary purposes of sales plane are:

- To reduce under certainty about future revenue.
- To incorporate management judgment and decisions into the planning process.

- To provide necessary information for developing other elements of comprehensive profit plan.
- To facilitate management control of sales activities.

Sales Forecasting and Sales Planning

Although sales planning and sales forecasting are usually used synonymously, they have distinctly different purpose. A forecast is not a plan rather is it a statement of a future condition about the particular subject based on one or more explicit assumptions. A forecast should always state the assumptions upon which it is based. A forecast should be viewed as only one input for the development of sales plan. The management of the company may accept, modify or reject the forecast. In contrast, a sales plan incorporates the management decisions that based on the forecast, other inputs and management judgment about such related items as sales volume, prices, sales, efforts production and financing.

It is important to make a distinction between the sales forecast and the sales plan primarily because the internal technical staff should not be expected or permitted to make the fundamental management decision and judgments implicit in every sales plan. The major difference between sales forecast and sales budget can be attributed as:

i) The sales forecast is merely the initial estimate of future sales, where as plan sales is the projection approved by the budget committee that describes expected sales in units and rupees.

ii) Sales forecast is a merely well educated estimate of future expected demand of a specific product where as sales budget is the quantitative expression of business plan and policies to be pursued in future.

iii) A sale plan provides standard for comparison with the result actually achieved, thus it is an important control device of management, whereas forecasting represents merely a probable events over which no control can be exercised.

iv) Sales plan beings where and when sales forecast end. sales forecast is the input to sales plan; sales plan is the foundation to PPC

Strategic and Tactical Sales plan

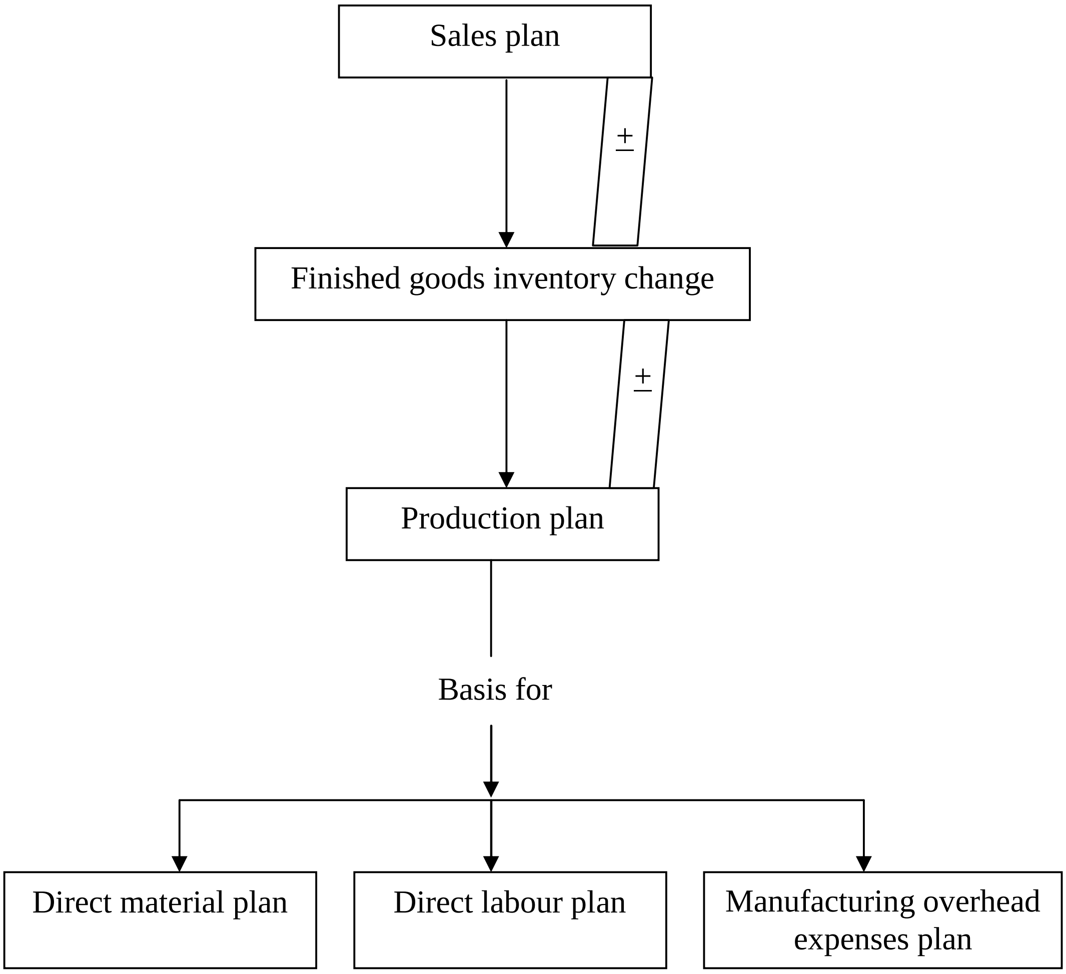
Strategic sales plan: - Strategic sales plan is the long range sales plan of enterprises. Usually it is of 5 to 10 years. It is broad and general. It is usually developed by year and annual amount. It is prepared by considering future market potentials, popular changes, state of economy, industry projections company objectives and long-term strategies because they affect in such areas as pricing, development of new product line, innovation of product, expansion or distribution channel, cost pattern etc.

Tactical sales plan: - Tactical sales plan in a short-range sales plan. It is developed for a short period of time usually a year. Initially by quarters and by months for the first quarters. The tactical sales plan includes a detailed plan for each major product and for grouping of minor products. Tactical sales plan are usually developed in terms of physical units and in sales rupees.

2.2.2.10.2 Production Plan

A next step in the manufacturing enterprises after a tentative approval of sales plan is the preparation of a production plan. The production plan is an important tool of planning, coordination and control in a manufacturing organization. Development of a production plan requires the conversion of sales plan into production program. It interlinks the activities such as materials planning, labor planning, overhead planning etc.

The production plan specifies the planed volume of each product to be produced for each time period throughout the planning period. This entails the development of policies about efficient production levels, use of productive facilities and inventory levels. The quantities specified in the marketing plan. Adjusted to confirm to production and inventory policies, give the volume of goods that must be manufactured. It can be presented in equation:



Source: Ojha and Gautam, 2066.

2.2.2.10.3 Material Budget

After the sales and production has been estimated, the next steps is to prepare material purchase budget. When the production budget is completed then the requirement of raw materials and components are used in the process of material budget. Based on the production budgets, the qualities of each material are determined and this determination of material usage solved the problem of when and how much to purchase of material. A purchase budgets gives the details of materials purchase to be made in the budget period. The function of purchase budget is to plan purchase, so that firm will never run out of inventory, such purchase plan should be made in such a way that inventory of raw material are kept as low as possible without losing the planned product because the higher inventory the higher cost will occur, while preparing the materials plan there should be serious consideration to coordinate among the following items.

a. Production requirements for material and components parts.

b. Raw requirements and parts inventory levels.
c. Purchase of raw materials.

To ensure that the appropriate amount of raw materials and component parts, the tactical short term profit plan should include.

a) A detailed budget that specifics the quantity and cost of such materials and parts
b) A related budget of material and parts purchase.

This materials and purchase budget while usually requires the following four sub-budget.

a) Materials and parts budget:- This specified the planned quantities of each raw materials and part required for planed production by time, product and responsibility center.
b) Material and parts purchase budget:- This specifies the quantities and timing of each materials and components part needed to purchase, the estimated cost and required delivery date.
c) Materials and parts inventory budget:- This specifies the planned level of raw materials and raw materials and parts inventory in term of quantities and cost.
d) Costs of materials and part use budget:- This specifies the planed cost of materials and parts that will be used in the productive process.

The materials and purchase budget and it's sub budgets should be designed in such a way that the related activities and cost will be budgeted in term of responsibilities centers.

2.2.2.10.4 Consideration in Materials and Parts Inventory Policies

This budget specifies the planned level of raw material and parts inventory in term of quantities and cost. The different in units between the material and parts of budget and purchased budget is accounted for the change in materials and part inventory levels. The timing of purchasing will depend on inventory policies. The primary consideration in setting inventory policies for materials and parts are:

Timing and quantity of manufacturing needs by the factory.
Availability of materials and parts.
Lead time (order and delivery)
Storage facilities involved.

Capital requirement for finance inventory.

Cost of storage.

Expected change in the cost of raw materials and parts.

Protection against storages.

Risks involved in inventories.

Opportunities costs (inadequate inventory)

In developing the inventory policy with respect to purchase and maintain the level of inventory, the basic two questions should be answered. The first is how much to purchase to a time and second when to purchase? How much to purchase at a time is determined by a well known, approach, called economic order quantity (EOQ).

EOQ can be calculated by using following formula.

EOQ = $\sqrt{\frac{2AO}{C}}$

Where,

A= Annual requirements units

O= Average annual costs of placing an order

C= Annual caring cost

The second questions when to purchase is determined by reorder point. Re order points is the time when a purchase is made. The re-order points is reached when inventory level is equal to the time to re-order.

Cost of Materials Used Budget

This budget reports the estimated cost of the materials planned for in the materials budget. The quantity of materials and parts required for planned production is specified in the materials and parts budgets. Quantity and unit cost data are available to develop the budgeted cost of materials to be used, if the purchase budget anticipates a constant unit cost. Alternatively, when a changing unit price is planned for raw materials and parts, the related inventory budget must be developed by utilizing a selected inventory such as LIFO, FIFO, moving average and weighted average.

2.2.2.10.5 Direct Labor Cost Budget/Plan

Labor costs, in a broad sense, are composed of all expenditures incurred for employees; top executives, middle management personnel, staff officers, supervisor, foreman, skilled workers and unskilled workers. It is necessary to consider separately the different types of labor costs. Labor is generally classified as direct and indirect labor. Direct labor comprises all the worker's who were directly on specific productive output. Hence, as with direct material costs, direct labor costs are directly traceable to output. The labor who work or support productions indirectly are classified as indirect labor. Indirect labor last is a part of manufacturing overhead budget.

The direct labor budget is also developed form the production budget. Firstly, direct labor requirement must be computed so that the company will know whether sufficient labor is available to meet production needs. By knowing in advance, the company can develop a plan to adjust the labor force as the situation may require. Direct labor requirements can be computed by multiplying product to be produced in each period by the number of direct labor-hours required to produce a unit. Many different types of labor may be involved. If so, then the computation should be made of the type of labor needed. The direct labor hours resulting from these computations can then be multiplied by the direct labor cost per hour to obtain the budgeted total direct labor cost.

Components of Direct Labor Budget/Plan

Basically, there are three components of direct labor budget.

1. Direct Labor Hour Budget: - Direct labor hour budget estimates the total direct labor hours required for each product by time and responsibility. It is computed as:
   Total direct labor hours required = Planed production x Standard time required per unit of outputs
2. Manpower Budget: - Manpower budget estimates the number of each kind of manpower by department and time. Number of labor = Total hours required ⌉ working hours per person per month.

Working hours per person per month = Normal working hours per person per day x Working days in a month

2. Direct Labor Cost Budget: - Direct labor cost budget estimates the total direct labor costs by product, time and responsibility. To get direct labor costs budget, first estimates the average wages rate by department. Then multiplication of the standard time per unit of product by the average wage rates gives the labor cost per unit of production for the department. The multiplication of departments, cost centers, or operations total units by the unit labor lost rate gives the total direct labor costs for each product.

2.2.2.10.6 Overhead Expenses Budget

Meaning:- The next step in the tactical profit plan, the expenses budget is necessary to maintain the expenses level in reasonable. There are three board categories of expenses, manufacturing overhead, distribution expenses and general administrative expenses and for this three separate sub-budget are prepared.

"Expenses planning should not focus on decreasing expenses but rather on better utilization of limited resources. Expenses planning and control should focus in the relationship between expenditures and the benefits derived from these expenditures. The desired benefit should be viewed as goals and sufficient resources must be planed to support the operation activities essential for their accomplishment" (Welsch, 1998, 302).

The expense of planning the knowledge of cost behavior is important cost behavior is the response of a cost to different volume of output. There are three distinct categories of expenses when they are viewed in relation to change in output.

a) Fixed Expenses:- Constant in total directly with change in output, constant per unit.
b) Some Variable Expenses:- Neither fixed nor variable change in the same direction of output lout but not proportionately

The expenses budget should be in total for each responsibility centers and by interim time periods. The expenses can be divided into three sub budget.

a. Planning Manufacturing Overhead

Manufacturing overhead is that part of total production cost, not directly identifiable with specific products. It consists of a) indirect material b) indirect labor c) All other miscellaneous factory expenses such as taxes, insurance, depreciation, supplies, utilizes and repairs. Manufacturing expenses include many dissimilar expenses, which can cause problem in the allocation of these costs to products.

Two types of responsibility centers: production and services are common in most manufacturing firms. Production department work directly on the products manufactured. Service department do not work on the products directly but rather furnish services to the production department and to other service departments.

For budgeting purposes, manufacturing overhead involves the following two problems.

i) Control of manufacturing or factory overhead.
ii) Allocation of manufacturing or factory overhead to product manufactured.

b. Planning Administrative Expenses

Administrative expenses include these expenses other than manufacturing and distribution. They are incurred n the responsibility centers that provides supervision of and service to all function of the enterprises rather than in the performance of only one function. Because long portion of administrative expenses are fixed rather than variable, general administrative expenses are generally determined by top management therefore, there is strong tendency to overlook their magnitude of effect on profits. Each administrative expense should be directly identified with a responsibility center and the concerned manager should be responsible for planning and controlling expenses. It is advisable on specific plans and programs.

c. Planning Distribution (Selling) Expenses

Distribution expenses in clued all cost related to selling, distribution and delivery of product to customers. The two primary aspects of planning distribution expenses are:

Planning and coordination: - Marketing executives are directly responsible for planning the optimum economic balance between a) Sales budgets b) The advertising budget c) The distribution expenses budget. PPC views them as three separate problems.

Control of Distribution Expenses: - Distribution includes a) Head office expenses and b) field expenses. From the planning and control point of view, these expenses must by planed by responsibility center. These expenses are not product costs. They are not allocated to special products. So, separate distribution expenses plan should be developed for each responsibility center.

2.2.2.10.7 Capital Expenditure Budget

Meaning:- "The investment decision of a firm are often referred to as capital budgeting. A capital budgeting decision may be defined as the firms decision to invest its current funds most efficiently in long term assets in anticipation of an expected flow of benefits over a series of years" (Pandey, 1996: 353). Capital budgeting is the making of long term planning decisions for investment and their financial capital budgeting then consists in planning the development of available capital for the purpose of maximizing the long term profitability of them firm. A capital expenditure is the use of funds to obtain operational assets that will help earn future revenue or reduce future costs.

Thus capital budgeting is the process of planning and controlling the strategic and tactical expenditures for expansion and contraction of investments in operating assets. Capital expenditure includes such fixed assets as properly plan, equipment, and patents. Typically, capital expenditure projects involve large amount of cash. Capital expenditure involves two major planning and controlling phase. a) Investment b) Expenses. Capital expenditure budget is the formal plan for the expenditure of money to purchase fixed assets. It is an internal corporate document that lists the allocated investment projects for a given fiscal period. Capital budgeting involves the generating of investment proposals, the evaluation of cash flow, the selection of project based on acceptance criterion and finally continual evaluation of investment project after their acceptance (Van Horne, 2000: 66).

Thus, capital budgeting involves the following steps.

a) Consideration of investment proposal including alternatives.
b) Application of profit, cash flows and analysis of cost benefit of the project.
c) Estimation of available funds and utilization of funds.
d) Maximization of profit with the utilization of available funds.

The top executive working with other members of executive management has the primary responsibility for the capital additions budget. However, the primary responsibility for the projects and other proposals should include divisional departmental mangers.

There are three stages of capital budgeting proposal generation, analysis and implementation. The important steps involved in capital budgeting process are a) Project generation b) Project evaluation c) Project selection and d) Project execution. The process for planning and controlling capital expenditure as suggested by welsh, Hilwand Gordan are!

i) Identify and generate capital additions project and other needs.
ii) Develop and refine capital additions proposal.
iii) Analyze the evaluate all capital additions proposals and alternative.
iv) Make capital expenditure decisions to accept the best alternative and the assignment of project designation to select the alternative.
v) Develop the capital expenditure budget.
vi) Establish control of capital expenditure during the budget year by using periodic and special performance report by responsibility enters.
vii) Conduct past completion audit and follow-up evaluation of the actual results from capital expenditure in periods after completion.

Capital Expenditure Decision

The crucial capital expenditure decisions are the choices of management form the completing capital expenditure alternatively such decisions most focus on two over rising problems.

a) Investment Decision:- Selecting the best alternatives based on their economic worth to the competitive investment world.
b) Financing Decisions: - Determination the amounts and source of funds needed pay for the selected alternatives. This cash constraint may necessarily limit the project cash proposals that can be initiated.

Numerous methods are available for measuring economic value or investment worth of the contemplated proposals. Some common and widely used methods are listed under:

A) Discounted cash flow method
   i) Net present value (NPV)
   ii) Internal rate of return (IRR)
   iii) Profitability index (PI)

B) Traditional/ simple method
   i) Payback period (PBP)
   ii) Average rate of return (ARR)

A. Discounted Cashflow Method

Under this method of investment evaluation basically two sub methods are contemplated.

i. Net present value (NPV)

This method compares the present value of the net cash inflows with the present value of the initial net cash cost of capital expenditure project. The difference of these two figures gives the net present value. The net cash inflows are discounted to present value by using a target or minimum rate of return. Mathematically, its is calculated by,

$$\text{NPV} = \sum_{t=0}^{n} \frac{At}{(1+k)^{2}} - A_0$$

Where,

K= Cost of capital

T=No. of years

A=Expected cash flow

The decision about acceptance or rejection of the project depends upon the positively or negatively of NPV.

ii. Internal Rate of Return (IRR)

The IRR is the rate that will discount all the future net cash inflows that their discounted sum will exactly equal the initial outflows of the investment project. The formula is:

$$A_0 = \frac{A1}{(1+r)^{1}} + \frac{A2}{(1+r)^{2}} + \ldots\ldots\ldots\ldots \frac{An}{(1+r)^{n}}$$

where,

R = IRR

A = Expected cash inflows in future.

The proposal will be accepted of IRR is more that the normal rate of return.

iii. Profitability Index (PI)

The profitability index is simply a ratio of total present value of cash inflows to initial cash outlay. Mathematically, it can be expressed as:

$$P.I. \frac{Total\ present\ value}{Net\ cash\ outlay}$$

For acceptance of the proposal P.I must be greater than one.

B. Traditional Method

i. Payback Method

This method considers the number of years within which the cash inflow will recover the initial investment, mathematically,

$$PBP = \frac{Net\ cash\ investment}{Annual\ cash\ \mathrm{inf}\ low}$$

The alternatives project having shorter payback period will be accepted.

ii. Average Return on Total Investment Method

This method yields the ratio of average annual cash inflows to the total investment.

Both above method of evaluation are frequently used. However, discounted cash flow method is superior since is value of money:

$$ARR = \frac{Average\ net\ income}{Average\ investment} | 100\%$$

After analyzing the above four method of measuring capital investment, the decision criteria can be summarized as follows:-

Methods		Basis of Selection
NPV	______________________	Higher the NPV
IRR	______________________	Higher than cost of capital
PBP	______________________	Lower the PBP
ARR	______________________	Higher the ARR

2.2.2.10.8 Cash Budget

a. Concept and Preparation

Cash budget is the most important tools of cash management. It is an integral part of cash planning. The cash budget is plan of future cash receipt and payment. The statement showing the estimate cash income and cash expenditure over a projected time period is known as cash budget. The forecast of cash flows are made on the basis of past behavior of cash flows as modified and adjusted to likely changes during the coming period.

For an estimation closing balance of cash, receipt of cash and payment of cash budgets has to prepare. The cash budget focuses exclusively on the amount and timing of cash inflow and outflow. The primary purposes of cash budget are:

a) To give probable cash position at the end of each period as a result of planed operations.
b) To identify cash excess on shortage by time.
c) To establish the need for financing and or the availability of idle cash for investment
d) To coordinate cash with total working capital, sales revenue, expenses, investments and liabilities.
e) To establish a sound basis for continuous monitoring of the cash position.

b. Approaches to Develop Cash Budget

The primary approaches used to develop cash budget are:

1. Cash receipts and disbursements approach.
2. Financial accounting approach.

1. Cash receipts and disbursements approaches

This method is also known as direct or cash amount method. This method is based on a detailed analysis of increase and decrease in the budgeted cash account that would reflect all cash inflows and outflows from such budgets as sales expenses and capital expenditures. It is simple to develop and appropriate when a detailed profit plan is used. This approach is not appropriate for the more general long term profit plan. This approach usually involves following three steps.

Step 1:- Estimate cash flow arising form transactions such as cash sales, collections of accounts and notes receivable, interest received on investment, sales of capital assets and miscellaneous income sources.

Step 2:- Estimate cash outflow for materials direct labors, expenses, capital additions, retirements of debts and dividends to shareholders.

Step 3:- Determine interim finance needs. For this, first cash inflows and outflows must be compared to assess the planed cash position throughout the period.

2. Financial Accounting Approach

This approach is also known as indirect or income statement approach. The starting point in this approach is the planed net income shown in the budgeted net income statements. Basically, planned net income is converted form an accrual basis to a cash basis. Next the other cash sources and requirement are identified. This approach requires less supporting detail and provides less detail about the cash inflows and outflows. it is useful for making long range cash projection. This approach requires the following procedures.

Step 1:- Start with net income in the budgeted income statement.

Step 2:- Convert an accrual basis net income to a cash basis by making adjustments.

Step 3: - Show the inflows and outflows, not directly related to the income statement. Such as proceeds from issue of shares or debenture, sales of fixed assets, dividend payments, retirement of debt, acquisition of assets and so on.

3. Alternative in Developing the Profit Plan

The clerical and mechanical parts of the profit plan development might suggest that once the sales plan is completed, this can be followed by a series of simple clerical activities that result in the production, inventory purchase. This views is misleading because it ignores, the fundamental importance of decision making, policy formulation and consideration of alternatives action through the planning process. The development of decisional inputs and preparation of sub budget by the manager of each responsibility center is the heart of comprehensive PPC programs.

Numerous situation have been cited to show management, in the process of developing the profit plan is faced with alternative decisions.

Some illustrations are:

i) Sales price;- Management must set pricing policies and estimate the quantities of goods that can be sold at given prices.
ii) General advertising policies;- Limitation of advertising expenditure local VS national, product VS institutional advertising.
iii) Sales mix:- Sales mix refers to the relative sales emphasis given to the various products sold by the company.
iv) Sales territory and sales forces explosions or contraction.
v) Balance between production and inventory level.
vi) Research and development expenditure.
vii) Capital expenditure
viii) Testing of alternative decisions.

If the profit is satisfactory, preparation of profit plan can be continue. If the profit plan is unsatisfactory, management should examine the alternative decisions.

2.2.2.11 Implementation of Profit Plan

2.2.2.11.1 Completion of the Annual Profit Plan

The development of an annual profit plan ends with the planed income statement, the balance sheet and the planed statement of changes in financial position. These three statements summarize and integrate the details of plans developed by management for the period. They also report the primary impacts of detailed plans and the financial characteristics of the firm, before

Distribution the completed profit plan, it is generally desirable to recast contain budget schedules. So that the technical accounting mechanic is avoid as much as possible. Timely completion of the planning budget suggests the need for a budget calendar.

2.2.2.11.2 Performance Report

Management devotes and contributes its considerable effort and timely in resource planning. So the achievement of planed profit is essential the evaluation of how efficiently and how effectively goals and targets have been achieved thorough control activities. Control is the process of obtaining conformity of actual performance, with planed course of action. Control is related with the reporting of evaluated result. So, it is the most important part of comprehensive PPC.

