

CHAPTER -I

INTRODUCTION

1.1 Background of the Study

Nepal is one of the poorest countries in the world though it is rich in natural beauties, resources and many others. But index measurement systems of economic development growth of the world shows that the country is in the list of least developed country. It lies between the two big boulders i.e. India and China. So it is also recognized as a buffer nation. India and China able to touch the economic boom and at present, are in the list of fastest developing nations in front of international arena by the efficient utilization of natural resources and their strong commitments. As a result, both the country are achieving a highest economic growth rate in the world.

Although Nepal is rich in natural resources, these are not properly and systematically utilized in the process of nation building. It can be considered as the worst and dark side of development. Unless any country uses its national resources systematically, the pace of development of the country reach in the zero either or in place of development, destruction on nature can be seen and felt.

Backbone of Nepalese economy is agriculture. Economic status of Nepal is in crowing stages. The economic survey of 2064/65 shows that our economy growth rate just 2.5% and more than 31 percent people are still under the poverty line and per capita income of Nepalese people is just US \$470 (World Bank Report 2007). The growth rate of agriculture economy and non-agriculture sector is just 0.7% and 3.6% respectively. Although introduction of systematic planning since 2013 B.S. to divert unutilized and excess resources from agriculture towards other sectors did not properly success. Although being agro based economy. The non-agriculture sectors should be given most priorities to be learnt from our two neighboring countries.

Prosperity and progress of a country highly depend on growth and development of various sectors such as economic, social cultural, industrial, technological, agricultural and financial sectors. Development is not like a magical construction and conservation. Reconstruction works must be checked out and the policies and plans should be scientific so that the seed of development must be the nation and the fruit holders should be its stakeholders to achieve target goal, which need huge amount of investment. Financial sectors such as bank and other financial institution they collected small portion of scattered money through attractive interest scheme and mobilize towards the productive sector.

1.1.1 Overview & Role of Management Accounting

Accounting System plays vital role in the functioning of any corporation organization. Accounting system provides the guidelines for better management and maximum utilization of available resources so that the competitive advantages can be achieved at this high competitive atmosphere through the application of available tools and techniques of accounting. Among the prevalence of many tools and technique in accounting field, Management Accounting tools is one of the finest accounting tools in every aspects of management activities from planning to decision-making. However the process of keeping account is traditional system in its field. But the history of management accounting practices is rather new. The important role of management accounting was not felt in ancient time because at that time there was no any such a competitive environment as of today among the corporate society. Therefore the managerial decision-making was not so important as it has its value these days. Competition in business sector is now seen very high. To sustain and grow business at a competitive fashion, managerial decision play center role. To make such a optimal managerial decision in a appropriate time management accounting is too useful. The role of management accounting in decision-making process is not all in all itself but it is rather something.

The management always works hard to carryout their basic functions of cost minimization, profit maximization and cash management in the uncertain circumstances. To achieve this goal, management accounting tools like Cash Flow Management, Standard Costing, Pricing Technique, Master Budgeting, Beak Even Analysis, Ratio analysis etc. help to gather necessary data, and to analyze and interpret the collected data and provide a base line for management to take proper decision on time so that basic function of accounting could be easily achieved.

1.1.2 Role of management Accountants within the Corporation

Consisting with other in today's corporation, management accountants have a dual reporting relationship. As a strategic partner and provider of decision based financial information, management accountants are responsible to the business management team while at the same time also have reporting relationship and responsibilities to the corporation's finance organization. The activities of management accountants provides inclusive of forecasting and planning, performing variance analysis, reviewing and monitoring costs inherent in the business are ones that have dual accountability to both finance and the business team. Examples of tasks where accountability may be more meaningful to the business management team vs. the corporate finance department are the development of business driver metrics, sales management score carding, and client profitability analysis. Conversely, the preparation of certain financial reports, reconciliation of the financial data to source systems, risk and regulatory reporting will be more useful to the corporate finance team as they are charged with aggregating certain financial information from all segments of the corporation. One widely held view of the progression of the accounting and finance career path is that financial accounting is a stepping-stone to management accounting. Consistent with the notion of value certain, management accountants helps drive the success of the business while strict financial accounting is more of a compliance and historical endeavor.