Performance report is a controlling tool of comprehensive PPC. It is prepared periodically and monthly or quarterly basis and it submitted to concerned persons and departments though authorized channels. Performance reports are internal management tool and designed to facilitate internal control by the management performance reports are comparison between actual results and budgeted targets. They show the reality about performance weather they are favorable or unfavorable. Another important aspect of performance report is to minimize the time gap between the decision and report. The firm may have to suffer a great loss if unfavorable variance between planed and actual performance, immediate corrective action should be taken as already stated, the main purpose of performance report is to show variances, such variances should be expressed in amount as well as percentages of the planned figure. Statistical control tool should be used to determine the significance of variance. Monthly performance report should show the performance for the period being reported and cumulative variance to date by each responsibility center.

2.2.2.11.3 Analysis of Budget Variance

Generally, variance is the difference between two contemplated consumptions. It shows the gap between budget or planed goals and actual results. Performance report just indicates these variances and possible through the techniques of variance analysis. As such, variance analysis is the determination of reasons for a reported variance whether it is favorable or unfavorable. If the variance is significant, a painstaking managerial attention required to locate the underlying causes. Management can apply a number of approaches are:

i) Conferences with mangers of responsibility centers, supervisor and other employees involved in the particular responsibility centers.
ii) Analysis of the work situation including the flow of work, coordination of activities, effectiveness of supervision and other prevailing circumstances.

iii) Direct investigation by line managers.

iv) Internal audits

v) Special studies

vi) Investigation by staff groups.

vii) Variance analysis

Variance analysis is a sequential job that follows the steps like:

- Setting standard
- Measurement of performance.
- Analyzing variance.
- Taking corrective actions.

2.2.2.12 Other Purposes of Accounting Systems

Accounting systems are designed mainly to provide information that managers and outsiders can use in decision making. They also serve other purposes: to produce operating documents, to protect the company's assets, to provide data for company tax returns, and, in some cases, to provide the basis for reimbursement of costs by clients or customers.

The accounting organization is responsible for preparing documents that contain instructions for a variety of tasks, such as payment of customer bills or preparing employee payrolls. It prepares confidential documents, such as records of employees' salaries and wages. Many of these documents also serve other accounting purposes, but they would have to be prepared even if no information reports were necessary. Measured by the number of people involved and the amount of time required, document preparation is one of the biggest jobs performed by an organization's accounting department.

Accounting systems must provide means of reducing the chance of losses of assets due to carelessness or dishonesty on the part of employees, suppliers, and customers. Asset protection devices are often very simple; for example, many restaurants use numbered meal checks so that waiters will not be able to submit one check to the customer and another, with a lower total, to the cashier. Other devices entail a partial duplication of effort or a division of tasks between two individuals to reduce the opportunity for unobserved thefts.

These are all part of the company's system of internal controls. Another important element in this system is internal auditing. The task of internal auditors is to see whether prescribed data handling and asset protection procedures are being followed. To accomplish this, they usually observe some of the work as it is being performed and examine a sample of past transactions for accuracy and fidelity to the system. Internal auditors might also insert a set of fictitious data into the system to see whether the resulting output meets a predetermined standard. This technique is particularly useful in testing the validity of new computer systems.

The accounting system must also provide data for use in the completion of the company's tax returns. This function is the concern of tax accounting. In some countries financial accounting must conform to tax accounting rules laid down by national tax laws and regulations, and tabulations prepared for tax purposes often diverge from those submitted to shareholders and others. “Taxable income,” it should be remembered, is a legal concept rather than an accounting concept, and tax laws typically contain incentives that encourage companies to do certain things while discouraging them from doing others. Accordingly, what is “income” or “capital” to a tax agency may be far different from the accountant’s measures of these same concepts. Finally, accounting systems in some companies must provide cost data in the forms required for submission to customers who have agreed to reimburse the company for costs incurred on the customers' behalf (*MLA and APA Style*: Encyclopaedia Britannica, 2009).

2.2.2.13 Responsibility Accounting

The concept of responsibility accounting is very important in profit planning. The basic idea behind responsibility accounting is that a manager should be responsible for those items that the managers can actually control to a significant extent. Each line item (i.e., revenue or cost) in the budget is made the responsibility of a manager, and that manager is held responsible for subsequent deviations between budgeted goals and actual results. Someone must be held responsible for each cost or else no one will be responsible, and the cost will inevitably grow out of control.

Being held responsible for costs does not mean that the manager is penalized if the actual results do not measure up to the budgeted goals. However, the manager should take the initiative to correct any unfavorable discrepancies, should understand the source of significant favorable or unfavorable discrepancies, and should be prepared to explain the reasons for discrepancies to higher management. The point of an effective responsibility system is to make sure that nothing "falls through the cracks" that the organization reacts quickly and appropriately to deviations from its plans, and that the organization learns from the feedback it gets by comparing budgeted goals to actual results. The point is not to penalize individuals for missing targets.

***In Business* | A Little Coordination Please!**

Budgeting plays and important role in coordinating activities in large organizations. Jerome York, the chief financial officer at IBM, discovered at one budget meeting that "the division that makes As/400 workstations planned to churn out 10,000 more machines than the marketing division was promising to sell. He asked nicely that the two divisions agree on how many they would sell for the sake of consistency (and to cut down on the inventory problem). The rival executives said it could not be done. Mr. York got tougher, saying it could. Ultimately, it was."

Source: Laurie Hays, January 26, 1994, pp. A1, A6.

2.3 Review of Previous Researches and Articles

The review of literature is a curial aspect of the planning of the study. The much purpose of the literature review is to find out what works have been done in the area of research, problem under the study and what works have been done in the field of the research study being under taken.

The profit planning in the context of particularly commercial banks seems to be new subject of study for research and analysis so far this researcher could find very few studies.

Which is made on this field is not fully focusing the budget used as follows for profit planning. What ever the research in the area of profit planning have been made are also not in depth and detailed. An attempt is made here to review some of the research. Which has been submitted in profit planning in context of Nepal.

Sharma (2004), has submitted his research work on the topic of "Revenue collection of Nepal Electricity Authority" he has tried to analyze and evaluate the revenue collection of NEA. He has pointed out the specific objectives are:

i) To highlight the NEA through its objectives, function and activities.
ii) To analyze the revenue trend by taking recent years variables.
iii) To give pragmative suggestion for improving the performance in accordance with revenue collection.

On the basis of detail analysis of revenue collection in NEA conducted this study. He pointed out the following major findings.

i) The revenue of NEA is increasing yearly among the three sectors of revenue collection like domestic, industrial and other. The revenue collection from other sources is unable to meet average revenue collection of NEA
ii) There has been fluctuating in the increasing revenue. It shows up and down by the cause of poor managerial decision and poor government policies.
iii) The revenue from industrial sector, domestic and other sector are fluctuated respectively.
iv) There are more risk to industrial sectors than other sectors. It means the revenue generating from industrial sector is more than other sectors.
v) There is positive relationship between revenue generation and profitability of NEA but there is positive correlation in negative profitability therefore to increase in profit, the operating cost and other cost should be controlled.
vi) There can not be improved in the revenue collection of NEA. In spite of the government efforts, there are various problems like structural problems, social problem, economic problems and bureaucratic culture in staff etc.

Tiwari (2007), has conducted his research entitled "Profit Planning in Nepal Electricity Authority." He has tried to examine whether the NEA applying profit planning system properly or not analyzed if there is any draw back in profit planning system of the authority. The basic objectives of this study are as follows.

Some major finding pointed by Mr. Ganesh Tiwari are:-

i. The authority fails to maintain its performance report systematically.
ii. Low level staffs are not encourages to participation but only executive level.
iii. Total acid turnover ratio, profitability ratio, return on net capital employed ratio are perfectly satisfactory.
iv. Overhead are not classified systematically and creates problem to analyze its expenses proper.
v. The authority is suffering form high fixed cost.
vi. Specific goals and objectives are not conveyed to lower level staff and it denotes the absence of MBO principle of management.

vii. There is lack of proper coordination between the various responsible departments.
viii. Absence of skilled and partly academic manpower in budgeting section of authority.

Mundul (2007), has published an article on Business Age entitled “Corporate financial sector: Restructuring.” ‘Corporate and financial sector restructuring are two aspects of the same problem,” he mentioned. The amount of debt and company can sustain – and on which lenders can expect reliable debt service - is determined by the unit’s cashflow. Indeed, a company cannot sustain interest payments in excess of its cashflows (i.e. interest coverage < 1:1), let alone make any repayments on the principal. Hence, substantially higher ratios of interest coverage are most desirable. He concluded that the corporate debtors and financial institution creditors will naturally seek to minimize their losses from corporate restructuring. The government has a role to play in balancing a variety of conflict interest (Mundul, 2007).

Uprety (2008) has conducted a research on “Profit Planning and Control of Commercial Banks in Nepal.” In his study, he has selected Machhapuchhre Bank Limited as a sample bank. This study an analytical and descriptive type of research. The main objective of his study was to examine the main approaches of profit planning and to test the extant of achievement of planning of Machhapuchhre Bank Limited.

To complete the research, he has collected data from various sources are managed, analyzed and presented in proper tables and formats. He was mainly based on secondary data published by MBL. Both financial and statistical tool were used in his study. In financial tools CVP analysis and flexible budget were used. Similarly the statistical tools used were mean correlation, regression line, time series, coefficient of variance standard deviation, graphs, diagrams etc.

Uprety has stated following major findings which are as follows:

1. Machhapuchchhere Bank Ltd lacks active and organized planning department of undertake innovative products research, lunch and development work.
2. Management is not free to operate the bank. Intervention of NRB and ministry of finance regarding personnel places and other matters has paralyzed the effectives of the bank.
3. The analysis of the position of deposit in MBL shows that the deposit, which are raised by the bank is not fully utilized. In fact this also reflects the lack of definite policy of the MBL.

4. MBL has the most sophisticate GLOBUS banking software enabling it to provide modern banking facilities like tale banking, internet banking point of sale services, ATM facilities, SWIFT facility and many more.
5. It is the first private commercial Bank to keep sophisticated communication technology which has interlinked all its branches to the centralized database system and has enabled the bank to provide Anywhere Banking facilities to all its valued customer.
6. Loans were approval based on proprietors or promoters statements rather than verifying and evaluating the possibilities of happening and non happening of their plans and statements.
7. While evaluating the loan application only the positive aspect or prospective are highlighted and the risk involved (negative aspects) is not adequately addressed.
8. Addition Loans/Facilities are provided and loans are renewed without evaluating the past performance of the client. Even problematic loans are renewed for the sake of showing them good.
9. Analysis of the real need of the project and its capability to pay back are not done. Appraisals are based on the directors and promoters rather than the viability of the project.

Sharma (2009), has conducted a research entitled "Implementation of Profit Planning Techniques in Commercial Banks: A Case Study of Investment Bank Limited." The study was mainly concerned with budgeting system of NIBL. The fundamental objective of this study was to assess the budgeting system of NIBL to study the application of comprehensive PPC system in NIBL.

Descriptive as well as analytical research design was adopted in the research. This is a case study research. Here both primary and secondary data were used for this study. The main sources of secondary data were quarterly and annual financial reports, official records, web site, brochures, prospectus and other relevant publications of NIBL, NRB, CBS and relevant publications. The main variables considered were share capital, customer deposit, loan and advances, overdrafts, total resources and deployment, LC, bank guarantees, interest expenses, other expenses, interest income, and other income of NIBL. Various financial and statistical tools were used to analyzed the data.

The following major findings were obtained from the study:

1. The bank is conscious about he human resources due to rapid growth and advent new branches. Develop skills to employees to empower them to provide excellent customer services bank supports to employees further advanced courses. Currently there are 622 employees over the 22 branches of NIBL and bank has aim to rise up to 50 branches with in the year 2010 A.D.
2. NIBL is well performing in the deposit collection sector. Budgeted figure is higher than the actual deposit.
3. The deployment of Banks available resources at various portfolios among which LDO hold the highest percentage i.e. 54% in average out of total deployment amount through out the five years of study period.
4. The researcher find that the 100% of achievement of targets in deployment of resources other than LDO i.e. NLDO.
5. The cash flow analysis of the NIBL shows that there is sufficient fund to repay the short term obligation and it has maintained the liquidity position as per the NRB direction.

Thapa (2010), has conducted a research entitled "Profit Planning and Control (PPC) of Grand Hotel Pvt. Ltd." The main objective of his study is to find out the relationship between sales (income from service and facilities) budget and profit of the company and to identify how far the different functional budgets are being applied as tools for profit planning in the company.

To achieve the targeted objective of the research, Thapa has fully based on secondary data. To analyze the data he has used some financial and statistical tools like mean, standard deviation, correlation, regression, trend line, percentage ratio analysis, C.V.P analysis, flexible budget, productivity measurement and variance analysis to present the data in systematic manner.

Thapa has stated following major findings in his study:

1. There is a positive correlation between sales target and sales achievement. However sales achievement in respect to sales and yet to be achieved.
2. Inventory turnover of the company are quite satisfactory. Inventory turnover are found to be fluctuating over the past 6 years.

3. The gross profit margin shows the decreasing trend which signifies the increasing trend of cost of goods sold.
4. Percentage of NP on sales has declined for the year 2005/06. The net profit has not been able to go along with sales.
5. Operating expenses are in increasing trend which has affected the profit margin. The operating expenses occupy more than 50% of gross profit.
6. Percentage of financial expenses on Net profit before provision increased to 72.82%.
7. GHPL has adopted cost plus pricing strategy. The price is found to be cheaper than other hotels.
8. Sales revenue was found to be very high than BEP which is good for the company.
9. There was very high degree positive correlation between profits, cost and sales i.e. 0.9454.

Kunwar (2010) has conducted a research entitled "Profit Planning in Public Utility Enterprises of Nepal: A Case Study of Nepal Electricity Authority." This was an analytical and descriptive survey study concentrated on financial accounting practices only and identifying the only short listed areas was concerned with financial accounting only.

Kunwar has used secondary data in his study. To analyze the collected data he has used some financial and statistical tools like mean, standard deviation, correlation, regression, trend line, percentage ratio analysis, C.V.P analysis, flexible budget, productivity measurement and variance analysis to present the data in systematic manner.

The main objectives of this study were to evaluate the profit planning of Nepal Electricity Authority and its effectiveness.

Kunwar in his study stated these major findings which are as follows:

a. Achievement of authority for actual sales was more variable than budgeted sales and actual production is also more variable than planned production.
b. Overhead were not classified systematically and creates problem to analyze its expenses properly.
c. NEA has no proper record of manufacturing and it has no proper practice of segregating cost into fixed, variable and semi variable.
d. NEA is paying a large amount of interest every year and it was suffering from high fixed costs.

e. NEA was suffering from idle cash and bank balance.
f. Return on sales ratio, return on net worth, fixed assets turnover ratio, capital turnover ratio, total assets turnover ratio were not perfectly satisfactory though quick ratio seems better.
g. Goals and objectives were not clear cut of the authority.

2.4 Research Gap

Research gap focuses that the researcher how much trying to give new things from his/her study with compare to previous studies held by different researcher. Most of the past research studies about profit planning system are basically related to the profit planning system of manufacturing organization or production oriented activities. The researcher could find some study so far that has been related to profit planning system of commercial bank in RBB, HBL, SCBNL, NBL, NABIL etc. All the dissertations have pointed out that there is no proper profit planning system and recommend for the effective implementation of profit planning system in the concerned institution. Through many affiliate researchers have been done in this area but these have been very few exclusive researchers on this subject. This study may be a new study in this field and no study has been made on profit planning of MBL. In the past financial institution were depends only the interest margin in present economic dynamism. Only the interest margin is not sufficient to improve profitability so this researcher has tried to analyze the extra ordinary items of income generation in financial instruction. To bring the forth, the new developments and to bridge the gap between the past research and the present situation, it is set out to conduct the research in this stimulating topic.

CHAPTER-III

RESEARCH METHODOLOGY

Research methodology refers to the various methods of practices applied by the researcher in the entire aspect of the study. It is the plan, structure and strategy of investigations conceived to answer the research question or test the research hypothesis. Research design is used to control variance (Wolff and Pant; 2002:51). It includes different dependent and independent variables, types of research design, research questions and hypothesis sample, data collection activities, technique of analysis etc.

The main objective of the research is to analyse, examine, and interpreter the application of profit planning in commercial bank with specific reference to Machhapuchchhre Bank Limited with help up various financial statement, statistical tools and nun financial subject matter.

3.1 Research Design

This study is an examination and evaluation of budgeting procedure in the process of profit plan of commercial bank a case study of Machhapuchchhre Bank Limited. This study is closely related with the various functional budgets and other accounting statement as well as the actual result of the budget. This information and data are presented in an analytical method.

Finally research design is the plan, structure and strategy of investigations conceived so as to obtain answers to research questions and to control variances. To achieve this study descriptive and analytical research designs have been used.

3.2 Population and Sample

Under the study of profit planning and control, the total number of commercial banks including domestic and joint venture banks operating in the Nepal are the population. At present there are thirty one licensed commercial banks are running in Nepal. All thirty one licensed Nepalese CBs has been considered as the total population out of them this study is concerned with one commercial bank i.e. Machhapuchhre Bank Limited has been chosen randomly for the case study purpose.

3.3 Period Covered

This study covers a time period five years from 2062/063 to 2066/067 data are taken from MBL and the analysis is basically made an on the basis of these 6 years data.

3.4 Nature and Sources of Data

This study has mostly based on secondary data. In secondary source, mainly annual reports published by Machhapuchhre Bank Limited are taken as main source of data.

3.5 Data Collection Procedures

The primary information have been obtained through informal discussions with the staff of the bank. Secondary data have been collected from the annual published accounting and financial statement of MBL. Similarly other necessary data have collected from publication of the Nepal Rastra bank, publications of national planning commission central bureau of statistics and related publications.

3.6 Tools Used

This study has been confined to examine the profit planning of MBL bank. In this study, both financial and statistical tools have been used to analyze the presented data. In financial tools financial ratio analysis and budget have been used. Similarly the statistical tools used are mean correlation, regression estimate, coefficient of determination (r^2) , test of hypothesis, coefficient of variance, standard deviation, graphs, diagrams have been used.

Statistical Tools

Statistical tools are the mathematical techniques used to facilitate the analysis and interpretation of numerical data. Following statistical tools have been used in this study.

a. Percentages

Uses of percentages make the data much simpler and grasp. It is the simplest statistical device used in interpretation of phenomenon. It can reduce everything to a common base and thereby helps in meaningful presentation. Mathematically, let A represent the base used for comparison, B represent the given data to be compared with the base, then the percentage of given number in the base may be calculated as

$$\text{Percentage (P \%)} = \frac{B}{A} \times 100$$

b. Measures of Central Tendency

Measures of central value are simple statistical treatments of distribution that attempts to find the single figure to describe the entire distribution. It is the best possible value of a group of variables that singly represents to whole group. In the statistical analysis the central value falls within the approximately middle value of the whole data. Among the several tools of measuring central value, the mean has been used in this analysis where and when necessary. The mean is the arithmetic average of a variable. Arithmetic Mean of a series is given by

$$\text{Mean } (\bar{X}) = \frac{X}{N}$$

c. Standard Deviation

S.D. indicates the ranges and size of deviance from the middle or mean. It measures the absolute dispersion. Higher the value of standard deviation higher is the variability and vice versa. It is the positive square root of average sum of squares of deviations of observations from the arithmetic mean of the distribution.

It can be calculated as follows:

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

d. Coefficient of Variation

The percentage measure of coefficient of standard deviation is called coefficient of variation. The less is the C.V the more is the uniformity and consistency and vice versa. Standard deviation gives an absolute measure of dispersion. Hence where the mean value of the variable is not equal it is not appropriate to compare two pairs of variables based in S.D. only. The coefficient of variation measures the relative measures of dispersion, hence capable to compare two variables independently in terms of their variability.

$$\text{Coefficient of Variation (C.V)} = \frac{\sigma}{\bar{X}} \times 100$$

e. Correlation Coefficient (r)

Correlation refers to the degree of relationship between two variables. Correlation coefficient determines the association between the dependent variable and independent variable. Among various techniques we have used Karl Pearson coefficient of correlation.

It is calculated as follows:

$$\text{Correlation Coefficient (r)} = \frac{xy}{N\exists_x \exists_y}$$

Where,

$x = X\ Z\overline{X}$ $\qquad$ $y = Y\ Z\overline{Y}$

$\exists_x$ XStandard Deviation of Series X

$\exists_y$ XStandard Deviation of Series Y

N = No. of pairs of observation

On simplification of the equation of r, we obtain the following formula for computing r.

$$r = \frac{xy}{\sqrt{x^2.\quad y^2}}$$

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

Where, r = correlation coefficient

N= No. of pairs of observation.

If r > 6 P.E, then the correlation coefficient is significant and reliable.

If r < P.E, then the correlation coefficient is insignificant and there is no evidence of correlation.

f. Test of Statistics

To test the significant difference, t-test has been considered in this study. Two hypothesis i.e. null and alternative hypothesis is setted to find out the significant difference. Where null hypothesis shows two variables are not correlated and alternative hypothesis shows two variables are correlated. t-calculated value is calculated using this formula:

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}$$

Where, r = Correlation coefficient

R^2 = Coefficient of determination

n = Number of pair of observation

g. Trend Analysis

Trend Analysis is one of the statistical tools which is used to determine the improvement or deterioration of its financial situation. Trend analysis informs about the expected future values of various variables. The Least square method has been adopted to measure the trend behaviors of these selected Banks. This method is widely used in practices. The formula of least square method for the straight line is represented by the following formula.

$Y_c = a + bX$

Where,

Y_c = Trend Values

a = Y intercept or the computed trend figure of the Y variable, when X = 0

b = Slope of the trend line of the amount of change in Y variable that is associated with change in 1 unit in X variable.

X = Variable that represent time i.e. time variable

The value of the constants a and b can be determined by solving the following two normal equations.

$$\Sigma Y = Na + b\Sigma X \text{ ……………...(i)}$$

$$\Sigma XY = a\Sigma X + b\Sigma X^2 \text{ …………(ii)}$$

Where, N = number of years

But for simplification, if the time variable is measured as a deviation form its mean i.e. mid-point is taken as the origin, the negative value in the first half of the series balance out the positive values in the second half so that ($\Sigma X = 0$).

The values of constant a and b can easily be determined by using following formula.

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

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

CHAPTER-IV

PRESENTATION AND ANALYSIS OF DATA

4.1 General Introduction of Machhapuchhre Bank Limited

When the government adopted open market and liberal economic policy, then only there was a suitable environment for commercial bank to be establishment. As a result modern commercial bank were establishing. Machhapuchhre Bank Limited, a commercial bank, was established in 1998 by Nepalese promoters in western part of kingdom of Nepal. The commercial Act 2031 and company Act 2021. It gained approval from NRB and was registered with office of company registers on the Falgun 2054 B.S. Begin its operations on 17th Ashwin 2057 B.S. MBL is fully computerized banks and its head office is situated at Nayabazar, Pokhara,Kaski.

Its authorized capital is 240 million and issued capital Rs 120 million.. Now it has authorized capital Rs 2000 million and issued and paid up capital Rs 1,479 million with the structure, MBL is the first private commercial bank to keep sophisticated GLOBUS system in Nepal. It provides any where banking facilities to its valuable customers. The bank has been promoted individuals and companies with local roots from different walks of life with a vision and dedication to private the best financial products and services effectively and professionally. The share structure of MBL has 70% of promoter,25% public and 57% from employees.

4.1.1 General Function of MBL

As like in other business concern commercial banks are also very much concerned about making profit because profit is the major element of each every business endeavor for their survival, further development and fulfilling social expectations. In modern business, the effectiveness and efficiency of the business organization and their manager are measured from the profit earned by them. Banks deals with money and performs several financial monitory and economic activities that are essential for economic development of a country. It is a service industry there for its profit plans are of a different format than those in a manufacturing units as bank has resources mobilization and utilization plan and its aims at maximizing profit out of their activities.

Machhapuchhre Bnak Limited being a commercial banks and also business concern perform various kind of profitable banking business activities which are under the control the Nepal Rastra Bank Act 2012, commercial Act 2031, Foreign Exchange regularized Act 2019, Umbrella a Act (Bank and financial institution ordinance 2060) and other specific law of Nepal. The main activities are:

- Acceptance of deposit
- Providing loans and advances
- Providing over draft
- Opening various types of customers A/C
- Remittance (Transfer of Fund)
- Opening letter of credit (L/C) on behalf of their customer
- Bills discounting or Purchasing or collection on behalf of the customer
- Issuing guarantees against the bidding financial and Performance of activities
- Obtaining mortgage of properties as collateral sector.
- Safe custody of valuable
- Trading in securities etc

4.1.2 The Organization and Management of MBL

Machhapuchhre Bank Ltd is managed by chief executive officer (CEO) under the supervision and control of Board of Directors. Board of directors appoints the chief executive officer. The board of directors of Machhapuchhre Bank Ltd is conducted by the body of seven number altogether. Two directors are appointed from General Public and five directors are appointed from promoters. These days Mr. Surya Bahadur K.C the promoter directors is the chairmen of the board and Mr. Bhai Kaji Shrestha is the Chief Executive Officer (CEO)

Banking Service of MBL

MBL has been providing different services such as accepting deposit, paying the amount of cheque drawn by the depositor by means of computerized and facilities counters through various branches including the head and corporate office. It also advances loan for short term to long term against commercial good, movable and immovable property. It also provides the facility of discounting bill of exchange, issuing travelers cheque, issuing letter of credit provide guarantee, sale and buy of foreign currency and remittance of many from one place to another. MBL has the most sophisticated GLOBUS banking software with modern banking facilities like late banking, internet banking, and point of sale service, ATM facilities, mobile banking and many more. Any where banking by means of centralized data base and communication systems, person who has an account in any branch of MBL is allowed to conducted certain operation like deposit and withdrawer of cash and cheque from any other branch easily. MBL has been providing the facility of transferring draft in foreign currency such as Indian Rupees of India, Japan and Us dollar, Euro and GBP and in local currency with Nepal through SCBLN, NIBL, NBL, MBL and BOK.

The Main Vision and Objectives of MBL

MBL has defined its objectives and goals in its mission and vision statement which states as follow:

Vision

The vision of the bank has been status as bankers with state of the art technology strive for growth with profitability. Profitability is the core vision that shall be achieved with professionalism and excellence.

Mission and Objective

Machhapuchhre Bank Limited strives to facilitate its customer needs by delibering the practices, the era of the new millennium has heralded widespread changed in the way of financial services are delivered and financial market operate. In lights of this fact, Machhapuchare Bank Limited seeks to infinity and exploits the financial opportunities of its customer the community and the country at large.

The mission of the bank states as with slogan "service with a person touch".

We at MBL, our goal is to aim and achieve the highest standard of Professionalism and service to silent by providing customized financial products and services through practice across the geographical and cultural boundaries with contemporary competitively advantages in a dynamic environment. Thus the objective and goals set by the bank can be noted from above statements as follows.

a. To aim and achieve highest standard of professionalism
b. To aim and achieve to provide highest standard of customized products and services to their clients

c. To create life long relationship with their customer
d. To achieve strategic advantage in the dynamic environment every their designed deferential qualified financial product
e. To maintain management proactively

Corporate Philosophy

The objective of the bank has been further reflected in the corporate philosophy of the bank that stets as follows. Main slogan service with personal touch: life long relationship with our client is our most valuable assets. We serve with excellence always standing by to cater the need of our valued client we develop relationship mutual respect and faith founded on the bedrock of commitment to provide with value added and quality service. We create and environment that is progressive, productive and professional encouraging management by group subjective and teamwork through proactive to promote corporate excellence. We strive to enhance shareholder wealth remaining catalyst to the rapid growth and socio economic development of the nation (Sources of annual report 2010- MBL)

Time Period in Profit Plan

As per NRB directives all the commercial banks have identically to follow the accounting year of in months beginning from 1st of Shrawan to the end of Ashadh. With over the list nine months of a (B.S.) to the first three months of seeding year (B.S) MBL prepares the profit plans for 12 months of upcoming year which includes the business. Budget revenue and expenditure and profit plan for the year. This study covers for year period from fiscal year 2062/063 to 2066/067 and 7th month data this year including for year study the data of fiscal 2066/067 are taken to analyze.

Strategic Profit Plan of MBL

The strategic profit plan of MBL is reflected in its business budget the business budget is a reasonable estimation of business activities to be performed and the goal to be achieved by the bank with in the particular fiscal year for which the budget is prepared the practice of formulation formal business has been started only from 2059/2060 MBL in for the initial few year. The board used to set some broad target and used to be limited only up to the top management and was not public.

4.2 Budgeting

4.2.1 Total Revenue of MBL

There are various sources of generating revenue. Interest income is the major source of revenue. In addition commission and discount, other operating income (safe deposit rent, credit card issue and renew, ATM card issue and renew, telex, service charge, renew charge and others), income on foreign exchange and non-operating incomes are also the sources of income.

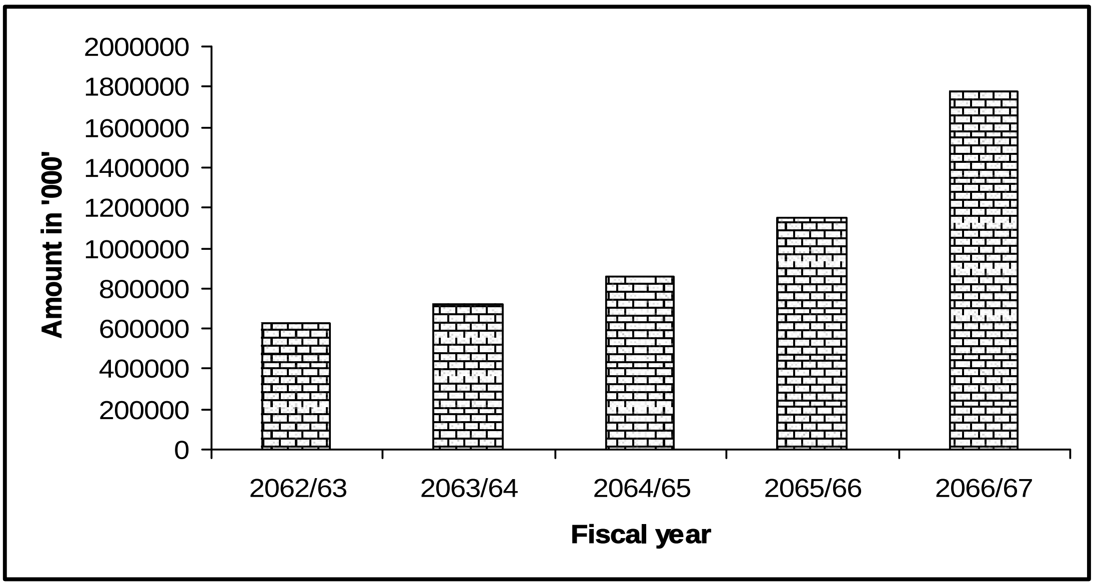
Table 4.1: Total Revenue

Rs. in '000'

Income revenue sources	2062/63	2063/64	2064/65	2065/66	2066/67
a. Interest on loan and advances including interest on government securities	540226.28	613202.19	749636.91	994485.95	1622002.78
b. Commission and discount	33401.89	34305.03	35616.25	38017.28	49903.88
c. Other operating income	13690.77	49039.12	30072.13	57135.63	60633.75
d. Non-operating income	(9.27)	462.18	(48.16)	24.28	-
e. Income on forex	35152.38	27143.11	45699.32	59817.53	42695.33
Total revenue	622462.05	724151.63	860976.45	1149480.87	1775235.74

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

Figure 4.1: Total Revenue



Above table and figure 4.1 indicates that total income is in increasing trend. Interest income is in rising trend, which is Rs. 540226.28 thousand in 2062/63 and Rs. 1622002.78 thousand in Fy 2066/67. Similarly, commission and discount in in increasing trend, which is slightly increasing. It is Rs. 33401.89 thousand in Fy 2062/63 and reaches to Rs. 49903.88 thousand in Fy 2066/67. In the same way, other operating income is in increasing trend. But, income on forex. is in fluctuating trend. It is decreased in Fy 2063/64 and Fy 2066/67 than preceding year. Non-operating income, which contributes a little part in total income is negative, positive and zero.

This figure of total revenues shows the satisfactory condition because the income is increasing every year.

4.2.1.1 Interest Income from Loan and Advances Including Government Securities and Other Interest

MBL's main source of income is interest on its investment in different sectors like interest income on loan and advances, investment, agency stock, short-term financing and others. The following table 4.2 shows the interest income on loan and advances.

Table 4.2: Interest on Loan and Advances

Rs. in '000'

Fy	Amount (Rs.)	Change (Rs)	% change	Index (%)
2062/63	540226.28	-	-	100
2063/64	613202.19	72975.91	13.51	113.51
2064/65	749636.91	136434.72	22.25	138.76
2065/66	994485.95	244849.04	32.66	184.09
2066/67	1622002.78	627516.83	63.10	300.25

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

Above table 4.2 shows that interest income is increasing in all fiscal years. It is Rs. 540226.28 thousand in Fy 2062/63. It has reached to Rs. 1622002.78 thousand i.e. (300.25% increased from 2062/63). In Fy 2063/64 to 2066/67 percentage increment in interest collection is 13.51%, 22.25%, 32.66% and 63.10% respectively. It shows the strong position of bank in collecting interest income.

4.2.1.2 Revenue from Commission and Discount

Revenue from commission and discount is not fund based revenue source of MBL. It includes bills purchase and discount, commission on L/C, bank guarantee, remittance fees, collection fee, credit card, share issue, discount income and other. The following table 4.3 shows the details of revenue form commission and discount.

Table 4.3: Revenue from Commission and Discount

Rs. in '000'

Fy	Amount (Rs.)	Change (Rs)	% change	Index (%)
2062/63	33401.89	-	-	100
2063/64	34305.03	903.14	2.70	102.70
2064/65	35616.25	1311.22	3.82	106.63
2065/66	38017.28	2401.03	6.74	113.82
2066/67	49903.88	11886.6	31.27	149.40

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

Above table 4.3 indicates that the revenue form commission and discount is in increasing trend in every fiscal year. In Fy 2062/63 it is Rs. 33401.89 thousand, reached to Rs. 49903.88 thousand (i.e. 149.40% index) in Fy 2066/67. The increment is positive every fiscal year i.e. 2.70%, 3.82%, 6.74% and 31.27% in Fy 2063/4 to 2066/67 respectively. This shows the sound condition of collection of commission and discount.

4.2.1.3 Revenue from Other Income

Revenue form other income is non-fund based revenue sources. Revenue from other income consists of rent of safe deposit, credit card issue and renew, ATM card issue and renew, telex, service charge, renew charge and others. The following table 4.4 shows the details of revenue from other income.

Table 4.4: Revenue from Other Income

Rs. in '000'

Fy	Amount (Rs.)	Change (Rs)	% change	Index (%)
2062/63	13690.77	-	-	100
2063/64	49039.12	35348.35	258.19	358.19
2064/65	30072.13	(18966.99)	(38.67)	219.65
2065/66	57135.63	27063.5	90.0	417.32
2066/67	60633.75	3498.12	6.12	442.88

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

Above table 4.4 indicates the revenue from other income is in increasing trend except Fy 2064/65. In Fy 2062/63 other income is Rs. 13696.77 thousand, in Fy 2063/64 it is highly increased i.e. Rs. 49639.12 thousand i.e. 358.19%. In Fy 2064/65 it is decreased to Rs. 30072.13 thousand which is 219.65% in index. Again, in Fy 2065/66 and 2066/67 it is increased to Rs. 57135.63 thousand and Rs. 60633.75 thousand respectively.

From the above result we can easily conclude that the bank is able to collect the other income promptly.

4.2.1.4 Revenue from Income on Foreign Currency Exchange

Among different kind of revenue, income on forex is one of the important sources. It is non-fund based income of MBL. Income on foreign currency exchange consists of income form difference in exchange rate and income from foreign currency transactions.

The following table 4.5 shows the revenue from income on foreign currency income in details:

Table 4.5: Revenue from Income on Foreign Currency Exchange

Rs. in '000'

Fy	Amount (Rs.)	Change (Rs)	% change	Index (%)
2062/63	35152.38	-	-	100
2063/64	27143.11	(8009.27)	(22.78)	77.22
2064/65	45699.32	18556.21	68.36	130.0
2065/66	59817.53	14118.21	30.89	170.17
2066/67	42695.33	(17122.2)	(28.62)	121.46

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

Above table 4.5 indicates that the income on foreign currency exchange in fluctuating trend. It is Rs. 35152.38 thousand in Fy 2062/63. But in Fy 2063/64 it decreased to Rs. 27143.11 thousand (22.78% decreased). In Fy 2064/65 and 2065/66 it is increased by 68.36% (130% index) and 30.89% (170.17% index) respectively. In Fy 2066/67 it again decreased by 28.62%.

The above figure shows the income on foreign exchange is very fluctuating in trend.

4.2.2 Total Expenditure

MBL's interest expenses are playing major role in expenses. The bank is generating expenditure form different sources. Interest is major source. In addition, employee's expenses, operating expenses, staff bonus, providing for losses and income taxes.

The below table 4.6 shows the details picture of total expenditure of MBL.

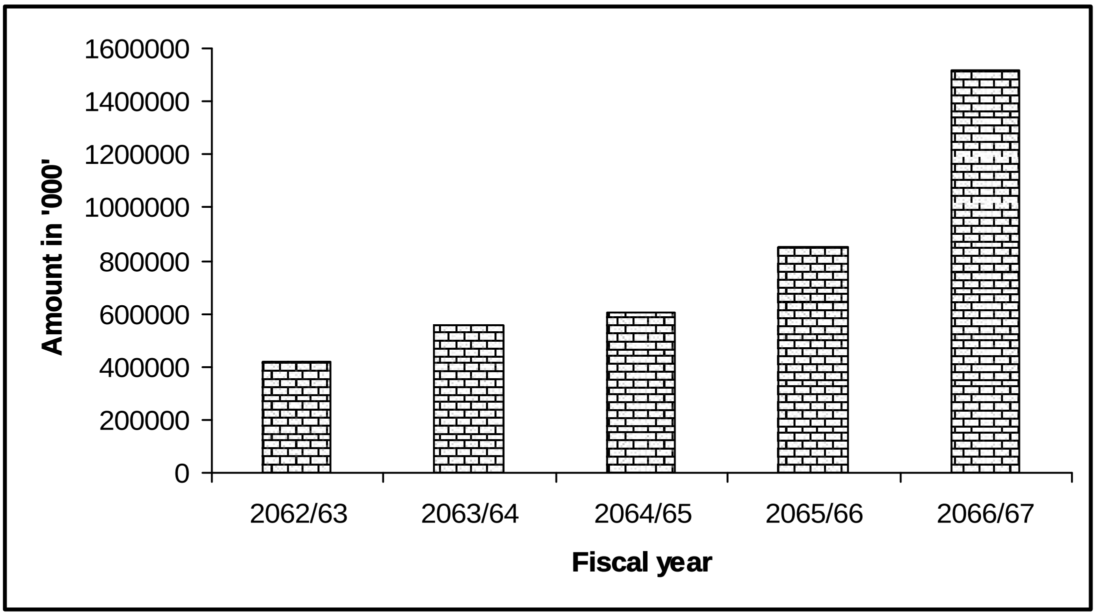
Table 4.6: Situation of Total Expenditure

Rs. in '000'

Expenditure heads	2062/63	2063/64	2064/65	2065/66	2066/67
a. Interest on deposit including interest on loan	288661.55	397721.72	407919.24	580036.19	1144808.13
b. Employee expenses	43410.16	54360.31	71421.06	90995.69	152113.21
c. Operating expenses	85924.28	104181.24	124408.42	182841.04	223469.56
Total expenditure	417995.99	556263.27	603748.72	853872.91	1520390.90

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

Figure 4.2: Total Expenditure



Above table 4.6 and figure 4.2 indicates that interest that interest on deposit including interest on loan and borrowing, employee expenses and operating expenses is the major expenses.

Interest on deposit is in increasing trend from first to last 5 years. In Fy 2062/63 the bank beard interest expenses Rs. 288661.55 thousand and in Fy 2066/67 Rs. 1144808.13 thousand. Operating expenses is second major expenses of the bank, which is also in increasing trend. It is Rs. 43410.16 thousand and Rs. 152113.21 thousand in Fy 2062/63 and 2066/67 respectively. Employee expenses are one of the sources of expenditure. It is also increasing trend every year.

4.2.2.1 Interest Expenses

Interest expenditure is the major part of expenditure of MBL. Interest is paid on deposit, loan and others. The following table 4.7 shows the details of interest expenditure upto 5 years.

Table 4.7: Interest Expenses

Rs. in '000'

Fy	Amount (Rs.)	Change (Rs.)	% change	Index (%)
2062/63	288661.55	-	-	100
2063/64	397721.72	109060.17	37.78	137.78
2064/65	407919.24	10197.52	2.56	141.31
2065/66	580036.19	172116.95	42.19	200.94
2066/67	1144808.13	564771.94	97.37	396.59

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

Above table 4.7 reveals that the interest expenses is increasing every year. If we take 2062/63 as base year the index of interest expenses is 100%, 137.78%, 141.31%, 200.94% and 396.59% in Fy 2062/63 to 2066/67 respectively. In Fy 2062/63 interest expenses is Rs. 288661.55 thousand, in Fy 2066/67, it became Rs. 1144808.13 thousand.

4.2.2.2 Employee Expenses

Employee expenses is the third major part of expenditure, which consists of salary, allowances, contribution to provident fund, training expenses, uniform, medical, insurance, pension and gratuity and others. The following table 4.8 reveals in details of employee expenses.

Table 4.8: Employee Expenses

Rs. in '000'

Fy	Amount (Rs.)	Change (Rs.)	% change	Index (%)
2062/63	**43410.16**	**-**	**-**	**100**
2063/64	**54360.31**	**10950.15**	**25.22**	**125.22**
2064/65	**71421.06**	**17060.75**	**31.38**	**164.53**
2065/66	**90995.69**	**19574.63**	**27.41**	**209.62**
2066/67	**152113.21**	**61117.52**	**67.17**	**350.41**

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

Above table 4.8 indicates that the employee expenses is increasing every year. It is Rs. 43410.16 thousand in Fy 2062/63 which is increased to Rs. 152113.21 thousand in Fy 2066/67. The employee expenses index is 100%, 125.22%, 164.53%, 209.62% and 350.41% in Fy 2062/63, 2063/64, 2064/65, 2065/66 and 2066/67 respectively. The highest increment is 67.17% in Fy 2066/67 and lowest increment is 25.22% in Fy 2063/64.

4.2.2.3 Operating Expenses

Operating expenses is the second major part of total expenditure of MBL. It includes all the operating costs like house rent, electricity, repair and maintenance, insurance, office equipment and furniture, stationery, advertisement, donations, legal expenses, security, commission, discount and many others. The following table 4.9 shows the details of operating expenditures.

Table 4.9: Operating Expenses

Rs. in '000'

Fy	Amount (Rs.)	Change (Rs.)	% change	Index (%)
2062/63	**85924.28**	**-**	**-**	**100**
2063/64	**104181.24**	**18256.96**	**21.25**	**121.25**
2064/65	**124408.42**	**20227.18**	**19.42**	**144.79**
2065/66	**182841.04**	**58432.62**	**46.97**	**212.79**
2066/67	**223469.56**	**40628.52**	**22.22**	**260.08**

Source: Annual reports of MBL (Fy 2062/63 – 2066/67 B.S.).

The table 4.9 reveals that the operating expenses is in increasing trend. In Fy 2062/63, it is Rs. 85924.28 thousand, which is increased by 21.25% i.e. Rs. 104181.24 thousand in Fy 2063/64. In the same way, it is increased by 19.42%, 46.97% and 22.22% in Fy 2064/65, 2065/66 and 2066/67 respectively. The index of operating expenses is 100% at base year i.e.

Fy 2062/63, reached to 260.08% in Fy 2066/67. This shows that operating expenses is increasing trend every year.

4.2.3 Analysis of Cost and Income

Cost is the means of achieving revenue proper utilization of cost result is greater volume of revenue otherwise its result becomes hardened. Interests expenses are playing a major role in cost, office operating cost and staff costs are other important cost that MBL facing.

MBL generating revenue from different foreign exchange, interest income is the major source of revenue in addition a commission and discounts on exchange, income on forex are also important source of income, interest income is fund based income while other are non-fund based incomes.

Profit is the difference between revenue and cost. Higher is the difference greater will be profit, such difference may happen in the following conditions:

a. Increasing in income, cost remaining the same.
b. Decrease in cost, income remaining the same.
c. Increase in income, increase in cost.
d. Higher increase in income than increase in cost.
e. Higher decrease in cost than decrease in income.

Out of these five conditions MBL is following third condition nowadays.

4.2.3.1 Revenue, Cost and Net Profit

MBL's revenue, cost and net profit is presented in the following table 4.10.

Table 4.10: Revenue, Cost and Net Profit

Rs. in '000'

Fy	Total revenue	Total costs (excluding tax)	Net profit
2062/63	**622462.05**	**417995.99**	**133996.71**
2063/64	**724151.63**	**556263.27**	**74085.65**
2064/65	**860976.45**	**603748.72**	**85016.00**
2065/66	**1149480.67**	**853872.92**	**123251.10**
2066/67	**1775235.74**	**1520390.90**	**73312.80**

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

The above table 4.12 shows the total revenue, total costs and net profit. In Fy 2062/63, total revenue is Rs. 622462.05 thousand and cost is Rs. 417995.99 thousand, whereas net profit is Rs. 133996.71 thousand. In Fy 2063/64, 2064/65, 2065/66 and 2066/67, total revenue and total costs is increased, but net profit is in fluctuating trend. In Fy 2063/64, net profit is decreased, in Fy 2064/65, it is increased slightly. In Fy 2065/66 it is increased to Rs. 123251.10 thousand from Rs. 85016 thousand of 2064/65. In Fy 2066/67, net profit is again decreased to Rs. 73312.80 thousand.

From the above revenue, cost and net profit figure we can conclude that revenue and costs are increasing but net profit is in fluctuating trend. It is harmful to MBL.

4.2.3.2 Analysis of Deposit Liabilities and Interest Expenses

MBL has been accepting mainly in current account, royal saving account, normal saving account and fixed accounts. There are call deposits and margin deposits account also. The bank pays interest on saving, call deposit, fixed deposit and certificate of deposit. Interest on fixed deposit account differs according to time range. Bank pays interest on royal saving account on daily basis and on normal saving account, monthly basis.

An interest ratio of different account is different and in various within the fixed deposit too. So the analysis is made computing the simple average ratio interest dividing total deposit by total interest dividing total deposit and its effect on interest expenses is also analyzed.

Table 4.11: Deposit Liabilities and Interest Expenses

Rs. in '000'

Fy	Total deposit	Interest expenses	Increase in interest (Rs)	% increase in interest
2062/63	7893297.67	288661.55	-	3.66
2063/64	9475451.51	397721.72	109060.17	4.20
2064/65	11102242.26	407919.24	10197.52	3.67
2065/66	15596790.85	580036.19	172116.95	3.72
2066/67	18535917.00	1144808.13	564771.94	6.18

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

The above table 4.11 shows the interest expenses on total deposit. Average interest rate is calculated in above table. In Fy 2062/63, the bank has Rs. 7893297.67 thousand of total deposit. On which bank paid Rs. 2886615.55 thousand in interest which is 3.66% in average. In every fiscal year, interest expenses is increasing along with deposit too. But interest rate is in fluctuation trend. In Fy 2062/63, 2063/64, 2064/65, 2064/65, 2065/66 and 2066/67, interest rate is 3.66%, 4.20%, 3.67%, 3.72% and 6.18% respectively.