1.1.3 Financial Institutions of Nepal

The type of financial institutions presently operating in Nepal are as follow:

Table 1.1: Type of Financial Institutions in Nepal

Types	No. of Institutes
Central Bank	1
Commercial Banks	25
Finance Companies	78
Developments Banks	58
Micro Credit Developments Banks	12
Co-Operatives	16
Non-Government Organizations (NGOs)	46
Total	236

Source: Banking & Financial Statistics (NRB), Mid-June 2008

1.1.4 Meaning of Commercial Banks

A Bank is an organization whose principal are connected with the actualization of the temporary money of public for the purpose of advancing to other for expenditure. Banking play vital role for effective mobilization of resources.

Generally, bank means commercial bank, which provides banking services to the public by accepting deposit, advancing loan and other social service functions. Bank is the most important financial institutions in the economy. Banks are those financial institutions that offer the widest range of financial

services especially credit, saving and payments services and perform the widest range of financial functions of any business firm in the economy. In other words, commercial banks are the main institutions, which are meant to collect, and utilize the small scattered saving of the people.

Commercial banks means a private owned financial institute which 1), accepts demand and time deposit, 2) makes loan to individuals and organization's and, 3) provides services such as documentary collection, international banking, trade financing. Since a large proportions of a commercial Bank's deposits is payable on demand, it prefers to make short-term loans instead of the long-term ones (which are handled by organizations such as development companies and home mortgage companies) [www.businessdictionary.com]

Commercial bank is an Institution, which accepts deposit, makes business loan and offers related services. Commercial Bank also allow for a variety of deposit accounts, such as checking, saving and time deposit. These institutions are to make a profit and owned by a group of individuals. While Commercial Banks offer service to individuals, they are primarily concerned with receiving deposit and lending to business

According to Nepalese commercial bank act 2063" A commercial bank means which deals in exchanging currency accepting deposits, giving loans and doing commercial transaction", Commercial banks are the major components in the financial system. "Principally speaking, a commercial bank accepts deposits and provides loans primarily to business firm there by facilitating the transfer or funds in the economy. (G Abrol, P.N and Gupta O. P, 1982:2-10)

In developing countries like Nepal, there is always shortage of the fund for the development activities. There is need of development in all sectors. Private sector cannot undertake large business because the per capita income of the people is very low. So commercial banks of Nepal are the only financial institution to contribute for the boost of economic development to the country.

There are four functions of the commercial bank, which have been down by the American institute of Banking, They are:

- ❖ Receiving and handling deposits
- ❖ Handling payment for its clients
- ❖ Granting loans and investment, and
- ❖ Creating money by extension of credit.

"A commercial bank is a dealer which deals with money as well as the substitutes for money such as cheques and bills exchange. It also provides a variety of financial services. "(American Institute of Banking).

Commercial banks are organized on a joint stock company system, primarily for the purpose of earning a profit. Although the commercial banks attract deposit of all kinds-current, saving & fixed their resources are drawn from current deposits, which are repayable on demand. So they attach much important to the liquidity of their investments and as such they specialize in satisfying the short-term credit needs of business and other long –term. (Bhandari, 2059:10)

Table 1.2: List of Licensed Commercial Banks in Nepal

Class A: Commercial Banks				
S.N.	Names	Operation Date (A.D.)	Head Office	Paid Up capital (Rs. in Million)
1	Nepal Bank ltd	1937/11/15	Kathmandu	3803.8
2	Rastriya Baniyya Bank	1966/01/23	Kathmandu	11723
3	Agricultural Development Bank	1968/01/02	Kathmandu	9278
4	NABIL Bank ltd	1984/07/16	Kathmandu	6892.2
5	Nepal Investment Bank ltd	1986/02/27	Kathmandu	12039
6	standard chartered Bank Nepal ltd	1987/01/30	Kathmandu	6208
7	Himalayan Bank Ltd	1993/01/18	Kathmandu	10135.1
8	Nepal SBI Bank Ltd	1993/07/07	Kathmandu	8745.3