A question may arise whether collection of only deposit has been fruitful to MBL. Deposit in itself produces so higher costs. It is possible only when it is invested.

4.2.4 Plan for Non-Funded Business Activities

Apart from the activities like advancing loan, overdraft, bills discounting and investments, funds are involved for income generation. Other business activities performed by the bank which do not involve fund yet they are income generative, such transactions are called non-funded business of the bank. In such transaction, the bank has to the contingent liabilities on behalf of their customer for fee and or commission which are the income of bank other than the interest income. Such incomes greatly contribute in reducing the expenses burden of the bank.

Generally, income generating non-funded business of the bank is of following two types that are letter of credit and bank guarantee. Since, these are the contingent liabilities; it appears down the line of the balance sheet of the bank.

4.2.4.1 Letter of Credit

Letter of credit is a kind facility provided by the bank to their customer by way of which the customer can import the goods form foreign buyer for which the bank undertake the guarantee for payment, provided the terms and conditions of the L/C is compiled with. Following table shows the letter of credit business status of the bank as of the closing of the respective fiscal year and its growth over the period of this study.

Table 4.12: Letter of Credit

Rs. in '000'

Fy	O/L L/C amount	Increase amount (Rs.)	Growth (%)
2062/63	425301.84	-	-
2063/64	548123.56	122821.72	28.88
2064/65	348929.76	(149193.8)	(27.22)
2065/66	1448647.03	1049717.27	163.13
2066/67	905140.73	(543506.3)	(37.52)

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table shows that the letter of credit outstanding is fluctuating in every year. It is increased in Fy 2063/64 by 28.88%, but it is decreased 27.22% in Fy 2064/65. In Fy 2065/66 it is increased by 263.13% and then decreased by 37.52% in Fy 2066/67.

From the above data, we can conclude that, it is very difficult to predict the O/S letter of credit in future.

4.2.4.2 Bank Guarantee

Bank issues the bank guarantee on behalf of their customer. For bidding and or performing any activities by the letter in favour of the employer of the activities. It is a guarantee latter issued by the bank agreeing to pay a certain sum of money in case of any default done by the party while performing the activities. It includes guarantees issued against counter guarantee of internationally rated banks, advance payment guarantee and financial guarantee.

Following table 4.13 shows the outstanding bank guarantee liability as of the end of fiscal year of out study and the change in subsequent year.

Table 4.13: Bank Guarantee

Rs. in '000'

Fy	O/S bank guarantee (Rs.)	Increase amount (Rs.)	Growth (%)
2062/63	**709277.24**	**-**	**-**
2063/64	**821982.06**	**112704.82**	**15. 89**
2064/65	**316849.96**	**(505132.1)**	**(61.45)**
2065/66	**503360.12**	**186510.16**	**58.86**
2066/67	**856152.96**	**352792.84**	**70.09**

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.13 indicates that outstanding bank guarantee amount is increasing every year except in Fy 2064/65. In Fy 2062/63, the outstanding bank guarantee amount is Rs. 709277.24 thousand whereas it is increased to Rs. 821982.06 in Fy 2063/64, which is the increased amount by 15.89%. In Fy 2064/65 it decreased to Rs. 316849.96 thousand (61.45% decreased). In Fy 2065/66 and 2066/67 it is increased by 58.86% and 70.09% respectively.

From the above data we can conclude that the bank guarantee amount is increasing every year except Fy 2064/65. Since bank guarantee is one of the sources of income of bank, increase in outstanding bank guarantee is better for bank.

4.2.5 Budgeting System of MBL and Its Application

MBL has not practiced of preparing budget systematically but we cannot say how it is successfully run its business without making budget. According to the higher level staff of MBL, it has practiced to forecast only short-term plan for three to twelve months depend on actual progress of the bank. According to staff report they predict 20% more on actual achievement. Management always engages to improve its operation, market aspects and make the personnel full skilled their job. Bank has been trying to improve profit by giving best training to the personnel.

4.2.5.1 Long-Term Plan

In the context of Nepal, a few commercial banks are prepared two periodic profit plan. A long-range profit plan encompasses a time horizon of five years beyond the upcoming year. And a tactical short-range is for each four months period of following budget year.

4.2.5.1.1 Total Capital Fund Plan

In this context, MBL follows the directives of NRB. According to the NRB directives commercial bank should maintain their capital fund 8%. The following table 4.14 shows the capital fund of MBL.

Table 4.14: Total Capital Fund Plan

'000'

Fy	Paid-up capital	Reserve and surplus	Total
2062/63	715000	216091.36	931091.36
2063/64	821651.30	178316.34	1000264.64
2064/65	901339	262007.66	1163346.66
2065/66	1479269.60	220928.50	1700198.10
2066/67	1479269.60	220928.50	1700198.10

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.14 shows the paid-up capital is in increasing every year. In Fy 2062/63 paid-up capital is Rs. 715000 thousand and reserve and surplus is Rs. 216091.36 thousand. Similarly, it is increased every year. In Fy 2065/66, paid-up capital is Rs. 1479269.60 thousand and reserve and surplus is Rs. 220928.50 thousand. In Fy 2066/67, paid-up capital and reserve and surplus become same. So we can conclude that paid-up capital is increasing every year except Fy 2066/67. But reserve and surplus is increasing upto Fy 2064/65 and it is decreased in Fy 2065/66.

Reserve and surplus is created form profit. Due to decreased in net profit, in Fy 2065/66 and 2066/67, reserve and surplus is also decreased.

4.2.5.1.2 Long-Term Credit Investment Plan

MBL has no practice of preparing long-term plan in systematically but it predicts 20% more for each fiscal year on actual achievement. The following table shows the picture of long-term credit investment trends of MBL from Fy 2062/63 to 2066/67.

Table 4.15: Budgeted and Actual Credit Investment

Rs. in '000'

Fy	Budgeted investment	Actual investment	Achievement (%)
2062/63	562334.60	1190829.82	211.76
2063/64	1428995.78	1278468.56	89.46
2064/65	1414162.27	1443550.56	102.08
2065/66	1732260.67	1246158.65	71.94
2066/67	1495390.38	2096792.29	140.22

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.15 shows that the achievement is in fluctuating trend. In Fy 2062/63, the achievement is made by 211.76%, but in Fy 2063/64, it is decreased or achievement has not been met i.e. 89.46% only. Similarly, in Fy 2064/65 achievement is 102.08%, in Fy 2065/66 it decreased to 71.94%. In Fy 2066/67 it is achieved i.e. 140.22% From above table we can conclude that the actual and budgeted investment is not related each other. It is increased by 211.76% in Fy 2062/63 and decreased to 71.71% in Fy 2065/66. The arithmetic mean and standard deviation with coefficient of variation of MBL for credit investment are summarized as under:

Here,

Credit investment budgeted = x
Credit investment achievement = y

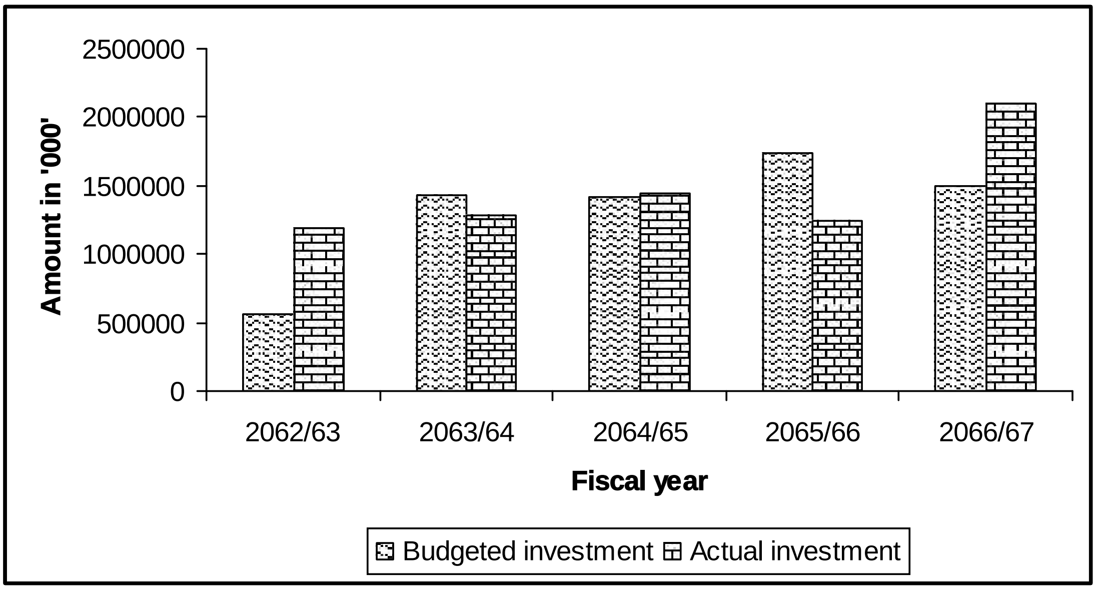
Calculation of standard deviation, coefficient of variation and correlation coefficient is as under (Source: Appendix-VII).

Budgeted credit investment (x)	Actual credit investment (y)
Mean = 1326.63	1451.17
S.D. = 398.82	333.61
C.V. = 30.06%	22.99%

The above analysis shows that achievement in credit investment is less variable than budgeted investment. The coefficient of variation of achievement is less than budgeted investment. This means budgeted investment more variable than actual achievement. Standard deviation, which shows consistency, also higher of budgeted than actual investment.

The budgeted credit investment and achievement in credit investment can be shown in figure.

Figure 4.3: Budgeted and Actual Credit Investment



The graphical presentation indicates that the actual achievement in credit investment is more in three fiscal years (Fy 2062/63, 2064/65 and 2066/67)and less in two fiscal years (Fy 2063/64 and 2065/66). The gap between budgeted investment and achievement is also more.

Another statistical tool correlation coefficient can be used to analyze the relation between budgeted investment and actual investment. For this purpose, Karl Pearson's coefficient of correlation and it is denoted by (r), calculating r we can examine whether there is positive correlation between budgeted investment and actual investment or not. In other words, whether or not the actual investment will be changed in the same direction that the budgeted investment will be changed. For this reasons budgeted investment figures denoted by 'x' are assumed to be independent variable and actual figures denoted by 'y' are assumed to be dependent variable.

The detail calculation of 'r' and probable error 'r' is presented in appendix VII and from this appendix, we have the calculated value of 'r' is 0.31.

The significant of r can be tested by the help of PE of r. We have PE of r is 0.27. Since the 'r' is greater than the probable error i.e. 0.31 > 0.27, the value of r is definitely significant. So it can be said that actual investment will go on same direction that of the budgeted investment.

The value of 'r' shows that there is positive correlation between budgeted credit investment and actual investment, this means the actual investment will go to same direction as the budgeted credit investment.

A regression line can also be fitted to show the degree of relationship between budgeted credit investment and actual credit investment and to forecast. The possible actual credit investment have been assumed to be dependent upon budgeted, so the regression line of achievement y on target or budgeted investment x or y on x is as follows:

$$y - \bar{y} = r\frac{\sigma_y}{\sigma_x}(x - \bar{x}) \text{ ………… (1)}$$

Budgeted credit investment (x)	Achievement (y)
Mean = 1326.63	1451.17
S.D. = 398.82	333.61
rxy = 0.31	

Putting the value on eq. (i)

$$y - 1451.17 = 0.31\ \frac{333.61}{398.82}\ (x - 1326.63)$$

or, $y - 1451.17 = 0.26\ (x - 1326.63)$

or, $y - 1451.17 = 0.26x - 344.92$

or, $\hat{y} = 1106.25 + 0.26\ x$

By this equation, there is positive relation between budgeted credit investment and actual credit investment, here a certain amount 1106.25 increases and actual credit investment will also increased by 0.26 per rupee.

By help of regression equation, we can determine the expected achievement on credit investment with the given value of budgeted credit investment (x). By this equation, we can ascertain the expected achievement or credit investment for Fy 2066/67:

Budgeted credit investment for 2066/67 (x)

$x = 1495.39$

Expected credit investment achievement (y)

$y = 1106.25 + 0.26 \times 1495.39$
$= 1495.39$ lakhs.

If the relationship between budgeted investment and actual investment remain same as previous year then the actual investment for Fy 2066/67 will be 2096.79 lakhs.

4.2.5.1.3 Total Deposit Collection Plan

MBL has plan to collect deposit 20% above the actual collection. But this is not systematic projected plan. How much money needed to the bank and how can it be collected is not question to the bank but providing best services to the customers and collect all the money, who open account in the bank. Bank cannot deny excess collecting and can't stop issuing money to the authenticate cheque. But bank always aware towards utilization of money.

Table 4.16: Budgeted and Actual Deposit Collection

Rs. in '000'

Fy	Budgeted collection	Actual collection	Achievement
2062/63	**6704163.17**	**7893297.67**	**117.74**
2063/64	**9471957.20**	**9475451.51**	**100.04**
2064/65	**11370541.81**	**11102242.26**	**97.64**
2065/66	**13322690.71**	**15596790.85**	**117.07**
2066/67	**18716149.02**	**18535917.0**	**99.04**

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

From above table 4.16 it is known that the achievement of MBL of deposit collection is satisfactory. However, the achievement is in fluctuating trend i.e. below the budgeted and higher than budgeted. In Fy 2062/63 it has collected total deposit more than budgeted i.e. 117.74%, in Fy 2063/64 budgeted collection and actual collection seemed almost equal. In Fy 2064/65 and 2066/67 it is less than budgeted collection i.e. 97.64% and 99.04%. In Fy 2065/66 it has collected total deposit more than budgeted.

From above data, we can conclude that the budgeted and actual collection of MBL is satisfactory.

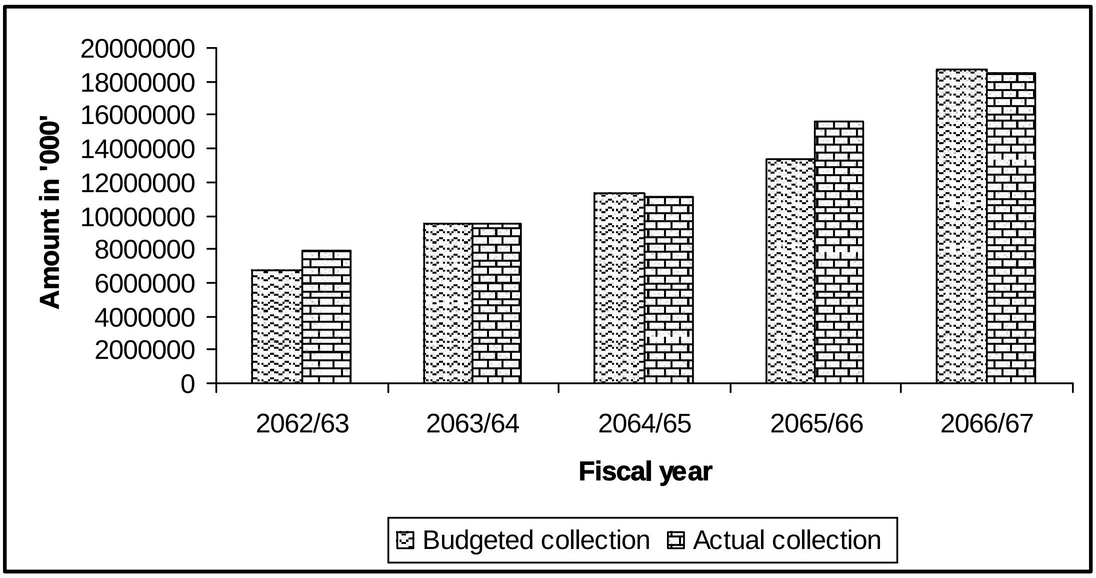
To find out the nature of the variability of deposit collecting in budgeted and achievement of different year arithmetic mean, standard deviation and coefficient of variation should be calculated. The detail calculation of these variables are presented in appendix VIII.

Budgeted deposit collection (x)	Actual deposit collection (y)
Mean = 119.17	125.21
S.D. = 40.41	39.58
C.V. = 33.91%	31.61%

The above analysis shows that coefficient of variation is greater in budgeted collection than actual collection. It means that the actual collection of money is more consistent than budgeted deposit collection.

This can be presented in graph which as:

Figure 4.4: Budgeted and Actual Deposit Collection



To find out the correlation between budgeted and achievement figures coefficient of correlation (r) is determined for this purpose, budgeted figure (x) are assumed to be independent variable and achievement figures (y) are assumed to be dependent variable.

The detail calculation of 'r' and probable error of 'r' is presented in appendix………… and from this appendix we have the calculated value of 'r' is 0.97.

The value of 'r' shows that there is positive and strong correlation between budgeted and actual deposit collection. The significant of 'r' can be tested by help of probable error of r is 0.02.

Since the value of 'r' is greater than the probable error is 0.98 > 0.02, the value of 'r' is definitely significant. So it can be said that actual collection will go on same direction that of budgeted collection.

A regression line also can be fitted to show the degree of relationship between budgeted deposit collection and actual collection and forecast the possible actual deposit collection with given targeted figures. For this purpose actual deposit collections have been assumed to be dependent upon budgeted.

So regression line of achievement 'y' on budgeted 'x' on 'y' or 'y' on 'x' is as follows:

$$y - \bar{y} = r\frac{\pm_y}{\pm_x}(x Z \bar{x})$$

Putting the value of equation following result comes in :s

$$y - 125.21 = 0.97 \text{ x } \frac{39.58}{40.41}(x Z 119.17)$$

or, $y - 125.21 = 0.95$ (x-119.17)

or, $y = 0.95x - 113.21 + 125.21$

or, $y = 0.95x + 15$

or $\hat{y} = 12 + 0.95x$

The regression shows the positive relationship between budgeted deposit collection and actual deposit collection. Here, a certain amount 12 increased actual collection 9.95 per rupees increased in budgeted collection of deposit.

By this regression ascertain the expected collection achievement will give value of budgeted collection (x). This equation to ascertain the expected deposit of collection of deposit achievement for Fy 2066/67 is as under:

Budgeted collection of deposit for Fy 2066/6y7 = 18716149.02

y = 12 + 0.95 x 18716149.02

= 17780353.57 thousand

In the relationship between budgeted collection and actual collection remain increase as previous year, that the actual of deposit for Fy 2066/67 will 17780353.57 thousand.

Another statistical tool called least square method can be also used to analyze the trend of actual deposit collection of a given time of year. Time element is an important factor, with the passage of time, the deposit collection change which can be expressed by the components of time series.

4.2.5.1.4 Actual Loan Disbursement and Actual Deposit Collection

It is necessary to analyze whether deposits meet to disbursement or investment or not and it is significant to analyze the relationship between credit investment and deposit collection.

Following table 4.17 shows the MBL's actual investment and actual deposit collection.

Table 4.17: Actual Loan Disbursement and Actual Deposit Collection

Rs. in '000'

Fy	Actual credit investment	Actual deposit collection	% of investment
2062/63	**1190829.82**	**7893297.67**	**15.09**
2063/64	**1278468.56**	**9475451.51**	**13.49**
2064/65	**1443550.56**	**11102242.26**	**13.0**
2065/66	**1246158.65**	**15596790.85**	**7.99**
2066/67	**2096792.29**	**18535917.0**	**11.31**

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

From the above table 4.17, it is clear that the investment on actual deposit collection is 15.09%, 13.49%, 13.00%, 7.99% and 11.31%. The bank ahs invested highest amount on its deposit i.e. 15.09%in Fy 2062/63 and lowest investment is in Fy 2065/66 i.e. 7.99%.

Summarizing the result from appendix

	Actual credit investment (Rs.)	Actual deposit collection (Rs)
Mean	14.51	125.21
S.D.	3.33	39.58
C.V.	22.95%	31.61%

Source: Appendix VIII.

Above table 4.17 shows that actual deposit collection is more variable than actual credit investment. Since the coefficient of variation and standard deviation of actual deposit collection is greater than actual credit investment, actual deposit collection is more variable.

4.2.6 Operational Profit and Net Profit

Profit and loss account shows the final position of the company. The below table 4.18 shows the profit and loss account and profit trend of MBL form 2062/63 to 2066/67.

Table 4.18: Operational Profit and Net Profit

Rs. in '000'

Fy	Operational profit	Net profit
2062/63	**192908.82**	**133996.71**
2063/64	**91100.16**	**74085.65**
2064/65	**39749.10**	**85016.0**
2065/66	**83632.34**	**123251.10**
2066/67	**(13580.80)**	**73312.80**

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.18 shows the operational profit and net profit of MBL. In Fy 2062/63 operational profit is Rs. 192908.82 thousand whereas net profit is Rs. 133996.71 thousand. In fy 2063/64 operational and net profit both are decreased. In Fy 2064/65 operational profit is decreased but net profit has been increased. Similarly, in Fy 2065/66 operational profit and net profit both are increased but in Fy 2066/67 operational profit become negative and net profit also decreased to Rs. 73312.80 thousand.

Operating loss occurred in Fy 2066/67, the cause may be bad debt increment, opening new branches along with increase in staffing cost.

4.2.7 Cash Budget

Cashflow planning or cash budget is not an expense budget, but it is a plan of cashflows. It provides relevant information about the cash receipts and cash payments of enterprises during a period. information about enterprises cashflows is useful in assessing its liquidity, financial flexibility, profitability and risk. Planning of cashflow indicates:

i. The need for financing probable cash deficit.

ii. The need of investment planning to put excess cash for profitable use. Cash budget is prepared with the help of other financial budget such as: sales plan, account receivable and expenditure budget.

The major sources of cashflows of MBL is the collection of deposit from the customers and the other source are income from interest, income from exchange money, income by issuing shares, loan received form other places. The main place of cash outflows is the capital expenditure, administrative expenses, interest payment of loan, loan reimbursement, advance to the staff and inventory.

Table 4.19: Cashflow Statement

Rs. in '000'

Particular	2062/63	2063/64	2064/65	2065/66	2066/67
A. Cashflow from operating activities	(167783.13)	685629.30	553040.41	1011471.59	(193846.24)
B. Cashflow from investing activities	(31515.21)	(171057.41)	(293874.70)	(159579.98)	(113653.61)
C. Cashflow from financing activities	282089.0	(42522.44)	35428.38	404951.10	-
D. Income/loss from change in exchange rate in cash and bank balance	-	(1893.20)	9889.35	9750.94	568144
E. Current year's cashflow form all activities	82790.66	470156.25	304483.45	1266593.62	(306931.70)
F. Opening balance of cash and bank	731133.28	813923.94	1284080.19	1500055.50	2766649.12
G. Closing balance of cash and bank	813923.94	1284080.19	1588563.63	2766649.12	2459717.42

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

From above cashflow statement we can say that the closing balance of cash and bank is positive every year and it is increasing every year except Fy 2066/67. Cashflow form operating activities, which shows the strong or weak position of organization, is positive in Fy 2063/64 to 2065/66. But in Fy 2062/63 and 2066/67 it is in negative figure which indicates the weak position of MBL.

4.2.8 Profit and Loss Account

After preparing all functional budget, profit and loss account is prepared to know the future profit or loss for the budgeted. It shows the final conclusion of operation of an accounting year. MBL does not prepare profit and loss account in advance. At the end of each fiscal year, the account department prepares P/L account.