9	Nepal Bangladesh Bank Ltd	1993/06/05	Kathmandu	7441.3
10	Everest Bank Ltd	1994/10/18	Kathmandu	8314
11	Bank of Kathmandu ltd	1995/03/12	Kathmandu	6031
12	Nepal Credit and Commerce Bank Ltd	1996/10/14	Siddarthanagar, Rupendehi	12758
13	Lumbini Bank Ltd	1998/07/17	Narayangadh, chitawan	7500
14	Nepal Industrial & Commerce Bank Ltd	1998/07/21	Biratnager, Morang	7920.0
15	Machhapuchhre Bank Ltd	2000/10/13	Pokhara, kaski	8217
16	Kumari Bank Ltd	2001/04/03	Kathmandu	13000
17	Laxmi Bank Ltd	2002/04/03	Birgunj, Parsa	7320
18	Siddartha Bank Ltd.	2002/12/24	Kathmandu	8280
19	Global Bank Ltd.	2007/01/02	Birgunj, parsa	7000.00
20	Citizen Bank Ltd.	2007/06/21	Kathmandu	5600
21	Prime Bank Ltd.	2007/09/24	Kathmandu	7000
22	Sunrise Bank Ltd.	2007/10/12	Kathmandu	7000
23	Bank of Asia Nepal Ltd	2007/10/12	Kathmandu	7000
24	Development Credit Bank Ltd.	2001/01/23	Kathmandu	11043
25	NMB Bank Ltd	2007/02/04	Kathmandu	10000

Source: NRB Statistics, Mid June 2008

1.2 Statement of the Problem

Banking and financial sectors are the backbone of whole country. Different types of banks are operating their financial activities and contributing to the national economy of the country. In Nepal twenty-five commercial banks are operating at present. The commercial banks are categorized into two types as public sector commercial banks and private sector commercial bank. Private sector commercial banks are also categorized into two parts as joint venture and domestic commercial bank. Although these banks are committed to provide services, their major aim is to get profit so far.

Profit is a must part for any kind of business firm. Without profit business society cannot be existed. Like the other business sectors, banking sector also cannot survive and operate without profit. But the profit does not just happen. It is to be well managed and planned. Management accounting provides such types of tools and technique to aid management function in an efficient manner. Poor planning, controlling and decision making enforce to bad performance of the business society. In a banking sector a question may arise “do the commercial banks of Nepal practice management accounting tools and techniques to carry out planning, controlling and decision making function”? If they follow, what kinds of tools and technique are used? If they do not, what kinds of challenges may arise to follow the management tools & technique? To find out the correct answer of this question, it is felt that there should be serious studies on management accounting practices of commercial banks in Nepal. Some questions are mentioned below.

- 1- How far Nepalese Commercial Banks (both private and public banks) are practicing management accounting tools and technique?
- 2- Which management accounting tools and techniques are mostly practiced and which are not practiced by commercial bank till now?
- 3- Are they able to practice management accounting tools effectively?
- 4- What are the major difficulties faced during the implementation phase of management accounting tools?
- 5- In which areas of the commercial banks can management accounting tools be applied to improve their competitive strength?

1.3 Objectives of the Study

The main objective of the research is to examine and study the management accounting tools practiced by commercial banks in Nepal. The major objectives are as follows.

- a) To study and analyze the current practices of management accounting tools and techniques applied by commercial banks in Nepal.
- b) To identify the areas where management accounting tools can be fruitful to gain competitive advantages.
- c) To underline the difficulties faced by commercial banks.
- d) To suggest and recommend for betterment on the basis of major findings.

1.4 Significance of the Study

This study provides information relating to practice of Management accounting (MA) tools and techniques used in commercial banks of Nepal. It analyzes the problems in MA practices and managerial decision. It is beneficial for those people who are directly or indirectly related with management field.