Table 4.20: Profit and Loss Account

Rs. in '000'

Particular	2062/63	2063/64	2064/65	2065/66	2066/67
Net interest income	274700.76	296760.51	388677.94	461437.24	543809.86
Total operating income	356945.80	409140.97	500065.64	616407.69	697042.82
Operating profit before provision	227611.36	248706.21	304236.16	342570.97	321460.05
Operating profit after provision	192908.82	91100.16	39749.10	83632.34	(13580.80)
Profit form regular operation	213049.02	139747.79	175106.30	194394.92	104215.60
Net profit after considering all activities	211519.06	125428.72	175144.30	193894.73	114185.92
Net profit/(Loss)	133996.71	74085.65	85016.0	123251.10	73312.80

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

From above table 4.20 it is shown that net profit is increasing every year except year 2066/67. In Fy 2066/67, the bank has not able to get profit in previous year's ratio. Due to increasing operating cost and bad debt, bank has fallen back. Establishing new branches i.e. 8 (in Fy 2065/66 no. of branches are 31 whereas in Fy 2066/67 it has increased to 39 branches), the bank beard a lot of expenses. The establishing and operating cost played a major role in reducing net profit.

4.3 Financial Analysis

4.3.1 Liquidity Ratios

Liquidity ratio is a pre-requisite for every survival of a firm. The short-term creditors of the firm are interested in the short-term solvency or liquidity of a firm but liquidity implies, from the view point of utilization of the fund of the firm that funds are idle or they earn very little. A proper balance between the two contradictory requirements i.e. liquidity ratio measures the ability of a firm to meet its short term obligation and reflects the short term financial strength or solvency of a firm. According to the nature of the firm, various ratios may be calculated their liquidity position. Below here have been calculated some liquidity ratios which have been thought to be important to indicate the liquidity position of a bank and have been used to analyze the financial position of Machhapuchhre Bank Limited in term of its liquidity.

4.3.1.1 Current Ratio

Current assets include cash and those assets, which can be converted into cash within a year. These include cash and bank balance, investment in government securities, loans and advances, money at call and short notice, bills for collection, interest receivables. All obligations maturing within year are included in current liabilities. These consists of current, saving and short term deposit, fixed deposit maturing in that year, borrowing, accrued expenses, bills for collection, dividend payable, customers acceptances etc.

Current ratio = $\frac{Current\ assets}{Current\ liabilities}$

Table 4.21: Current Ratio

Rs. in lakh

Fiscal year	Current assets	Current liabilities	Ratio (times)
2062/63	45209.35	39597.03	1.14
2063/64	81374.44	51064.4	1.59
2064/65	92290.89	32903.41	2.80
2065/66	127520.88	57007.7	2.24
2066/67	178931.24	106181.61	1.69
Mean			1.89
S.D.			0.64
C.V.			33.91%
r			0.87

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

The above table 4.21 shows current assets and current liabilities. The ratio of the bank are in fluctuation trend. The current ratio of the bank is not satisfactory because it is below the standard level of 2:1.

From the above table, it is seen that the ratio of current assets to current liabilities 1.14, 1.59, 2.80, 2.24 and 1.69 in the fiscal year 2062/63 to 2066/67 respectively. It is in fluctuation trend every year. Its mean deviation is 1.89, standard deviation is 0.65 and coefficient of variation is 33.91%.

According to the trend in ratio of commercial bank, the ratio below the normal standard may seen unsatisfactory, but it denotes that the bank has adequate liquidity in the fiscal year 2064/65 and 2065/66. But in other fiscal year of has below has the standard level of liquidity i.e. 2:1. Coefficient of variation measures the risk. Bank having low C.V. is preferable than high C.V. From the overall point of view i.e. higher the CV, higher standard deviation and lower current assert ratio, it is unsatisfactory to Machhapuchhre Bank Limited.

Correlation between current assets and current liabilities is 0.87, which shows the high correlation between current assets and current liabilities. This shows the high consistency of CA and CL.

4.3.1.2 Cash and Bank Balance to Current and Saving Deposit Ratio

Cash and bank balance comprise cash in hand, foreign cash in hand cheque and other cash items balance held in foreign banks. Current and saving deposit consist all types of deposits excluding fixed deposits.

Cash and bank balance to current and saving deposit = $\frac{\textit{Cash and bank balance}}{\textit{Current and saving deposit}}$

Table 4.22: Cash and Bank Balance to Current and Saving Deposit Ratio

Rs. in lakh

Fiscal year	Cash and bank balance	Current and saving deposits	Ratio (times)
2062/63	8139.24	25822.01	0.32
2063/64	12840.8	42035.08	0.31
2064/65	15885.64	54318.28	0.29
2065/66	27666.79	73946.26	0.37
2066/67	24597.17	72272.07	0.34
Mean			0.33
S.D.			0.03
C.V.			9.94%
r			0.98

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.22 reveals the cash and bank balance to current deposit ratio. The highest ratio is 0.37 in Fy 2065/66 and lowest ratio is 0.29 in Fy 2064/65. The ratio, below the average are 0.31, 0.30, 0.29, in Fy 2062/63 to 2064/65 respectively and higher the average ratios are 0.37 and 0.34 in Fy 2065/66 and 2066/67 respectively.

The standard deviation is 0.03, which shows a very low deviation between the ratio of cash and bank balance to current and saving deposit ratio. Coefficient of variation i.e. 9.93% shows the less riskiness of the bank in maintaining cash and bank balance and current and saving deposit.

Correlation coefficient between cash and bank balance to current and saving deposit is 0.98, which shows the high consistency between cash and bank balance to current and saving deposit which shows that the bank is able to maintain cash and bank balance to saving deposit ratio.

4.3.1.3 Cash and Bank Balance to Total Deposit Ratio

This ratio indicates the ability of banks immediately funded to cover their current margin call, saving, fixed, call deposit and other deposits.

Cash and bank balance to deposit ratio reflects the ability of bank immediate fund to meet / cover their current deposits margin call and saving deposit. Higher ratio shows the higher liquidity position and ability to cover the deposits and vice-versa.

Cash and bank balance to total deposit = $\frac{Cash\ and\ bank\ balance}{Total\ deposit}$

Table No. 4.23: Cash and Bank Balance to Total Deposit Ratio

Rs. in lakh

Fiscal year	Cash and bank balance	Total deposit	Ratio (times)
2062/63	8139.24	78932.98	0.10
2063/64	12840.8	94754.52	0.14
2064/65	15885.64	111022.42	0.14
2065/66	27666.49	155967.91	0.18
2066/67	24597.17	185359.17	0.13
Mean			0.14
S.D.			0.03
C.V.			19.22%
r			0.93

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

The above table 4.23 shows the ratio of cash and bank balance to total deposit. The lowest ratio in Fy 2062/63 is 0.10 and the highest is 0.17 in Fy 2065/66. The ratio is slightly exceeded than the average 0.14 and 0.17 in Fy 2064/65 and 2065/66 respectively. In the fiscal year 2062/63 and 2066/67 are near the average, and other remaining fiscal year 2062/63 in 0.10 are below the average. Thus, the ratio has inverse relationship in each other.

From the point of correlation coefficient cash bank balance to total deposit ratio is closely related which is a strong point of MBL.

4.3.1.4 Fixed Deposit to Total Deposit Ratio

The ratio shows that percentage of total deposit has been collected in form of fixed deposit. High ratio indicates better opportunity available to the bank to invest in sufficient profit generating long-term loans. Low ratio means the bank should invest the fund of low cost in short term loans.

$$\text{Fixed deposit to total deposit} = \frac{Fixed\ deposit}{Total\ deposit}$$

Table 4.24: Fixed Deposit to Total Deposit Ratio

Rs. in lakh

Fiscal year	Fixed deposit	Total deposit	Ratio (times)
2062/63	26048.98	78932.98	0.33
2063/64	27333.6	94754.52	0.29
2064/65	29611.41	111022.42	0.27
2065/66	36818.3	155967.91	0.24
2066/67	67541.51	185359.17	0.36
Mean			0.30
S.D.			0.05
C.V.			17.11%
r			0.89

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

The above table 4.24 shows fixed deposit to total deposit ratio of Machhapuchhre Bank Limited. The ratio of MBL exceed mean is 0.33 and 0.36 in Fy 2062/63 and 2066/67. In remaining years it is lower than mean ratio i.e. 0.29, 0.27 and 0.24 in the year 2063/64, 2064/65 and 2065/66 respectively.

Higher the fixed deposit ratio indicates better opportunity available to the bank to invest in sufficient profit generation long-term investment.

However the ratio is in fluctuation trend but the standard deviation is not so greater. This is the positive sign for the bank. On the other hand, C.V. is only 17.11% which shows a little bit risk position between fixed deposit to total deposit ratio. Correlation coefficient i.e. 0.89, highly correlated, shows the better combination of fixed deposit to total deposit ratio.

4.3.2 Leverage Ratio

To judge the long term financial position of the firm in financial leverage or capita structure ratios are calculated. These ratios indicate funds provided by owners and lenders as a general rule, there should be an appropriate mix debt and owner's equity in financing the firm's assets. The leverage ratio re calculated to measure the financial risk and firm ability of using debt for the benefit of shareholders.

4.3.2.1 Debt to Equity Ratio

It shows the relationship between debt and equity. It shows the equity capacity toward the debt. Generally very high debt to equity ratio is unfavourable to the business because the debt gives third parties legal claims on the company, there claims are for interest payment at regular intervals, plus repayment of the principle by the agreed time. On the other hand low debt is also favourable from the shareholder's point of view. It measure creditors claim again owner. A high ratio shows the creditor claim are greater than those of owners such a situation introduces inflexibility in the firm's due to the increasing interference and pressure form creditors.

Debt to equity = $\frac{Total\ debt}{Shareholder's\ equity}$

Table 4.25: Debt to Equity Ratio

Rs. in lakh

Fiscal year	Total debt	Shareholder's equity	Ratio (times)
2062/63	81387.39	9310.91	8.74
2063/64	98073.52	10002.65	9.80
2064/65	113352.01	11633.47	9.74
2065/66	157905.84	15013.62	10.52
2066/67	189052.8	17735.5	10.66
Mean			9.89
S.D.			0.76
C.V.			7.72%
r			1.0

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table shows that debt equity ratio is increasing trend except fiscal year 2064/65. Its ratio is 8.74%, 9.80%, 9.74%, 10.51% and 10.65% in the year 2062/63 to 2066/67 respectively. In Fy 2066/67 is debt to equity ratio is high i.e. 2062/63 its debt to equity ratio is low i.e. 8.74%.

From the point of S.D. and C.V., bank has satisfactorily debt equity ratio. This shows the bank is able to maintain debt equity ratio.

Correlation coefficient between debt to shareholder's equity is perfectly positive. Form above figure we can conclude that MBL is able to maintain total debt to shareholder's equity ratio.

4.3.2.2 Total Debt to Total Assets Ratio

Debt to Assets Ratio reflects the financial contribution of outsides and owners on total assets of the firm. It also measures the financial security to the outsiders. Generally creditors prefer a low debt ratio and owners prefer high debt ratio in order to magnify their earning on the one hand and to maintain their concentrated control over the firm on the other.

The ratio shows the contribution in financing the assets of the bank. High ratio indicates that the greater portion of the bank's assets have been financing through the outsiders fund. The ratio should not be too high or too low. The ratio shows the contribution of creditors in financing the assets of the bank lower ratio indicates that the greater portion of the banks assets been financed through the equity fund. The ratio should not be too high nor too low.

Total debt to total assets = $\frac{Total\ \ debt}{Total\ \ assets}$

Table 4.26: Total Debt to Total Assets Ratio

Rs. in lakh

Fiscal year	Total debt	Total assets	Ratio (times)
2062/63	81387.39	90698.31	0.90
2063/64	98073.52	108076.17	0.91
2064/65	113352.01	124985.48	0.91
2065/66	157905.84	144907.82	1.09
2066/67	189052.8	206787.91	0.91
Mean			0.94
S.D.			0.08
C.V.			8.71%
r			0.97

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table shows that banks debt to assets ratio is satisfactory, but fiscal year 2065/66 are total asset is less than total debt, other then debt portion is low than assets so it has big possibilities to invest for other big productive sectors.

Total debt to total assets ratio is slightly changed in every fiscal year. It is stable in 0.90 to 0.91 in fiscal year 2062/63 to 2064/65. In fiscal year 2065/66 it is increased to 1.09 and in Fy 2066/67 it again decreased to 0.91 times. From the viewpoint of standard deviation and C.V. i.e. 0.08 and 8.71%, coefficient of correlation i.e. 0.97 also shows there is highly correlation between total debt to total assets ratio. So, we can easily say that the bank is able to maintain its total debt to total assets ratio..

4.3.2.3 Total Debt to Total Capital Ratio

Total capital refers to the sum of interest bearing debt and net shareholder equity. it shows the proportion to debt in total capital employed by the bank, high ratio indicates greater claim of the creditors. Low ratio is indication of lesser claim of outsider. For the sound solvency position the ratio should not be too high nor too low.

Total debt to total capital = $\frac{Total\ \ debt}{Total\ \ capital}$

Table 4.27: Total Debt to Total Capital Ratio

Rs. in lakh

Fiscal year	Total debt	Capital	Ratio (%)
2062/63	81387.39	90698.30	89.73
2063/64	98073.52	108076.17	90.74
2064/65	113352.01	124985.48	90.69
2065/66	157905.84	172919.46	91.32
2066/67	189052.8	206788.30	91.42
Mean			90.78
S.D.			0.67
C.V.			0.01%
r			0.999

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.27 shows debt to total capital ratio of Machhapuchhre Bank Limited. The ratio has fluctuated on increasing trend during the year. During the Fy 2066/67 the ratio has increased.

Debt to total capital ratio of MBL is in slightly fluctuation on increasing trend during the study period. The highest ratio has been observed Fy 2066/67 which it is 91.42% and lowest ratio has been observed Fy 2062/63 which is 89.73 %. The least C.V. and S.D. i.e. 0.01% and 0.67 shows the higher consistency between total debt and capital of MBL.

The higher mean ratio of MBL indicates the higher claim of creditors that means higher capital employed by the bank and greater proportion of debt in total capital.

Correlation coefficient i.e. r = 0.999 shows the total debt to total capital ratio is perfectly correlated. This shows the bank has been able to maintain debt to capital ratio because higher debt capital ratio shows the higher creditor’s claim in bank.

4.3.2.4 Interest Coverage Ratio

The ratio is also known as time interest earned ratio is used to test the debt. It shows the numbers to times the interest charge are covered by funds that are ordinarily available for the payment. It indicates the event to which the earning may fall without causing any embarrassment to the regarding the payment to interest.

$$\text{Interest coverage} = \frac{EBIT}{Interest\ ch\arg e}$$

Table 4.28: Interest Coverage Ratio

Rs. in lakh

Fiscal year	EBIT	Interest charge	(Ratio (times)
2062/63	4809.52	2886.62	1.67
2063/64	5117.48	3977.22	1.29
2064/65	5671.41	4079.19	1.39
2065/66	7563.04	5800.36	1.30
2066/67	12486.14	11448.08	1.09
Mean			1.35
S.D.			0.21
C.V.			15.52%
r			1.00

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.28 shows EBIT to interest charge ratio of banks. During the Fy 2063/64 to 2064/65 the ratio has increased. The ratio of MBL has fluctuating trend during the study period. The highest ratio has been observed by 2062/63 which it is 1.67 times and lowest ratio has been observed Fy 2066/67 which it is 1.09 times. The mean ratio of MBL is 1.35 times.

Standard deviation 0.21, C.V. 15.52% and r 1.0 shows the bank has consistency in interest coverage ratio. The higher mean ratio of MBL measure the higher percentage of net worth in relation to the total deposit collected in the bank.

4.3.4 Turnover/Activity Ratios

Turnover/Activity ratios measure how effectively the company employees the resources at its command an activity ratio may be defined as a test of relationship between loan and advance and total deposit. In other words, the activity ratio represents the intensity with which the firm used it as deposit amount. It is related with measuring the efficiency in invested management as well as deposit policy.

Activity ratios are intended to measure the effectiveness to employment of resources in a business concern. Through this ratio, it is known whether the funds have been used effectively in the business activities or not.

Loan and advance to total deposit = $\frac{Loan\ and\ advance}{Total\ deposit}$

Table 4.29: Loan and Advances to Total Deposit Ratio

Rs. in lakh

Fiscal year	Total loan and advances	Total deposit	Ratio (times)
2062/63	60333.65	78932.98	0.76
2063/64	72750.24	94754.52	0.77
2064/65	88749.14	111022.42	0.80
2065/66	129570.99	155967.91	0.83
2066/67	149347.18	185359.17	0.81
Mean			0.79
S.D.			0.03
C.V.			3.50%
r			1.00

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.29 shows loan and advance to total deposit ratio of MBL. The ratio of MBL is in increasing trend except Fy 2066/67. The highest ratio for the period has been observed in the Fy 2065/66 which is 0.83 and lowest ratio in the Fy 2062/63 which is 0.76.

The mean ratio of loan and advance to total deposit ratio of MBL reveals that the bank has highly used deposit for investing in loan and advance. The mean ratio of loan and advance to total deposit ratio of MBL reveals that the bank has greater use of deposit for investing in loan and advance.

Above description helps to conclude that the MBL is more successful to mobilize the total deposit on loan and advance.

Lower S.D. i.e. 0.03, lower C.V. i.e. 3.50% and perfect correlation i.e. 1.0 shows the higher consistency between total loan and advance to total deposit ratio.

4.3.4.1 Loan and Advance to Fixed Deposit Ratio

The ratio indicates what proportion of fixed deposit has been used for loan and advance. Since fixed deposit carry high ratio of interest funds so collected fund needs to be invested in such sectors which yield at least sufficient return to meet the obligation.

Loan and advance to fixed deposit = $\frac{Loan\ \ and\ \ advance}{Fixed\ \ deposit}$

Table 4.30: Loan and Advance to Fixed Deposit Ratio

Rs. in lakh

Fiscal year	Total loan and advances	Fixed deposit	Ratio (times)
2062/63	60333.65	26048.98	2.32
2063/64	72750.24	27333.6	2.66
2064/65	88749.14	29611.41	3.00
2065/66	129570.99	36818.3	3.52
2066/67	149347.18	67541.51	2.21
Mean			2.74
S.D.			0.53
C.V.			17.52%
r			0.87

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

The ratio indicates what proportion of fixed deposit has been used for loan and advance. Since fixed deposit carry high ratio of interest funds. So collected funds need to be invested in such sectors which yield at least sufficient return to meet the obligation.

Above table and figure shows loan and advance to fixed deposit ratio of MBL. The ratio is in fluctuating trend. It is 2.32, 2.66, 3.00, 3.52, 2.21 in the year 2062/63 to 2066/67 respectively. The mean ratio is 2.74, standard deviation is 0.53, coefficient of variation is 17.52 percent and r is 0.87.

The mean ratio of loan and advance to saving deposit ratio of MBL reveals that the bank has been not able to turnover fixed deposit into loan and advance.

4.3.4.2 Loan and Advance to Saving Deposit Ratio

The ratio indicates what proportion of fixed deposit has been used for loans and advance. Since fixed deposit carry high ratio of interest funds, collected funds need to be invested in such sectors which yield at least sufficient return to meet the obligation.

Loan and advance to saving deposit = $\frac{Loan\ \ and\ \ advance}{Saving\ \ deposit}$

Table 4.31: Loan and Advance to Saving Deposit Ratio

Rs. in lakh

Fiscal year	Total loan and advances	Saving deposit	Ratio (times)
2062/63	60333.65	23333.67	2.59
2063/64	72750.24	38568.15	1.89
2064/65	88749.14	49343.59	1.80
2065/66	129570.99	68450.79	1.89
2066/67	149347.18	66018.15	2.26
Mean			2.09
S.D.			0.33
C.V.			15.92%
r			0.94

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.39 shows loan and advance to saving deposit ratio of MBL. The ratio of loan and advance to saving deposit is 2.58 in 2062/63, it decreases to 1.89, 1.80 in the year 2063/64 and 2064/65, then it is increased to 1.89 and 2.26 for next two years 2065/66 and 2066/67. Its mean ratio is 2.08, standard deviation is 0.33, coefficient of variation is 15.91% and r is 0.94, which shows slightly fluctuation in loan and advance to saving deposit ratio.

4.3.4.3 Loan and Advance to Total Assets Ratio

It is measures what extent of total asset have been turnover to loan and advances.

Loan and advance to total assets = $\frac{Loan\ \ and\ \ advances}{Total\ \ assets}$

Table 4.32: Loan and Advance to Total Assets Ratio

Rs. in lakh

Fiscal year	Total loan and advances	Total assets	Ratio (%)
2062/63	60333.65	90698.31	66.52
2063/64	72750.24	108076.17	67.31
2064/65	88749.14	124985.48	71.01
2065/66	129570.99	144907.82	89.42
2066/67	149347.18	206787.91	72.22
Mean			73.30
S.D.			9.33
C.V.			12.72
r			0.95

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.32 shows loan and advance to total deposit ratio MBL. The ratio of MBL has increasing trend upto Fy 2065/66 but it decreases 72.29 for Fy 2066/67. The highest ratio for the period has been observed in the Fy 2065/66 which it is 89.42% and lowest ratio in the Fy 2062/63 which it is 66.52%.

The mean ratio of loan and advance to total assets of MBL is 73.29%, it has 9.33% standard deviation, 12.72% coefficient of variation and correlation coefficient is 0.95. The highest mean ratio of loan and advance to total assets of MBL reveals the bank has been able to turnover total asset into loan and advance in higher extent.

4.3.4.4 Investment to Total Deposit

Investment comprises of investment its government treasury bills, development bonds, company shares and other types of investment. The ratio shows how efficiently the major resources of the bank have been mobilized.

Investment to Total Deposit = $\frac{Investment}{Total\ \ deposit}$

Table 4.33: Investment to Total Deposit

Rs. in lakh

Fiscal year	Investment	Total deposit	(Ratio (%)
2062/63	11908.3	78932.98	15.09
2063/64	12784.69	94754.52	13.49
2064/65	14435.51	111022.42	13.00
2065/66	12461.59	155967.91	7.99
2066/67	20967.92	185359.17	11.31
Mean			12.18
S.D.			2.70
C.V.			22.17
r			0.76

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.33 shows investment to total deposit ratio of MBL. The highest ratio of MBL is 15.09% in Fy 2062/63 and lowest 7.99% in Fy 2065/66. During the Fy 2062/63 the ratio has 15.09% then other decreased upto Fy 2065/66 then increased Fy 2066/67. This ratio indicates management efficiency regarding the utilization of deposit.

Standard deviation 2.70, coefficient of variation 22.17% and correlation coefficient of correlation 0.76 shows the bank has been able to maintain investment to total deposit ratio to some extent.

4.3.5 Profitability Ratios

Profit is the difference between revenue and expenses over a period of time. A company should earn profit to provide service and grow over a long period of time. So profits are essential but profit earning is not the ultimate aim of the company and it should never be earned at the cost of employee, customers and society.

However, profitability is a measure of efficiency and the search for it provides an incentive to achieve efficiency. The profitability of a firm can be measured by its profitability ratio and profitability ratios are these ratios which indicates degree of success in achieving desired profit levels.

Profit provides money for repaying the debt incurred to finance the project and resource for the internal financing expansion the profitability of a firm can be measured by its profitability ratios can be determined on the basis of investment. The following are the major profitability ratios used in this study.

4.3.5.1 Return on Total Assets Ratios

Net profit refers to the profit after deduction of interest and tax. Total asset's mean that appear in asset right side of balance sheet. It measures the sufficiency of bank in utilization of the overall assets.