The purposed study will be significant in the following ways

- a) It examines the MA tools and technique followed by commercial banking sector in Nepal especially.
- b) It explains problems and potentials of MA tools in commercial bank.
- c) It provides vital information on the application of MA tools and techniques under different circumstances and encourage the management to carryout its basic function from planning to decision making
- d) It is useful to concerned company investors, policy makers and managers of business firm etc.
- e) Last but not least it provides literature to the researchers who want further research in this field.

1.5 Limitations of the Study

The main limitations of the study are as follows:

1. This research focuses on MA tools and technique practice by selected commercial banks in Nepal only. So the findings might not be used to other sectors.
2. This study mainly focuses on the practices of some important MA tools and technique only.
3. The study is based on primary data.
4. The study is based on the response and the data available from the management of the authorized commercial banks.

1.6 Organization of the Study

This research study has been divided into the following five chapters:

1. Introduction
2. Review of literature
3. Research methodology
4. Data presentation and analysis
5. Summary, conclusion and recommendations

The introduction chapter covers background of the study, role of management accounting, statement of the problem, and significance of the study and organization of the study.

The second chapter focuses on review of literature. It contains the review of conceptual framework and past research.

The third chapter deals with the research methodology adopted for the study and consists of research design, sources of data, data collection procedure, population and samples, research variable and data processing procedure.

The fourth chapter deals with presentation, analysis and interpretation of data. It consists of major findings of research also.

The last chapter covers summary, conclusion and recommendation of the research.

CHAPTER-II

LITERATURE REVIEW

2.1 Meaning and Definition of Accounting

Accounting refers to the process of identifying, recording, classifying, summarizing, analysis, interpretation and communication of the financial transaction in terms of monetary value. Primarily the main objective of accounting was to ascertain the result and financial position of business activities of particular period. But now days the scope of accounting has been increased with increase in the competition and business companies. Accounting is also important to meet the needs of parties like government, creditors, suppliers, customers etc.

Accounting provides information to management so that planning; Organizing and controlling can be done in an orderly and rational manner. The management accounting must provide a system, which allows management to receive this necessary information in useful form. The top management, accountant, the controller, is responsible for gathering, analyzing, evaluating and reporting data. (Lynch and Williamson, 2002:18).

2.2 Classification of Accounting

Accounting can be classified into following three categories, Cost Accounting, Financial Accounting and Management Accounting.

2.2.1 Financial Accounting

Financial Accounting is related with financial transactions. So, it records the financial transactions and helps to find out the profitability of the concern. It also provides the information about the financial position of an organization. With these objectives; it prepares profit and loss account,

or income statement and balance sheet. It also records business transaction taking place during the accounting period through journals and ledgers.

Financial accounting as "the art of recording, Classifying and summarizing in a significant manner and in term of money, transactions and events, which are in part at least of a financial character and interpreting the result there of (AICPA).

2.2.2 Cost Accounting

To overcome the limitations of financial accounting, Cost accounting has been developed. Cost accounting is a branch of accounting which deals with the costs. It has been designed to determine and accumulate the cost of certain activities and to report cost information to management.

According to the Institute of cost and works Accountants, London, Cost accounting is "the process of accounting for a cost from the point at which expenditure is incurred or committed to the establishment of its ultimate relationship with cost centers and cost units. In its widest usage it embraces the preparation of statistical data, the application of cost control methods and the ascertainment of profitability of activities carried out or planned.

2.2.3 Meaning and Definition of Management Accounting

Management accounting is that branch of the accounting information system of a business enterprise, which uses accounting information for planning controlling and decision-making. It uses partly financial accounting but mainly cost accounting. Management accounting is often defined as a system that provides useful information for management in terms of decision-making, planning, controlling and performance evaluation (Drury, 2004:92).