Return on total assets ratio = $\frac{NPAT}{Total\ \ assets}$

Table 4.34: Return on Total Assets Ratios

Rs. in lakh

Fiscal year	NPAT	Total assets	Ratio (%)
2062/63	1339.97	90698.31	1.48
2063/64	740.86	108076.17	0.69
2064/65	850.16	124985.48	0.68
2065/66	1232.51	144907.82	0.85
2066/67	733.13	206787.91	0.35
Mean			0.81
S.D.			0.41
C.V.			51.18
r			-0.46

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above the table shows return on total deposit ratio of bank. In fiscal year 2062/63 it has 1.48% then it is decreased to 0.69%, 0.68%0.85% and 0.35% in fiscal year 2063/64, 2064/65, 2065/66 and 2066/67 respectively. Upto fiscal year 2064/64 to 2065/66 it is slightly increased and decreased. But in fiscal year 2066/67 it is highly decreased fro 0.85% to 0.35%.

From above table and figure it is found that the highest ratio is 1.48% in 2062/63 and least is 0.35% in 2066/67. The mean ratio is 0.88%, standard deviation is 0.48%, coefficient of variation is 54.51% and correlation coefficient is -0.46. Higher the standard deviation, higher C.V. and negative correlation which shows the return on total assets ratio of MBL is not consistent i.e. riskier.

4.3.5.2 Return to Total Deposit Ratios

The ratio shows the relation of net profit earned by the bank with the total deposit accumulated. Higher ratio is index of strong profitability position.

Return to total deposit = $\frac{NPAT}{Total\ \ deposit}$

Table No. 4.35: Return to Total Deposit Ratio

Rs. in lakh

Fiscal year	NPAT	Total deposit	Ratio (%)
2062/63	1339.97	78932.98	1.70
2063/64	740.86	94754.52	0.78
2064/65	850.16	111022.42	0.77
2065/66	1232.51	155967.91	0.79
2066/67	733.13	185359.17	0.40
Mean			0.89
S.D.			0.48
C.V.			54.52
r			-0.29

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above the table shows return on total deposits ratio of bank. Like in return on total assets ratio, return on total deposit ratio is changing every year. The ratio of return on total deposit of MBL has decreasing trend every year except fiscal year 2065/66. The highest return to total deposit ratio is 1.70% in Fy 2062/63 and least is 0.40 in 2066/67.

The mean ratio is 0.89%, standard deviation is 0.48, coefficient of variation is 54.52% and correlation coefficient is -0.29 Higher the standard deviation, higher C.V. and negative correlation shows the bank is not able to maintain return to total deposit ratio promptly. From this figure we conclude that the bank should take corrective action to improve this negative situation of earning.

4.3.5.3 Total Interest Expenses to Total Interest Income

Total interest expenses consist of interest expenses incurred for deposit, borrowing and loan taken by the bank. Total interest income includes interest income received form loan and advance, cash credit, overdrafts, government securities, inter bank loans and other investment. Lower ratio is favorable from profitability point of view.

Total interest expenses to total interest income = $\frac{Total\ \text{int}erest\ \text{exp}enses}{Interest\ income}$

Table 4.36: Total Interest Expenses to Total Interest Income

Rs. in lakh

Fiscal year	Interest expenses	Interest income	Ratio (%)
2062/63	5633.62	5636.62	99.95
2063/64	3977.22	6944.82	57.27
2064/65	4079.19	7965.97	51.21
2065/66	5800.36	10414.73	55.69
2066/67	11448.08	16886.18	67.80
Mean			66.38
S.D.			19.72
C.V.			29.71
r			0.91

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.36 shows total interest expenses to total interest income ratio of MBL. The ratio of MBL has been fluctuated during the year. The highest ratio is 99.95% in the year 2062/63 and lowest in 2064/65 i.e. 51.21%. Lower the interest expenses to interest income shows the higher profit of the bank. Likewise, the bank is able to decrease this ratio except fiscal year 2065/66 and 2066/67. But in fiscal year 2065/66 and 2066/67it is increased to 55.69% and 67.80% respectively.

The mean ratio is 66.38%, standard deviation is 19.72%, C.V. is 29.71% and correlation coefficient is 0.91. Higher standard deviation, higher C.V. shows the bank has fluctuating expenses and income. It is more riskier for bank. This shows the bank has become failure to maintain interest expenses to interest income ratio properly. But correlation coefficient i.e. 0.91 shows the perfect correlation between interest expenses and interest income. This shows there is perfect correlation between interest income and interest expenses which is a strong point for bank.

As a whole, we can conclude that MBL has been able to minimize interest expenses in relation to interest income.

4.3.5.4 Interest Earned to Total Assets

The ratio shows the percentage of interest income as compared to the assets of the bank. High ratio indicates the proper utilization of banks assets for income generating purpose. Low ratio represents unsatisfactory performance.

Interest earned to total assets = $\dfrac{Interest\ income}{Total\ \ assets}$

Table 4.37: Interest Earned to Total Assets

Rs. in lakh

Fiscal year	Interest income	Total assets	Ratio (%)
2062/63	5636.62	90698.31	6.21
2063/64	6944.82	108079.17	6.43
2064/65	7965.97	124985.48	6.37
2065/66	10414.73	144907.82	7.19
2066/67	16886.18	206787.91	8.17
Mean			6.87
S.D.			0.81
C.V.			11.85
r			1.00

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.37 shows the interest earned to total assets of MBL. The ratio of MBL has fluctuated slightly during the year. The highest ratio is observed in Fy 2066/67 which is 8.17% and lowest ratio is 6.21% in Fy 2062/63.

The mean ratio of 6.87%, standard deviation is 0.81%, coefficient of variation is 11.85% and correlation coefficient is 1, shows there is slightly changed in the ratio of interest income to total assets. But the correlation between interest income to total assets is perfectly correlated.

Lower the standard deviation, lower C.V. and perfect correlation shows the bank is able to maintain its interest earned to total assets ratio properly.

4.3.5.5 Staff Expenses to Total Income Ratio

Staff expenses include salary and allowance, contribution to provident fund and gratuity fund, staff training expenses and other allowance and made for staff.

This ratio measures the proportion of income spent for the staff, whose contribution is of great significance in the success of the bank. High ratio indicates that the major portion of income is used for staff expense. From the firm's point of view, low ratio is advantage. But the staff prefer high ratio, as it is result of higher level of facilities and benefit provided to them.

Staff expenses to total income = $\frac{Staff\ \ \exp enses}{Total\ \ income}$

Table No. 4.38: Staff Expenses to Total Income Ratio

Rs. in lakh

Fiscal year	Staff/employee expenses	Total income	(Ratio (%)
2062/63	434.1	1339.97	32.40
2063/64	543.6	740.86	73.37
2064/65	714.21	850.16	84.01
2065/66	909.96	1232.51	73.83
2066/67	1521.13	733.13	207.48
Mean			94.22
S.D.			66.34
C.V.			70.41
r			-0.43

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.38 shows staff expenses to total income of the bank. The ratio of MBL has fluctuating during the year. The highest ratio is 207.48% in Fy 2066/67 and the lowest ratio i.e. 32.39% in Fy 2062/63.

Since the new branches i.e. 9, were launched by Machhapuchhre Bank Limited in fiscal year 2066/67, the operating expenses became high, so that the every aspects of banks seem weak in terms of profit. Increasing in interest expenses to total income ratio from 73.83% to

207.48% in fiscal year 2065/66 to 2066/67 seems the bank is going to bankruptcy in near future, due to launching new branches.

The mean ratio of MBL is 94.22%, standard deviation is 66.34%, coefficient of variation is 70.41% and correlation coefficient -0.28. The higher the mean ratio of MBL measure the highest percentage of staff expenses in relation to total income.

Higher the S.D., higher C.V. and negative correlation coefficient shows the riskier position of bank in terms of operating expenses to total income. To overcome this situation, MBL should maintain operating expenses properly.

4.3.5.6 General Expenses to Total Income

General expenses comprise expenses of incurred in house rent, water and electricity, repair and maintenance, legal expenses, audit expenses and other miscellaneous expenses made in course of operation. It shows the percentage of income spent for the operating activity of the bank. High ratio shows the large amount of income is spent for the operating activity of the bank. Low ratio is favorable to the bank, as it is the reflection of operational efficiency.

Operating expenses to total income = $\frac{Operating\ \exp enses}{Total\ income}$

Table 4.39: Operating Expenses to Total Income

Rs. in lakh

Fiscal year	Operating expenses	Total income	(Ratio (%)
2062/63	859.24	1339.97	64.12
2063/64	1041.81	740.86	140.62
2064/65	1244.08	850.16	146.33
2065/66	1828.41	1232.51	148.35
2066/67	2234.7	733.13	304.82
Mean			160.85
S.D.			87.83
C.V.			54.61
r			-0.28

Source: Annual reports of MBL (Fy 2062/63 to 2066/67 B.S.).

Above table 4.39 shows general expenses to total income ratio of MBL. the ratio is increasing trend during the year i.e. 2062/63 to 2066/67. The lowest ratio is 64.12% in Fy 2062/63 and highest ratio is 304.82% in Fy 2066/67. The mean ratio is 160.85%, standard deviation is 87.83%, coefficient of variation is 54.61% and correlation coefficient is -0.28.

From the above analysis it is concluded that the general/operating expenses is a part of expenses which is more than 300% than total income in the year 2066/67. The bank is not able to minimize it. This shows the bank is not able to maintain its operating expenses properly.

4.4 Statistical Analysis

This chapter includes some statistical analysis such as Karl Pearson's coefficient correlation, regression analysis, t-test, straight line trend, which are used to analyze the data to achieve the objective of the study.

4.4.1 Time Series Analysis

Time series is used to predict future forecasting and planning of variable on the basis of past and present information. In regard to MBL basically the trend of interest coverage ratio and interest income and interest expenses is analyzed. MBL has taken loan from different sources for certain period.

The projections are based on the following assumptions:

The main assumption is that other things will remain unchanged.

i. The forecasted will be true only with the limitations of least square methods are carried out.
ii. The MBL will continue to run in present position.
iii. The economy will remain in the present stage.

Trend Analysis of Interest Coverage

The analysis of interest coverage ratio of MBL for five years from fiscal year 2062/63 to fiscal year 2066/67 and forecasted of the same for next 5 years are given in the following table.

$$Y=a+bx$$

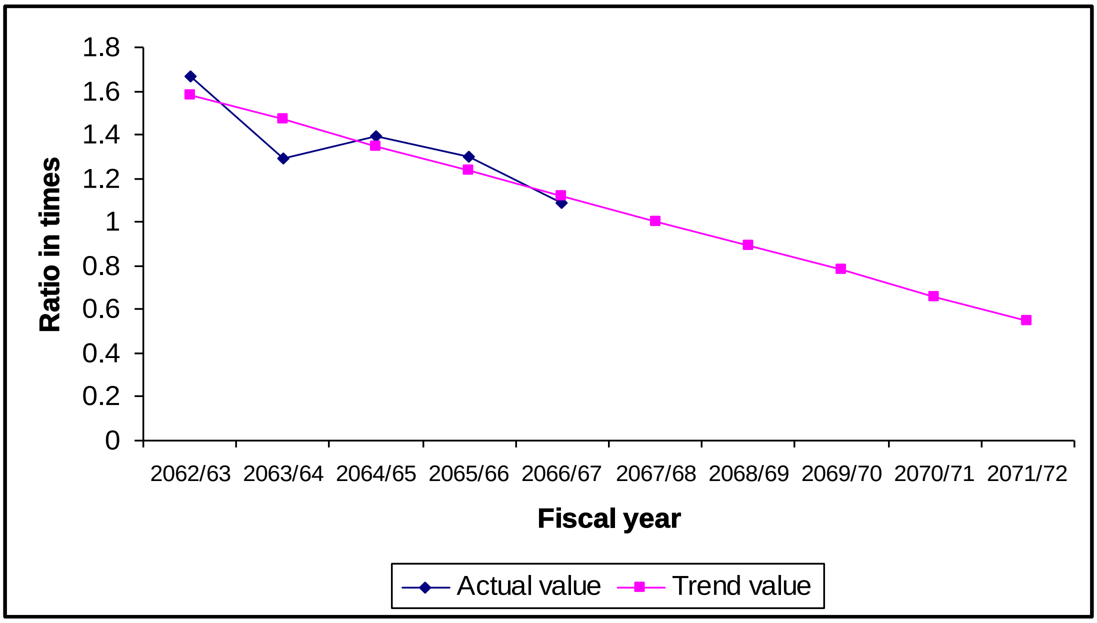
Table No. 4.40: Trend Value of Interest Coverage Ratio

Fiscal year	Actual value	Trend value
2062/63	1.67	1.58
2063/64	1.29	1.47
2064/65	1.39	1.35
2065/66	1.30	1.24
2066/67	1.09	1.12
2067/68	-	1.005
2068/69	-	0.89
2069/70	-	0.78
2070/71	-	0.66
2071/72	-	0.55

Source: Appendix-I.

In the above table of trend value of interest coverage ratio, shows decreasing trend. In the fiscal year 2062/63, it was 1.58 times where as it will be decreased to 0.55 times for the forecasted year 2071/72. It means the company has ability to pay interest of Rs. 1 by earning Rs. 0.55. The above calculations of trend values are fitted in the following figure.

Figure 4.5: Trend and Actual Line of ICR



Trend of Total Interest Expenses to Total Interest Income

The trend value of interest expenses and interest income of MBL for five years from 2062/63 and forecasting for the next five years till 2071/72 are given in the below table

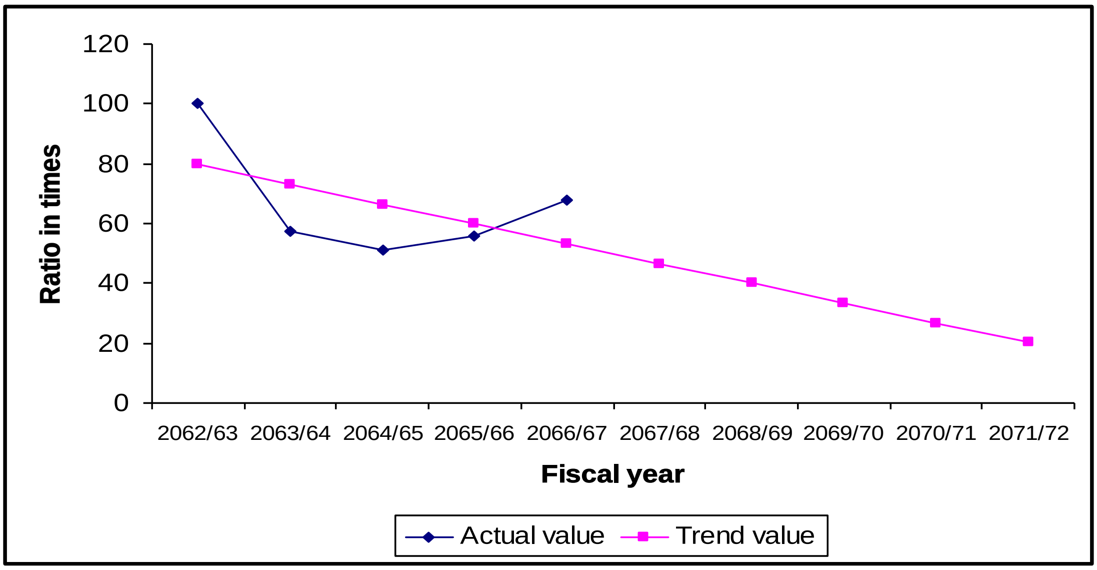
Table No. 4.41: Trend Value of Total Interest Expenses to Total Interest Income

Fiscal year	Actual value	Trend value
2062/63	99.95	79.58
2063/64	57.27	72.98
2064/65	51.21	66.38
2065/66	55.69	59.79
2066/67	67.80	53.19
2067/68	-	46.59
2068/69	-	39.99
2069/70	-	33.39
2070/71	-	26.80
2071/72	-	20.20

Source: Appendix-II.

From the above table of trend value of interest expenses and interest income shows the decreasing trend from 79.58 % in Fy 2062/63 to 20.20% for fiscal year 2071/72. The change is interest income and interest expenses has been affected in the change of trend values.

Figure 4.6: Trend and Actual Line of ICR



4.4.2 Correlation Analysis/Hypothesis Testing

Coefficient of Correlation between EBIT and Interest Charge:

The correlation between EBIT (x) and interest charge is analyzed in order to know whether there is relationship between EBIT and interest charge.

$$r = \frac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$$

Under t-statistic test,

Null hypothesis: H_1: $|\partial = 0$, that is the variables are uncorrelated (insignificant).

Alternative hypothesis: H_1: $\partial \neq 0$, that is the variables are correlated (significant).

The following result is obtained for MBL, Nepal.

Table No. 4.43: Coefficient of Correlation between EBIT and Interest Charge

Evaluation criterion					
r	r^2	t-calculated value	t-tabulated value	relationship	Significant/ insignificant
0.9956	0.9912	18.38	3.182	Positive	Significant

Source: Appendix-III.

Above table shows coefficient of correlation between EBIT and interest charge. Correlation between EBIT and interest charge is being independent. There is positive relationship between EBIT and interest charge. Coefficient of determination (r^2) indicates that 99.12% the variation in EBIT was explained by interest charge. Considering t-statistic calculated value, which was 18.38 and tabulated value of t-statistic, was 3.182 in 5% level of significance. T-statistic is significant because t-statistic value calculated is greater than tabulated value.

Coefficient of Correlation between Total Interest Expenses to Total Interest Income:

Under t-statistic test,

Null hypothesis: H_1: $|\partial = 0$, that is the variables are uncorrelated (insignificant).

Alternative hypothesis: H_1: $\partial \neq 0$, that is the variables are correlated (significant).

The following result is obtained for MBL, Nepal.

Table No. 4.44: Coefficient of Correlation between Total Interest Expenses and Total Interest Income

Evaluation criterion					
r	r^2	t-calculated value	t-tabulated value	relationship	Significant/ insignificant
0.91	0.8281	3.80	3.182	Positive	Significant

Source: Appendix-IV.

Above table shows coefficient of correlation between total interest expenses and total interest income. Correlation between total interest expenses and total interest income is being independent. There is positive relationship between total interest expenses and total interest expenses. Coefficient of determination (r^2) indicates that 82.81% the variation in interest expense was explained by total interest income. Considering t-statistic calculated value, which was 3.80 and tabulated value of t-statistic was 3.182 in 5% level of significance. t-statistic is significant because t-statistic value calculated is greater than tabulated value.

Actual Investment and Budgeted Investment

The correlation between budgeted investment (x) and actual investment (y) is analyzed in order to known whether budgeted and actual investments are similar.

$$r = \frac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$$

Under t-statistics test,

Null hypothesis, H_0: $\partial = 0$, i.e. budgeted investment and actual investment are not correlated.

Alternative hypothesis, H_1: $\partial \neq 0$, i.e. budgeted investments and actual investments are correlated (Two-tailed test).

Table 4.45: Coefficient of Correlation between Actual Investment and Budgeted Investment

Evaluation criterion						
6PE	**r**	**r^2**	**t-cal.**	**t-tab.**	**Relationship**	**Sig./Insig.**
0.27	**0.31**	**0.096**	**0.56**	**3.182**	**Positive**	**Insignificant**

Source: Appendix-VII.

Result from above calculation, i.e. correlation between budgeted investment and actual investment is 0.31. Coefficient of determination (r^2) indicates that only 9.6% of result of actual is affected/caused of budgeted. Since correlation coefficient is greater than 6PE i.e. 0.31 > 0.27, the correlation coefficient between actual investment and budgeted investment is significant. Considering t-statistics, calculated value, which is 0.56 and tabulated value of t-statistics is 3.182 at 5% level of significance. t-statistics calculated value is less than tabulated value of t. So, we conclude that there is no significant relationship between actual and budgeted investment.

Actual Deposit Collection and Budgeted Deposit Collection Plan

Under t-statistics test,

Null hypothesis, H_0: $\partial = 0$, i.e. actual deposit collection and budgeted deposit collection are not correlated.

Alternative hypothesis, H_1: $\partial \mid 0$, i.e. actual deposit collections and budgeted deposit collection are not correlation (two-tailed test).

Table 4.46: Actual Deposit Collection and Budgeted Deposit Collection Plan

Evaluation criterion						
6PE	**r**	**r^2**	**t-cal.**	**t-tab.**	**Relationship**	**Sig./Insig.**
0.02	**0.97**	**0.94**	**6.91**	**3.182**	**Positive**	**Significant**

Source: Appendix-VIII.

Above calculation shows the correlation coefficient between actual deposit collection and budgeted deposit collection. There is perfect positive correlation between actual and budgeted collection. Coefficient of determination (r^2) indicates that the actual deposit collection is affected 94% by budgeted deposit collection. Since correlation coefficient 'r' is greater than 6 PE i.e. 0.97 > 0.02, r is significant. Considering t-statistics, calculated value, which is 6.91 and tabulated value 3.182, shows there is significant correlation existed between budgeted deposit collection and actual deposit collection.

Actual Investment and Actual Deposit Collection

The correlation between actual investment (x) and deposit collection (y) is analyzed in order to know whether actual investment and actual deposit collection are related.

Under t-statistics test,

Null hypothesis, H_0: $\partial = 0$, i.e. actual deposit collection and actual investments are not correlated.

Alternative hypothesis, H_1: $\partial \mid 0$, i.e. actual deposit collection and actual investment are correlated (two-tailed test).

Table 4.47: Actual Investment and Actual Deposit Collection

Evaluation criterion						
6PE	**r**	**r^2**	**t-cal.**	**t-tab.**	**Relationship**	**Sig./Insig.**
0.13	**0.76**	**0.58**	**2.02**	**3.182**	**Positive**	**Insignificant**

Source: Appendix-IX.

Above calculation shows the correlation coefficient between actual investment and actual deposit collection is positive significantly, because the 6PE is less than calculated correlation coefficient. For testing of hypothesis, t-calculated value is less than t-tabulated value i.e. 2.02 < 3.182, there is no significant correlation coefficient between actual investment and actual deposit collection.

Correlation Matrix

In order to examine the possible degree of multiple co-linearity among the variables, correlation matrices of the selected variables has been considered. Correlation matrix gives the preliminary idea of the direction of the relationship between the selected variables. The variables selected for this study are: total revenue, total expenditure, total deposit, interest expenses, investments, operating profit and net profit. A study has been made to find the relationship between all of these variables. All correlation matrices have been presented below showing the correlation between each variable.

Table 4.48: Correlation Matrix

	TR	TE	TD	IE	Inv.	OP	NP
TR	1						
TE	0.995	1					
TD	0.965	0.941	1				
IE	0.988	0.998	0.918	1			
Inv.	0.893	0.915	0.756	0.929	1		
OP	-0.792	-0.789	-0.779	-0.778	-0.810	1	
NP	-0.387	-0.435	-0.288	-0.456	-0.614	0.769	1

Table 4.48 shows the correlation that exists and is maintained among the different variables. There is high degree of positive correlation between TR and TE i.e. 0.995. A total revenue and interest expense as well as total expenses and interest expenses has nearly perfectly positive correlation which is 0.988 and 0.998 respectively. The figures in the table show that there is positive correlation between each variable other than with operating profit and net profit. The shadowed area in the table is negative correlated area where operating profit and net profit has negative correlation between other variables.

4.4.3 Simple Regression Analysis

The simple regression helps to determine the relationship between different variables considering one as dependent and the other as independent variable. With the help of known variable one unknown variable can be estimated and it determined the relationship between each dependent variable. For the study only simple regression analysis had been considered.

Simple regression equation is:

$$Y = a + bx$$

Where,

y = NPAT

x = total assets

Coefficient of Regression between EBIT and Interest Charge

Under t-statistics test,

Null hypothesis, H_0: | β_1 = 0, i.e. the regression model of y on x is not significant.

Alternative hypothesis, H1: $\beta \neq 0$, the regression model of y on x is significant.

Table 4.49: Coefficient of Regression between EBIT and Interest Charge

Evaluation criterion					
Intercept	Regression coefficient	t-calculated value	t-tabulated value	Relationship	Significant/ insignificant
5334.28	0.3184	0.5918	3.182	Positive	Insignificant

Source: Appendix-V.

The regression coefficient of EBIT on interest charge is positive related. So this indicates that increasing in interest charge also increased in EBIT. And t-statistics is insignificant because t-tabulated value is greater than t-calculated value.

Coefficient of Regression between NPAT and Total Assets

Under t-statistics test,

Null hypothesis, H_0: | $\beta = 0$, i.e. the regression model of y on x is not significant.

Alternative hypothesis, H1: $\beta \neq 0$, the regression model of y on x is significant.

Table 4.50: Coefficient of Regression between NPAT and Total Assets

Evaluation criterion					
Intercept	Regression coefficient	t-calculated value	t-tabulated value	Relationship	Significant/ insignificant
13.74	-0.00292	0.7913	3.182	Negative	Insignificant

Source: Appendix-VI.

The regression coefficient of NPAT on total assets is negatively related, so this indicates that increase in total assets lead to decrease on NPAT. And t-statistics is insignificant, because t-calculated is less than t-tabulated.

4.5 Marketing System

Marketing plan frequently refereed to the investment target and availability of fund for each category of loans. The Machhapuchchhre Bank Ltd. is reputed private commercial bank. It has been rendering best services to its valuable customer since five years. MBL has own marketing department. This department does overall marketing function for the bank. The main market of the bank can be classified as follows.

a. Minor Investment-Bank has been proving minor facilities to the small industries and lower income gainer people of the country such as:- personal loan, education loan, foreign employment loan, hire purchase loan, home loan, deprive sectors loan & social loan etc.
b. Major Investment:- Bank also granting heavy facility to largest industry of the country such as.
c. Industrial Loan, Business Loan, Trust Loan, Personal guarantee Loan.

4.6 Credit Portfolio of MBL

MBL provides all kinds of credit facilities to its costumers and every year investment is increasing.

4.6.1 Adequacy of Collateral Security

Most of the loan, which defaulted later, where approved without formally completing security, documentation further. It is also observed that the security bases of major loan are not adequate and non tangible assets securities are available in some cases. This situation has not improved during the year and majority of new loans disbursed was secured against personal guarantee and hypothecation of stocks. Here the bank is exposed to be vulnerable situation due to inadequacy of tangible security.

4.6.2 Loan Appraisals and Approval

This first steps towards good loan administration started with the loan application appraisal and its recommendation. However this area has still being found to be more vulnerable and requiring immediate attention to being the situation at a depended level.

4.6.3 Security Arrangement

Although the loans and advances are to be provided on the basis of financial viability of the project concerned, additional collateral securities are generally obtained. This is done to secure the bank from future uncertainties of the project to ensure seriousness/commitment of the entrepreneur and to comply with directives of the requesting authority. However, the following serious lopes found in my research study.

In several cases there is no collateral security except personal guarantee. As the bank does not have the practice of obtaining wealth statement of the guarantor, security in the from of personal guarantee have been found to be just a paper work and bank has not been successful in realizing the debt by invoking the guarantee.

In some cases loans are secured by hypothecation of stocks only. The details of the stocks are not obtained and the bank also does not monitor the maintenance of the adequate stock by the borrower. Possibility of recovery by confiscating the hypothecated stocks in case of defect is almost none as the stock do not exists with the defaulting clients in most of the hypothecated assets in not required by the bank not available or not renewed leading possibility of non existence of the stocks.

Valuation done by the consultant are accepted at the time of approving the loan without conducing any test from the bank's side like visit of the major loan, cross checking of the value and liquidity aspects of the properties etc. Site visit by the bank's staff are done after the loan is disbursed and starts defaulting.

Security should be mortgaged before the disbursement. However, there are cases where the loans were first disbursed and the securities were mortgaged later on such situation allowed greater autonomy to the borrowers to decide whether to provide proper security or not.

Non-funded facilities like letter of credit and bank guarantee provided against certain cash margin (say 5%) without obtaining collateral security to fully cover the exposure. Due to this practice, conversion of L/C payment into T/R loan IBLC and claims on B/G are not secured. Due to this the client shows no response to clear such dues and ultimately the bank suffers from such transactions.

Records snowing utilization of the security by different sectors concerns and other are not maintained. This has made it difficult to establish the adequacy or other wise of the security. For the limits approved for such parties.

4.7 Major Findings

Following major findings has been obtained from the analysis.

1. Total revenue has been increasing every year. It is Rs. 622462.05 thousand in Fy 2062/63 and Rs. 1775235.74 thousand in Fy 2066/67. Interest income from loan and advance has been increasing every year. It is increased by 13.51%, 22.25%, 32.66% and 63.10% from Fy 2062/63 to 2066/67 respectively.Revenue from commission and discount has been increasing every ear. index is 149.40% in Fy 2066/67. Revenue

from foreign currency exchange and revenue form other income is in fluctuating trend.

2. Total expenditure has been increasing every year. It is Rs. 417995.99 thousand in Fy 2062/63 and Rs. 1520390.90 thousand in Fy 2066/67. Interest expenses is the major part of the expenditure of MBL. It is increased every year. Its index in Fy 2066/67 is 396.59% assuming 2062/63 as base year. Operating expenses and employee expenses has been increasing every year, which indexes are 350.41% in Fy 2066/67 assuming 2062/63 as base year.
3. Along with the increment of total deposit, interest expenses is also increased every year. Total deposit is Rs. 7893297.67 thousand in Fy 2062/63 and Rs. 18535917.00 thousand in Fy 2066/67. Interest expenses is Rs. 288661.55 thousand and 1144808.13 thousand in Fy 2062/63 and 2066/67 respectively.
4. Net profit trend shows the negative trend, which is decreased by Rs. 7220.24 thousand every year.
5. Trend of deposit shows the positive figure, which is increased by 27406.58 thousand every year.
6. Business activities which do not involve fund yet they are income generative. Such transactions are called non-funded business activities. Generally letter of credit and bank guarantee are non-funded business activities. Letter of credit's income is in fluctuating trend. And income form bank guarantee is in increasing and decreasing. It is increased upto 70.09% in Fy 2066/67 and decreased 61.45% in Fy 2064/65.
7. Paid up capital is increased every year. But reserve and surplus is in fluctuating trend. Paid up capital and reserve and surplus is fixed in Fy 2065/66 and 2066/67 i.e. 1479269.60 and 220928.50 thousand respectively.
8. Actual credit investment plan has been achieved in Fy 2062/63, 2064/65 and 2066/67 which is 211.76%, 102.08% and 140.22% respectively. In Fy 2063/64 and 2065/66 MBL could not achieved i.e. 89.46% and 71.94% respectively.
9. The mean of budgeted credit investment is 1326.63 lakh, S.D. is 398.82 lakh and C.V. is 30.06% whereas actual credit investment's mean is 1451.17 lakh, S.D. is 333.61 lakh and C.V. 22.99% which shows higher consistency in actual credit investment than budgeted investment. Correlation coefficient between budgeted and actual credit investment i.e. 0.31 shows, there is positive relationship.
10. Budgeted and actual deposit collection is achieved in Fy 2062/63, 2063/64, 2065/66. In Fy 2063/64, 2065/66. In Fy 2063/64 and 2066/67 it is nearly achieved i.e. 97.64%

and 99.04% respectively. Correlation coefficient is 0.97 which shows there is perfectly positive correlation between budgeted and actual deposit collection.

11. Actual credit investment on actual deposit collection is 15.09%, 13.49%, 13%, 7.99% and 11.31% in Fy 2062/63 to 2066/67 respectively.
12. Operational profit and net profit of MBL is decreased unexpectedly. Operational profit is negative in Fy 2066/67 i.e. 13580.80 thousand and net profit is Rs. 73312.80 thousand in positive figure, which were 192908.82 thousand and 133996.71 thousand in Fy 2062/63 respectively.
13. Trend analysis shows the net profit decreased by Rs. 1220.24 thousand every year.
14. Cashflow statement shows positive closing balance in every year. It is Rs. 813923.94 thousand in Fy 2062/63 and Rs. 2459717.42 thousand in Fy 2066/67.
15. Current ratio is 1.14, 1.59, 2.80, 2.24 and 1.69 times. The mean ratio is 1.89 times, S.D. is 0.64, C.V. is 33.91% and correlation coefficient is 0.87, shows the satisfactory condition of bank in terms of maintaining current ratio.
16. Cash and bank balance to current and saving deposit ratio is uniformly maintained. The mean ratio is 0.33, S.D. is 0.03, C.V. is 9.94% and correlation coefficient is 0.98.
17. Cash and bank balance to total deposit has uniform ratio. It has mean ratio 0.14, S.D, 0.34, C.V. 19.22% and r is 0.93.
18. Fixed deposit to total deposit ratio has 0.30 mean ratio. Its S.D. is 0.05, C.V. is 17.11% and is 0.89, shows the better combination of fixed deposit to total deposit ratio.
19. Total debt to shareholder’s equity ratio’s mean is 9.89 times, S.D. is 0.76, C.V. is 7.72% and it has perfect correlation. Ratio is found in increasing trend every year.
20. Total debt to total assets ratio is consistent. The mean ratio is 0.94 times, S.D. is 0.08 and C.V. is 8.7% only. Assets is less than debt, shows the possibility to invest in productive sector.
21. Total debt to total capital ratio’s mean is 9.89 times, S.D. 0.76, C.V. 7.72% and it has perfect correlation, shows the higher consistency between total debt to capital of MBL.
22. Interest coverage ratio’s mean is 1.35 times, S.D. 0.21, C.V. 15.52% and it has perfect correlation i.e. 1, shows MBL has higher percentage of net worth in relation to total deposit collected in the bank.

23. The mean ratio between loan and advance to total deposit is 0.79 times, S.D. is 0.03, C.V. is 3.50% and it has perfect correlation i.e. 1, shows MBL is successful to mobilize the total deposit on loan and advance consistently.
24. Loan and advance to fixed deposit ratio is increasing every year except year 2066/67. It has 2.74 mean ratio, 0.53 S.D., 17.52% C.V. and 0.87 correlation.
25. Loan and advance to saving ratio's mean value is 2.09 times. It has 0.33 S.D., 15.92% C.V. and 0.94 correlation coefficient, shows the satisfactory condition between loan and advance to saving deposit.
26. MBL has 73.30% ratio between loan and advance to total assets. It ahs lower S.D. and C.V. is 9.33% and 12.72% respectively. Higher correlation coefficient i.e. 0.95 shows the lower fluctuation and higher consistency of MBL is in terms of loan and advance to total assets ratio.
27. The mean ratio between investment to total deposit is 12.18%, S.D. 2.70%, C.V. 22.17% and correlation coefficient is 0.76, shows the well management efficiency regarding the utilization of deposit.
28. Return to total assets ratio is decreasing every year except Fy 2065/66. The mean ratio is 0.81% and correlation coefficient is in negative form. Higher C.V. and negative correlation shows the bank's riskier position in terms of return to total assets ratio.
29. Return to total deposit ratio is decreasing order, and it has 54.5%, C.V. and -0.29 correlation coefficient, which shows the bank Is not able to mobilize total deposit ratio.
30. The mean ratio of interest expenses to interest income is 66.38% shows the satisfactory condition of bank. It is 0.91 correlation coefficient, shows higher correlation between interest expenses to interest income.
31. Interest income on total assets is in increasing trend which is 6.21% in Fy 2062/63 and 8.17% in Fy 2066/67. Correlation coefficient is also perfect i.e. 1.0.
32. Staff expenses to total income ratio is in increasing trend which is 32.40% in Fy 2002/03 and 207.48% in Fy 2066/67. It shows the higher staff expenses in relation to total income. Higher S.D. and C.V. i.e. 66.34% and 70.41% shows the riskier position in terms of staff expenses to total income.
33. Trend value of interest coverage ratio is in decreasing order. And trend value of interest expenses to interest income is also in decreasing order.

34. Correlation between EBIT and interest charge is perfectly positive i.e. 0.9956, and correlation between total interest expenses to total interest income is 0.91, which shows perfect positive correlation.
35. t-test shows EBIT and interest charge are significantly correlated where t-calculated value is 18.38 and t-tabulated value is 3.182.
36. Total interest expenses and total interest income are significantly correlated, where t-calculated value is 3.80 and t-tabulated value is 3.182.
37. Regression model NPAT on total assets is not significant and EBIT on interest charge is also insignificant.
38. While evaluating the loan application only the positive aspect or prospective are highlighted and the risk involved (negative aspects) is not adequately addressed.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

For the sustainable existence and growth of a bank it must insure reasonable profitability. As the bank are formed as joint stock companies promotes by shareholder further by the profit made by the bank. It may choose to increase its capital base to make it stronger and more sustainable for facing any future threat that may come up. A profit earning organization can better feed to their employees, thereby enhancing the moral of the employees and them for better performance. This chapter highlights some selected actionable conclusion and recommendations on the basis of the major findings of the study derived from the analysis of MBL. The study has covered 5 years data from Fy 2062/63 to 2066/67. The major findings of the study based on financial and statistical analysis listed in chapter-IV of this report in order to carry out this study only secondary data have been used..

5.1 Summary

The role of commercial bank in the economic growth of the nation can be fairly estimated to be very prominent, be mobilizing the scattered idle resources from the several commercial bank pools the fund in a sizable volume in order to feed to the fund on the country there by raising the employment opportunities and earning to the labors and materials and services providers to such industries and trends which as a chain effective promotes saving into the banks and more saving means more funds available in the for future in investment. In this way the nations also grows. To remain major contributing factors the growth of the nation economy, the bank also have to have sustainable existence and growth of themselves. Machhapuchhre Bank Limited has completed ten years of operations since 17th Ashoj, 2067 B.S. The bank started its operation as the 14th commercial bank as a regional bank from Pokhara and has been functioning as a national level bank.

The bank has been successful and creating and positioning the MBL brand to reckon with amongst other banks: in the banking sector. Currently the bank has 12,957 investors and more than 153,000 depositors and thousands of other customers. At the time of establishment, MBL had total authorized capital Rs. 240 million and issued and paid-up capital Rs. 84 million. At present, MBL has Rs. 1000 million authorized capital and Rs. 550 paid-up capital (Annual report of MBL, 2066/67).

The role of MBL cannot be over emphasized. Now, MBL has already spent more than ten years in serving the nation, apart from its traditional function it has served as a major institution for the development of the nation. MBL has been able to improve quality of service and effectiveness in the area that are anywhere banking, SMS banking, internet banking, evening banking, 365 days banking, mobile bill payment, telephone bill payment, VISA debit card, etc.

The present study has been divided into five chapters. The first chapter highlights the introductory part, second chapter deals with review of literature, in which various theoretical as well as empirical reviews have been included. In theoretical review, different theories regarding profit planning and control have been mentioned. And in empirical section different researches have been included in profit-planning and control, previously done. Chapter three clears the methods and techniques used while doing research have been mentioned. In chapter four, collected data have been processed, analyzed and interpreted using various financial and statistical tools. Summary, conclusion and recommendations for weaknesses have been incorporated in chapter five.

5.2 Conclusion

Some conclusions have been drawn regarding profit planning and control of MBL. MBL has not prepared the long-term strategic plan. Only short-term profit plan that covered one year but not detailed by areas, has been prepared. There is no in-depth analysis of bank's strengths and weaknesses. It has concentrated on the survival of the bank because it has been suffering from huge amount of operating cost and employee expenses. The plans and policies are prepared by top level management and later it communicated to the lower level. As we know business without advertisement is just like to winking the eyes to the girl in a dark place. MBL has not used different and proper media. MBL has not used different and proper media to increase its popularity. MBL has not been able to manage its good marketing system to its prospective customer. Operating profit become negative in Fy 2066/67 which is Rs. 192908.82 thousand, however, net profit is in positive figure in every fiscal year. Budgets are prepared just to fulfill the formality; however, these are not used effectively for the profit planning process. Non-performing assets of the bank is 2.32%, which is a challenge for bank.

Lower of total debt to shareholder's equity ratio is highly consistent. Loan and advance to total deposit ratio i.e. 0.79 times shows the bank has been able to mobilize its deposit successfully. In terms of returns of MBL, return to total assets ratio as well as return to total deposit ratio is decreasing every year. This result shows the bank is not able to mobilize its deposit properly. Staff expenses to total income ratio is in increasing trend, which shows higher staff expenses in relation to total income. In the same way, interest coverage ratio is in decreasing order. But interest expenses to interest income ratio i.e. 66.38% indicates the satisfactory condition of bank.

Statistically, interest coverage ratio is in decreasing order and trend value of interest to interest income is also in decreasing order. Correlation between EBIT and interest charge is perfectly positive i.e. 0.9950. t-test shows EBIT and interest charge are significantly correlated where t-calculated value is 18.38 and t-tabulated value is 3.182. Total interest expenses and total interest income are significantly correlated where t-calculated value is 3.80 and t-tabulated value is 3.182.

5.3 Recommendations

Based on the above findings and conclusion, the following recommendations have been forwarded:

- The bank is facing the problem of capital structure, so to make proper combination of debt and equity, proper capital structure should be maintained.
- There is overstaffing problem, therefore unnecessary and more staff should be decreased.
- Bank should develop its specific goal for the coming budget year. Such goal may be net profit on investment, net profit on capital employment, investment revenues etc. Without formulating such goals the operation of bank may not be effective.
- In the interim time period, such kind of collection budget will help the bank to plan the necessary money fund and other deposit factors at appropriate time.
- Bank should be operated on purely commercial basis, so every manager of the bank should know the role of the budget. Effective programs should be launched to improve the productivity and morality employee to motivate them. Incentive plans should be started. Reward and punishment system should be effective and should be based on work performance.
- Non-performing assets do not provide any return to the bank, therefore MBL should increase its efforts to recover its credit on time. More facilities should be provided to

credit department, so that credit officers will increase their efforts to recover the credit of the bank.

- The liquidity position is relatively less than the standard requirement criteria i.e. 2:1, so the bank should try to meet the standard requirement.
- The leverage ratio of MBL is in very high position. MBL should decrease its debt ratio position more and more. i.e. 9.89 times in average. So the bank should increase its equity position.
- Credit deposit ratio i.e. total investment to total deposit ratio should be 75:100 but MBL has 12.18, which is very low. However, higher amount of current deposit and remittance is included in total deposit. Bank should try to increase total investment on total deposit.
- Staff expenses to total income ratio is to high and it has also negative correlation. So the bank should try to minimize its staff expenses.
- Operating expenses is the second major part of expenses, which is increasing rapidly. It has negative correlation with total income. If the bank will try to minimize this expenses, income will highly increased. So the bank should try to minimize this expenses using modern managerial tools and techniques.
- Due to creeping lending position of the bank, the profitability position of the bank seems to be very serious. The earning power ratio to total assets is negative way. This is very serious matter. In double-digit inflation rate of Nepalese context, the bank should rethink towards the revitalization of its position and must boost-up the earning power.
- MBL should move towards the modern banking facilities, prompt service in each branches, and provide new product to the customer to attract relative growth trend of deposit.
- The net profit trend of MBL is highly negative in first three fiscal year because of high amount i.e. 347577740.08 non-performing assets. Therefore the bank should look forwarded to maximizes the profit through good lending and sound management.
- The bank should adopt efficient and modern management concept to make more capable to their activities as well as fulfill the growing demand of current financial services.

- Necessary to diversify the bank's credit investment from commercial and consumption sector to productive sector. It can make capable utilizing its resources efficiently and fulfill the goal of flourishing industry and agriculture in the country.
- Bank should strictly band the policy of nepotism (biasness) and favouritism, on the basis of capability and efficient recruitment, placement and promotion should be extended.
- The bank should built local channel to collect deposit and lending opportunity. Similarly, in this twenty first century, in the time of globalization, the bank should provide prompt service to its customer.
- MBL have focused its activities in urban areas only. It should open new branches in remote areas too, so that the people of remote areas may familiar with banking habit.
- At last, MBL should develop specific programs to face competition on market of Nepal, quality aspects of services should be highlighted rather than the price aspects.

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APPENDICES

Appendix-I

Trend Analysis of Interest Coverage Ratio

Fy	Mid-value (x)	y	x^2	xy
2062/63	-2	1.67	4	-3.37
2063/64	-1	1.29	1	-1.29
2064/65	0	1.39	0	0
2065/66	1	1.30	1	1.30
2066/67	2	1.09	4	2.18
n = 5	$\mid$ x = 0	y = 6.76	$x^2 = 10$	xy = -1.15

Assuming 2064/65 is base year,

Trend line, $Y_c = a + bx$

$$a = \frac{y}{n} X \frac{6.74}{5} = 1.35$$

$$b = \frac{xy}{x^2} X \frac{Z1.15}{10} = -0.115$$

Now, putting the value of 'a' and 'b' in trend line,

$Y_c = a + bx$

Trend value:

2062/63 : 1.35 – 0.115 (2062/63-2064/65)=1.58

2063/64 : 1.35 – 0.115 (2063/64-2064/65) =1.47

2064/65 : 1.35 – 0.115 (2064/65-2064/65) =1.35

2065/66 : 1.35 – 0.115 (2065/66-2064/65) =1.24

2066/67 : 1.35 – 0.115 (2066/67-2064/65) =1.12

2067/68 : 1.35 – 0.115 (2067/68-2064/65) =1.00

2068/69 : 1.35 – 0.115 (2068/69-2064/65) =0.89

2069/70 : 1.35 – 0.115 (2069/70-2064/65) =0.78

2070/71 : 1.35 – 0.115 (2070/71-2064/65) =0.66

2071/72 : 1.35 – 0.115 (2071/72-2064/65) =0.55

Appendix-II

Trend Analysis of Total Interest Expenses to Total Interest Income

Fy	Mid-value (x)	y	x^2	xy
2062/63	-2	99.95	4	-200
2063/64	-1	57.27	1	-57.27
2064/65	0	51.21	0	0
2065/66	1	55.69	1	55.69
2066/67	2	67.80	4	135.6
n = 5	| x = 0	y = 331.92	x^2 = 10	xy = -65.98

Assuming 2064/65 is base year,

Trend line, $Y_c = a + bx$

$$a = \frac{y}{n} X \frac{331.92}{5} = 6.38$$

$$b = \frac{xy}{x^2} X \frac{Z65.98}{10} = -6.598$$

Now, putting the value of 'a' and 'b' in trend line,

$Y_c = a + bx$

Trend value:

2062/63 : 66.38– 6.598 (2062/63-2064/65)= 79.58

2063/64 : 66.38– 6.598 (2063/64-2064/65) =72.98

2064/65 : 66.38– 6.598 (2064/65-2064/65) = 66.38

2065/66 : 66.38– 6.598 (2065/66-2064/65) = 59.79

2066/67 : 66.38– 6.598 (2066/67-2064/65) = 53.19

2067/68 : 66.38– 6.598 (2067/68-2064/65) = 46.59

2068/69 : 66.38– 6.598 (2068/69-2064/65) = 40.00

2069/70 : 66.38– 6.598 (2069/70-2064/65) = 33.39

2070/71 : 66.38– 6.598 (2070/71-2064/65) = 26.80

2071/72 : 66.38– 6.598 (2071/72-2064/65) = 20.20

Appendix-III

Computation of Correlation Coefficient between EBIT and Interest Charge

Rs. in '00,000'

Fy	EBIT (x)	Interest charge (y)	xy	x^2	y^2
2062/63	4809.52	2886.62	13883256.62	23131482.63	8332575.02
2063/64	5117.48	3977.22	20353343.81	26188601.55	15818278.93
2064/65	5671.41	4079.19	23134758.96	32164891.39	16639791.06
2065/66	7563.04	5800.36	43868354.69	57199574.04	33644176.13
2066/67	12486.14	11448.08	142942329.6	155903692.10	131058535.7
n = 5	x = 35647.59	y = 28191.47	xy = 244182043.7	x^2 = 294588241.70	y^2 = 205493356.80

$$r = \frac{N\Sigma xy - \Sigma x.\Sigma y}{\sqrt{N\Sigma x^2 - (\Sigma x)^2}\sqrt{N\Sigma y^2 - (\Sigma y)^2}}$$

$$= \frac{5 \times 244182043.70 - 35647.59 \times 28191.47}{\sqrt{5 \times 294588241.70 - (35647.59)^2}\sqrt{5 \times 205493356.8 - (28191.47)^2}}$$

$$= \frac{1220910219 - 1004957964}{\sqrt{202190535.7 \times 232707803.2}}$$

$$= \frac{215570132}{216913151.6}$$

r = 0.9956

Since r = 0.9956

$r^2 = (0.9956)^2$

or, $r^2 = 0.9912$

$$t = \frac{r}{\sqrt{1 - r^2}}\sqrt{n - 2}$$

$$= \frac{0.9956}{\sqrt{1 - 0.9912}}\sqrt{5 - 2}$$

$$t = \frac{0.9956}{0.0938}\sqrt{3}$$

or, t = 18.38

Degree of freedom (d.f.) = 5 – 2

= 5-2

= 3

$\Im$ = 5% = 0.05

Critical value: Tabulated value of t for 3 d.f. and $\Im$ = 5% level of significance for two tailed test is 3.182.