A value adding continuous improvement process of planning, designing, measuring and operating non-financial and financial information system that guides management action, motivates behavior and supports and

creates the cultural values necessary to achieve an organization's strategic, tactical and operating objectives. (Atkinson et al., 2001: 350)

According to the Chartered Institute of Management Accountants (CIMA), Management accounting is " the process of identification, measurement, accumulation, analysis, preparation, interpretation and communication of information used by management to plan, evaluate and control within an entity and to assure appropriate use of and accountability for its resources. Management accounting also comprises the preparation of financial reports for non-management groups such as shareholders, creditors, regulatory agencies and tax authorities." (CIMA Official Terminology).

The American Institute of Certified Public Accountants (AICPA) states that management accounting practices extends to the following three areas:

- ❖ **Strategic Management:** Advancing the role of the management accountant as a strategic partner in the organization.
- ❖ **Performance Management:** Developing the practice of business making and managing the performance of the organization.
- ❖ **Risk Management:** Controlling the frameworks and practices for identifying, measuring, managing and reporting risks to the achievements of the objectives of the organization.

Management Accounting is the process of identification, measuring, analyzing, interpreting and communicating information in pursuit of an organization's goal. Management accountants are an integral part of the management process, and managerial accountants are important strategic partners in an organization's management team. [R.W.Hitton-2003: 5]

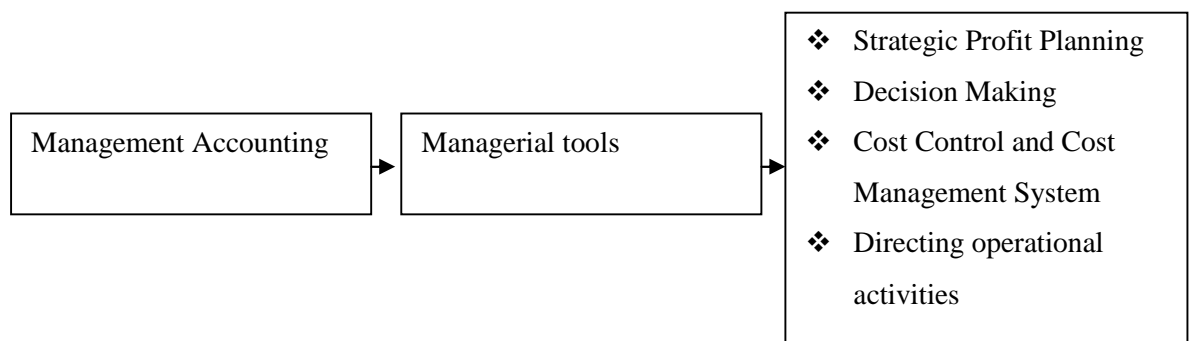
Management accounting refers to accounting information developed for managers within an organization. In other words, management accounting is the process of identifying; measuring, accumulating, analyzing, preparing, interpreting and communicating information that helps managers fulfill organizational objectives. [Hornsgren, Sundem, Stratton, 2003:12]

A management accountant applies his or her professional knowledge and skill in the preparation and presentation of financial and other decision oriented information in such a way as to assist management in the formulation of policies and in the planning and control of the operation of the undertakings. Management accountants therefore are seen as the "Value-creators" amongst the accountants. They are much more interested in forward looking and taking decisions that will affect the future of the organization, than in the historical recording and compliance (scorekeeping) aspects of the profession. Management accounting knowledge and experience can therefore be obtained from varied fields and functions within an organization, such as information management, treasury, efficiency auditing, marketing, valuation, pricing, logistics etc. [ICMA]

Management accounting is concerned with accounting information that is useful to management" [R.N. Anthony]

From the above-mentioned definition we can be concluded that management accounting is the process of identifying, measuring, analyzing, interpreting and communicating information to concerned department to meet organizational goals.