Decision: Since tabulated value i.e. 3.182 is less than calculated value i.e. 18.38, null hypothesis is rejected and alternative hypothesis is accepted. Therefore we can conclude that EBIT and interest charge are significantly correlated.

Appendix-IV

Computation of Correlation Coefficient between Total Interest Expenses to Total Interest Income

Rs. in '00,000'

Fy	Interest expenses (x)	Interest income (y)	xy	x^2	y^2
2062/63	5633.62	5636.62	31754575.16	31737674.3	31771485.02
2063/64	3977.22	6944.82	27621077	15818278.93	48230524.83
2064/65	4079.19	7965.97	32494705.16	16639791.06	63456678.04
2065/66	5800.36	10414.73	60409183.3	33644176.13	108466601
2066/67	11448.08	16886.18	193314339.5	131058535.7	285143075
n = 5	x = 30938.47	y = 47848.32	xy = 345593880	x^2 = 228898456.1	y^2 = 537068364.9

$$r = \frac{N \quad xy - \quad x. \quad y}{\sqrt{N \quad x^2 - (\quad x)^2}\sqrt{N \quad y^2 - (\quad y)^2}}$$

$$= \frac{5 \times 345593880 - 30938.47 \times 47848.32}{\sqrt{5 \times 228898456.1 - (30938.47)^2}\sqrt{5 \times 537068364.9 - (47848.32)^2}}$$

$$= \frac{1727969400 - 1480353813}{\sqrt{187303354.6 \times 395880093.2}}$$

$$= \frac{247615587}{272304369.2}$$

r = 0.91

Since r = 0.91

$r^2 = (0.91)^2$

or, $r^2 = 0.8281$

$$t = \frac{r}{\sqrt{1 - r^2}}\sqrt{n - 2}$$

$$= \frac{0.91}{\sqrt{1 - 0.8281}}\sqrt{5 - 2}$$

$$t = \frac{0.9956}{\sqrt{0.1719}}\sqrt{3}$$

$= \frac{0.91}{0.4146}\sqrt{3}$

or, t = 3.80

Degree of freedom (d.f.) = n – 2

= 5-2

= 3

$\Im$ = 5% = 0.05

Critical value: Tabulated value of t for 3 d.f. and $\Im$ = 5% level of significance for two tailed test is 3.182.

Decision: Since calculated value of t i.e.3.80 is greater than tabulated value of t i.e. 3.182, null hypothesis is rejected and alternative hypothesis is accepted. Therefore we can conclude that there is significant relationship between total interest expenses and total interest income.

Appendix-V

Regression Analysis between EBIT and Interest Charge

Rs. in '00000'

Fy	EBIT (y)	Interest charge (x)	xy	x^2	y^2
2062/63	4809.52	2886.62	13883256.62	23131482.63	8332575.02
2063/64	5117.48	3977.22	20353343.81	26188601.55	15818278.93
2064/65	5671.41	4079.19	23134758.96	32164891.39	16639791.06
2065/66	7563.04	5800.36	43868354.69	57199574.04	33644176.13
2066/67	12486.14	11448.08	142942329.6	155903692.1	131058535.7
n = 5	ϕy = 35647.59	ϕx = 28191.47	ϕxy = 244182043.7	ϕx^2 = 294588241.70	ϕy^2 = 205493356.8

…

Fy	$y - \bar{y}$	$(y - \bar{y})^2$
2062/63	-2320.48	5384627.43
2063/64	-2012.52	4050236.75
2064/65	-1458.59	2127484.78
2065/66	433.04	187523.65
2066/67	5356.14	28688235.7
n = 5		$\phi (y - \bar{y})^2$ = 40438108.31

Simple regression equation:

$Y = a + bx$

$\phi y = na + b\phi x$ ………. (i)

$\phi xy = a\phi x + b\phi x^2$…… (ii)

Substituting the value of above calculation in equation (i) and (ii), we get:

35647.59 = 5a + 28191.47b ………………………….. (iii)

244182043.70 = 28191.47a + 294588241.70b b……….(iv)

Multiplying equation (iii) by 28191.47 and eq. (iv) by 5, we get,

$$1004957964 = 140957.35a + 794758980.8b$$

$$\_\ 1220910219 = \_\ 140957.35a \pm 1472941209b$$

$$-215952255 = -\ 678182227.7b$$

$$b = \frac{215952255}{67818227.7}$$

$= 0.3184$

Putting the value of b in eq. (iii), we get

$35647.59 = 5a + 28191.47 \times 0.3184$

or, $35647.59 - 8976.164 = 5a$

or, $26671.43 = 5a$

or, $a = 5334.28$

Putting the value of ‘a’ and b’ on $Y = a + bx$

$y = 5334.28 + 0.3184x$

H_0: b1 = 0,

H_1: b1 ≠ 0,

Testing t-statistic,

$$t = \frac{b1}{Sb1}$$

Where,

$$SB1 = \frac{s}{\sqrt{\ (x \,\mathrm{Z}\, \bar{x})^2}}$$

$$s = \sqrt{\frac{SST}{n \,\mathrm{Z}\, 2}}$$

$$SSE = \phi(y - \bar{y})^2$$

$$S = \sqrt{\frac{(y \,\mathrm{Z}\, \bar{y})^2}{n \,\mathrm{Z}\, 2}}$$

$$= \sqrt{\frac{40438108.31}{5 \,\mathrm{Z}\, 2}}$$

$$= \sqrt{\frac{40438108.31}{3}}$$

$= 3671.43$

Now, Sb1 =

$$Sb1 = \sqrt{\quad (x \, \mathrm{Z} \, \bar{x})^2}$$

$$= \frac{3671.43}{\sqrt{46541534.19}}$$

= 0.5381

$$t = \frac{b1}{Sb1}$$

$$= \frac{0.3181}{0.5381}$$

= 0.5918

Degree of freedom (d.f.) = n – 2

= 5 – 2

= 3

Critical value: Tabulated value of t for 3 d.f. at $\Im$ = 5% level of significance for two-tailed test is 3.182.

Decision: Since t-calculated value is less than t-tabulated value i.e. 0.5381 < 3.182, null hypothesis is accepted. Therefore we can conclude that the regression model of y on x is not significant

Appendix-VI

Regression Analysis between NPAT and Return to Total Assets

Rs. in '00000'

Fy	NPAT (y)	Total assets (x)	xy	x^2	y^2
2062/63	1340	90698	1215353	82261272	17956
2063/64	741	108076	800843	116804217	5490
2064/65	850	124986	1062381	156215002	7225
2065/66	1232	144907	1785554	209980386	15178
2066/67	733	206787	1515748	427608633	5372
n = 5	$\phi y = 4896$	$\phi x = 675454$	$\phi xy = 6379580$	$\phi x^2 = 992869511$	$\phi y^2 = 51222$

…

Fy	$y - \bar{y}$	$(y - \bar{y})^2$
2062/63	361	1303
2063/64	-238	567
2064/65	129	166
2065/66	253	640
2066/67	-246	605
n = 5		$\phi\ (y - \bar{y})^2 = 3281$

Simple regression equation of MBL:

$Y = a + bx$

$\phi y = na + b\phi x$ ………. (i)

$\phi xy = a\phi x + b\phi x^2$…… (ii)

Substituting the value of above calculation in equation (i) and (ii), we get:

$4896 = 5a + 675454b$ ………………………….. (iii)

$6379580 = 675454a + 992869511\ b$…………….(iv)

Multiplying equation (iii) by 2819147 and eq. (iv) by 5, we get,

$$\begin{array}{rcl} 33070228 & = & 3377270a + 4562381061b \\ \_\ 31897900 & = & \_\ 3377270a \pm 4964347555b \\ \hline -1172328 & = & -\ 401966494b \end{array}$$

$$b = \frac{1172328}{401966494}$$

$= -0.00292$

Putting the value of b in eq. (iii), we get

$4896 = 5a + 675454 \text{ x } -0.00292$

or, $4896 + 1972 = 5a$

or, $6868 = 5a$

or, $a = 1374$

Putting the value of 'a' and b' on $Y = a + bx$

$y = 1374 + (-0.00292)x$

H_0: $b1 = 0$,

H_1: $b1 \neq 0$,

Testing t-statistic,

$$t = \frac{b1}{Sb1}$$

Where,

$$SB1 = \frac{s}{\sqrt{\quad (x \,\text{Z}\, \bar{x})^2}}$$

$$s = \sqrt{\frac{SST}{n \,\text{Z}\, 2}}$$

$SSE = \phi(y - \bar{y})^2$

$$S = \sqrt{\frac{(y \,\text{Z}\, \bar{y})^2}{n \,\text{Z}\, 2}}$$

$$= \sqrt{\frac{32.81}{5 \,\text{Z}\, 2}}$$

$= 3.31$

Now, Sb1 =

$$Sb1 = \sqrt{\quad (x \,\text{Z}\, \bar{x})^2}$$

$$= \frac{3.31}{\sqrt{803933}}$$

$= 0.00369$

$$t = \frac{b1}{Sb1}$$

$$= \frac{Z0.00292}{0.00369}$$

$= - 0.7913$

$|t| = 0.7913$

Degree of freedom (d.f.) = n – 2

= 5 – 2

= 3

Critical value: Tabulated value of t for 3 d.f. at $\Im$ = 5% level of significance for two-tailed test is 3.182.

Decision: Since t-calculated value is less than t-tabulated value i.e. 0.7913 < 3.182, null hypothesis is accepted. Therefore we can conclude that the regression model of y on x is not significant.

Appendix-VII

Budgeted and Actual Investment

Calculation Table **Rs. in '00,000'**

Fy	Budgeted investment (X)	$x = (X-\bar{X})/1000$	$(X-\bar{X})^2$
2062/63	562334.60	-764.29	584139.20
2063/64	1428995.78	102.37	10479.62
2064/65	1414162.27	87.53	7661.50
2065/66	1732260.67	405.63	164535.70
2066/67	1495390.38	168.76	28479.94
n = 5	$\phi x = 6633143.7$		$\phi(X-\bar{X})^2 = 795295.96$

Budgeted mean $(\bar{X}) = \frac{6633143.7}{5} = 1326628.74$ or 1326.63

Budgeted S.D. $(\exists_x) = \sqrt{\frac{1}{n} \quad (x \, Z \, \bar{x})^2}$ X $\sqrt{\frac{1}{5} \mid 795295.96} = 398.82$

Budgeted C.V.$_x$ = $\frac{\pm}{\bar{x}} \mid 100\% = \frac{398.82}{1326.63} \mid 100\% = 30.06\%$

Fy	Actual investment (Y)	$y = (Y-\bar{Y})/1000$	$(Y-\bar{Y})^2$
2062/63	1190892.82	-260.28	198929.40
2063/64	1278468.56	-172.70	-17679.30
2064/65	1443550.56	-7.62	-666.98
2065/66	1246158.65	-205.01	-83158.21
2066/67	2096792.29	645.62	108954.83
n = 5	$\phi x = 7255862.88$		$\phi(Y-\bar{Y})^2 = 206379.74$

Actual mean $(\bar{Y}) = \frac{7255862 \quad .88}{5} = 1451172.58$ or 1451.17 (taking 000 common)

Budgeted S.D. $(\exists_y) = \sqrt{\frac{1}{n} \quad (y \, Z \, \bar{y})^2}$ X $\sqrt{\frac{1}{5} \mid 556483.31} = 333.61$

Budgeted C.V.$_x$ = $\frac{\pm}{\bar{y}} \mid 100\% = \frac{333.61}{1451.17} \mid 100\% = 22.99\%$

Fy	Budgeted (x)	Actual (y)	xy	y^2	x^2
2062/63	562.33	1190.89	669673.17	36438.99	316215.03
2063/64	1429.0	1278.47	1826933.63	1634485.54	2042041
2064/65	1414.16	1443.55	2041269.25	2083836.60	1999848.51
2065/66	1732.26	1246.16	2158673.12	1552914.75	3000724.71
2066/67	1495.39	2096.79	3135518.80	4396528.30	2236191.25
n = 5	ϕx =6633.14	ϕy = 7255.86	ϕxy = 9832067.97	ϕy^2 = 9704204.18	ϕx^2 = 9595020.5

$\bar{x} X \frac{x}{n} X \frac{6633.14}{5} = 1326.63$ $\qquad$ $\bar{y} X \frac{y}{n} X \frac{7255.86}{5} = 1451.17$

Coefficient of correlation (r) = $\frac{xy}{n.\pm_x.\pm_y}$

$= \frac{206379.74}{5 \mid 398.82 \mid 333.61}$

$= \frac{206379.74}{665251.701}$

$\ldots$ r = 0.31

$r^2 = (0.31)2$

= 0.096

Probable error of correlation coefficient,

P.E. (r)

S.E. (r) = $\frac{1 Z r^2}{\sqrt{n}}$

Then the probable error of r is P.E. (r) = 0.6745 x S.E. (r)

P.E. (r) = 0.6745 x $\frac{1 Z r^2}{\sqrt{n}}$

$= 0.6745 \text{ x } \frac{1 Z 0.31^2}{\sqrt{5}}$

$= 0.6745 \text{ x } \frac{0.9039}{2.24}$

= 0.27

Since 6 PE is less than r i.e. 0.27 < 0.31, the correlation coefficient is significant.

Now,

Null hypothesis, H_0: $\partial = 0$, i.e. budgeted investment and actual investments are not correlated. Or the correlation coefficient is zero.

Alternative hypothesis, H_1: ∂ |≠ 0, i.e. budgeted investment and actual investments are correlated. Or the correlation coefficient is existed (two-tailed test).

Test of statistics, $$t = \frac{r}{\sqrt{1 \mathrm{Z} r^2}} \sqrt{n \mathrm{Z} 2}$$

$$= \frac{0.31}{\sqrt{1 \mathrm{Z} 0.31^2}} \sqrt{5 \mathrm{Z} 2}$$

$$= \frac{0.31}{\sqrt{0.9039}} \sqrt{3}$$

$$= \frac{0.31}{0.95} \mid 1.73$$

$$= 0.56$$

Degree of freedom: n – 2 = 5 – 2 = 3

Critical value: The tabulated value of t at 5% level of significance for two-tailed test and for 3 d.f. is 3.182.

Decision: Since calculated value of t is less than tabulated value i.e. 0.56 < 3.182, null hypothesis H_0 is accepted. Therefore we can conclude that budgeted investment and actual investments are not correlated.

Here,

r2 = sample coefficient of determination

a = y-intercept

b = Slope of the best fitting estimating line

n = Number of data point

x = Values of the independent variable

r = Values of the dependent variable

$\bar{y}$ = Mean of the observed values of the dependent variable

Appendix-VIII

Budgeted and Actual Deposition Collection

Calculation Table

Fy	Budgeted deposit (X)	x = (X- $\overline{X}$)/100000	(X- $\overline{X}$)^2
2062/63	6704163.17	-52.13	2717.54
2063/64	9471957.20	-24.45	597.80
2064/65	11370541.81	-5.47	29.92
2065/66	13322690.71	14.06	197.68
2066/67	18716149.02	67.99	4622.64
n = 5	ϕx = 59585501.91		ϕ(X- $\overline{X}$)^2 = 8165.58

Budgeted mean ($\overline{X}$) = $\frac{59585501.91}{5}$ = 11917100.38 or 119.17 (taking 00000 common)

Budgeted S.D. ($\exists_x$) = $\sqrt{\frac{1}{n} \quad (x \mathrm{Z} \bar{x})^2}$ X$\sqrt{\frac{1}{5} \mid 8165.58}$ = 40.41

Budgeted C.V.$_x$ = $\frac{\pm}{\bar{x}} \mid 100\%$ = $\frac{40.41}{119.17} \mid 100\%$ = 33.91%

Fy	Actual deposit (Y)	y = (Y- $\overline{Y}$)/ 100000	(Y- $\overline{Y}$)^2	xy
2062/63	7893297.67	-46.27	2140.91	2412.06
2063/64	9475451.51	-30.45	927.20	744.03
2064/65	11102242.26	-14.18	201.07	77.56
2065/66	15596790.85	30.76	946.18	432.49
2066/67	18535917.0	60.15	3618.02	4089.60
n = 5	ϕx = 62603699.29		ϕ(Y- $\overline{Y}$)^2 = 7833.38	ϕxy = 7755.74

Actual mean ($\overline{Y}$) = $\frac{62603699 \quad .29}{5}$ = 12520739.86 or 125.21 (taking 00000 common)

Budgeted S.D. ($\exists_y$) = $\sqrt{\frac{1}{n} \quad (y \mathrm{Z} \bar{y})^2}$ X$\sqrt{\frac{1}{5} \mid 7833.38}$ = 39.58

Budgeted C.V.$_x$ = $\frac{\pm}{\overline{y}} \mid 100\%$ = $\frac{39.58}{125.21} \mid 100\%$ = 31.61%

Coefficient of correlation (r) = $\frac{xy}{n.\pm_x.\pm_y}$

$$= \frac{7755.74}{5 \mid 40.41 \mid 39.58}$$

$$= \frac{7755.74}{7997.14}$$

… r = 0.97

r^2 = (0.97)2

= 0.94

Probable error of correlation coefficient,

P.E. (r)

S.E. (r) = $\frac{1 \, Z \, r^2}{\sqrt{n}}$

Then the probable error of r is P.E. (r) = 0.6745 x S.E. (r)

P.E. (r) = 0.6745 x $\frac{1 \, Z \, r^2}{\sqrt{n}}$

= 0.6745 x $\frac{1 \, Z \, 0.97^2}{\sqrt{5}}$

= 0.6745 x $\frac{1 \, Z \, 0.94}{2.24}$

= 0.02

Since 6 PE is less than r i.e. 0.02 < 0.97, the correlation coefficient is significant.

Now,

Null hypothesis, H_0: $\partial = 0$, i.e. actual deposit collection and budgeted deposit collections are not correlated, or correlation coefficient is zero.

Alternative hypothesis, H_1: $\partial \mid\neq 0$, i.e. actual deposit collection and budgeted deposit collections are correlated, or correlation coefficient is existed (two-tailed test).

Test of statistics, t = $\frac{r}{\sqrt{1 \, Z \, r^2}} \sqrt{n \, Z \, 2}$

$$= \frac{0.97}{\sqrt{1-0.97^2}}\sqrt{5-2}$$

$$= \frac{0.97}{0.243} \times 1.73$$

$$= 6.91$$

Degree of freedom: n – 2 = 5 – 2 = 3

Critical value: The tabulated value of t at 5% level of significance for two-tailed test and for 3 d.f. is 3.182.

Decision: Since calculated value of t is greater than tabulated value i.e. 6.91 > 3.182, null hypothesis H_0 is rejected. Therefore we can conclude that actual deposit collection and budgeted deposit collections are correlated.

Appendix-IX

Actual Investment and Actual Deposit Collection

Calculation Table

Fy	Actual investment (X)	x = (X- $\overline{X}$)/100000	(X- $\overline{X}$)^2
2062/63	1190829.82	-2.60	6.76
2063/64	1278468.56	-1.73	2.99
2064/65	1443550.56	-0.08	0.006
2065/66	1246158.65	-2.05	4.20
2066/67	2096792.29	6.45	41.60
n = 5	ϕx =7255799.88		ϕ(X- $\overline{X}$)^2 = 55.56

$\overline{X} = \frac{7255799.88}{5}$ = 1451159.98 or 14.51 (taking 00000 common)

S.D. ($\exists_x$) = $\sqrt{\frac{1}{n}\quad (x \, Z \, \bar{x})^2}$ X$\sqrt{\frac{1}{5} \mid 55.56}$ = 3.33

C.V.$_x$ = $\frac{\pm}{\bar{x}} \mid 100\%$ = $\frac{3.33}{14.51} \mid 100\%$ = 22.95%

Fy	Actual deposit (Y)	y = (Y- $\overline{Y}$)/100000	(Y- $\overline{Y}$)^2	xy
2062/63	7893297.67	-46.27	2140.91	120.30
2063/64	9475451.51	-30.45	927.20	52.68
2064/65	11102242.26	-14.18	201.07	1.13
2065/66	15596790.85	30.76	946.18	-63.06
2066/67	18535917.0	60.15	3618.02	387.97
n = 5	ϕx = 62603699.29		(Y- $\overline{Y}$)^2 = 7833.38	ϕxy = 499.02

$\overline{Y} = \frac{62603699 \quad .29}{5}$ = 12520739.86 or 125.21 (taking 00000 common)

$\exists_y$ = $\sqrt{\frac{1}{n}\quad (y \, Z \, \bar{y})^2}$ X$\sqrt{\frac{1}{5} \mid 7833.38}$ = 39.58

$$\text{C.V.}_x = \frac{\pm}{\bar{y}} | 100\% = \frac{39.58}{125.21} | 100\% = 31.61\%$$

Coefficient of correlation (r) = $\frac{xy}{n.\pm_x.\pm_y}$

$$= \frac{499.02}{5 | 3.33 | 39.58}$$

$$= \frac{499.02}{659.007}$$

$\therefore$ r = 0.76

r^2 = (0.76)2

= 0.58

Probable error of correlation coefficient,

P.E. (r)

S.E. (r) = $\frac{1 \mathrm{Z} r^2}{\sqrt{n}}$

Then the probable error of r is P.E. (r) = 0.6745 x S.E. (r)

P.E. (r) = 0.6745 x $\frac{1 \mathrm{Z} r^2}{\sqrt{n}}$

= 0.6745 x $\frac{1 \mathrm{Z} 0.58}{\sqrt{5}}$

= 0.6745 x $\frac{0.42}{2.24}$

= 0.13

Since 6 PE is less than r i.e. 0.13 < 0.58, the correlation coefficient is significant.

Now,

Null hypothesis, H_0: $\partial = 0$, i.e. actual deposit collection and actual investment are not correlated.

Alternative hypothesis, H_1: $\partial \ |\neq 0$, i.e. actual deposit collection and actual investment are correlated. (two-tailed test).

Test of statistics, t = $\frac{r}{\sqrt{1 \mathrm{Z} r^2}} \sqrt{n \mathrm{Z} 2}$

$$= \frac{0.76}{\sqrt{1 - 0.58}} \sqrt{5 - 2}$$

$$= \frac{0.76}{0.65} \times 1.73$$

$$= 2.02$$

Degree of freedom: n – 2 = 5 – 2 = 3

Critical value: The tabulated value of t at 5% level of significance for two-tailed test and for 3 d.f. is 3.182.

Decision: Since calculated value of t is less than tabulated value i.e. 2.02 < 3.182, null hypothesis H_0 is accepted. Therefore we can conclude that actual deposit collection and actual investment are not correlated.