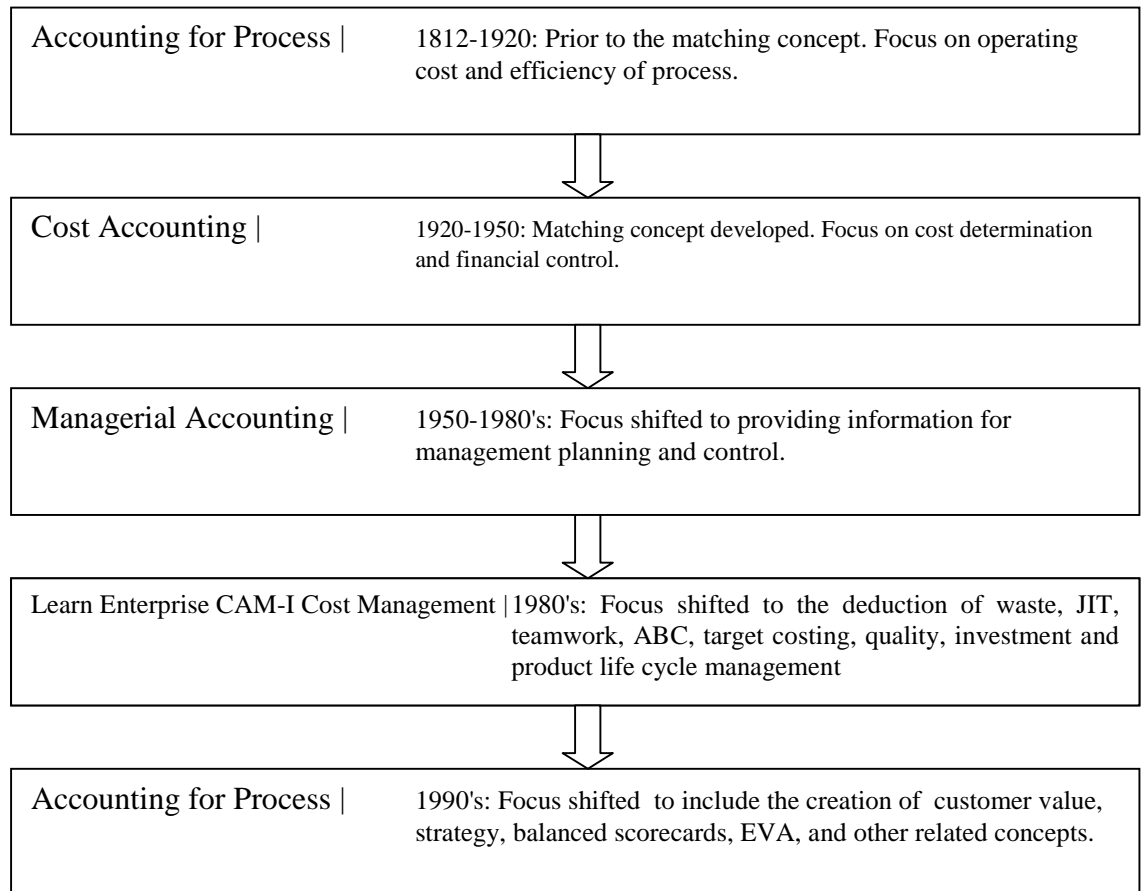
Fig. 2.1: Management Accounting



2.3 Origin and Evaluation of Management Accounting

The process of accounting was started from ancient time; the beginning of management accounting is not so old. The term "Management Accounting", is comparatively latest. Management accounting is the recently developed branch of accounting. The term management accounting was first coined in 1950 when a team of accountants of the Anglo-American Council on Productivity of the United Kingdom visited United States in 1950 under the auspices of the Anglo-American Council on Productivity. The focus of management accounting is on the information needs of managers within the organization rather than the interested parties outside the organization. Being a young discipline management accounting concepts and tools are still evolving as and when new ways are found to meet informational needs of management. [Wagle and Dahal 2004:1-2]

Fig.2.2: The Evolution of Management Accounting Practice



Source: Martin, Ph.D. Programme, Spring: 2004

According to the, Ittner, C.D. and D.F. Larker, 2001. Assessing empirical research in managerial accounting. A value-based management perspective journal of Accounting and Economic (December):349-410. They mention, the evolution of managerial Accounting practices as below:

Fig.2.3: The Evolution of Managerial Accounting Practices

Rough Time Estimate	Focus	Trends in Managerial Accounting
Prior to 1950	Cost determination and financial control.	Budgeting and cost accounting systems.
Mid 1960's	Providing information needed for management control	Anthony's 1965 management control framework separated operational control from strategic planning.
1970's	Planning and control	Contingency theory-choice of accounting and control techniques should depended upon circumstances surroundings the organization (external environment, technology, competitive strategy, mission, industry characteristics), etc.
Mid 1980's	Reduction of Waste	ABC, Strategic cost management etc.
Mid 1990's	Creating firm Value	Balanced scorecards of leading economic indicators, measures that approximate shareholders return, MAS that address current and future strategic uncertainties.

2.4 Features and Objectives of Management Accounting

Following are the main feature of management accounting:

-) It supplies necessary information, not decision.
-) It is concerned with future.
-) It stresses on the causes and effects relationship.

-) It do not uses prescribed format like financial accounting uses.
-) Its work is not continuous in nature. It collects and supplies the necessary information when needed.
-) Special techniques and concept are used by management accounting for making accounting data more useful.
-) It has been developed as a separate and specialized branch of accounting in order to help management in decision making.

Following are the main objective of management accounting:

The main objective of management accounting is to assist the management. Management accounting supplies accounting information to the management for planning, formulating policies, controlling business operation and decision- making.

The basic objectives of management accounting are as follows:

1. To Provide Information to Different Levels of Mangers for Decision Making and Planning to Optimize the Use of Resources

The relevant data are much needed for any decision makers, to make a right decision, in right times. It is only possible to collect those date with the help of management accounting tools and techniques. Moreover it also provides needed information to make an effective planning.

2. Assisting Mangers in Directing and Controlling Operational Activities

The another main objective of management accounting is to provide necessary data to managers to perform their directing and controlling operational activities in a efficient manner.

3. Motivating Managers and Other Employees Towards the Organization's Goals

The organizations and employees of the same organization have their own goal. The goals of individuals are diverse and they do not always match with those of the organizations. A key purpose of managerial accounting is to motivate managers and other employees to direct their efforts towards achieving the organization's goals.

4. Measuring the Performance of Activities, Subunits, Managers and Other Employees within the Organization.

To measure the performance of people, the managerial accounting system measures the performance of an organization's subunits, such as divisions, departments. These measurements help subunits managers obtain the highest possible performance level in their units. Such measurements also help top management decide whether a particular subunit is a viable economic investment.

5. Assessing the Organization's Competitive Positions

Now a day's business environment is changing very rapidly. The activities that make an enterprise successful today may no longer be sufficient next year. A crucial role of managerial accounting is to continually assess how an organization stacks up against the competition, with an eye toward continuous improvement.

2.5 Functions of Management Accounting

The functions of management accounting are described as follows:

1. Information and Data Collecting

Management accounting information system is used to produce and store data relating to the internal operation of a company and external environment.

2. Data Analysis and its Interpretation

Management accounting is concerned with the records of past achievements, maintenance of values, fixation of responsibility and basis for assessing the future developments, it is more concerned with the analysis and interpretation of data, which has opened up new directions for its use by management.

3. Identification and Modification of Relevant Information

Accounting data required for the decision-making and planning process is supplied by management accounting through a process of classification and combination, which enables to retain only the relevant information.

4. Providing Information for Planning and Decision Making

The planning and decision making process is possible with the help of information. Without information those function can't be carried. So management accounting provides relevant information for decision making and planning.

5. Facilitate Management Control

Management accounting enables all accounting effort to be directed towards control of an enterprise. This is made possible through budgetary and standard costing, which are integral parts of management accounting.

2.6 Scope of Management Accounting

Management needs a variety of information to plan, to control and to make decisions. Management accounting provides that information. So the scope or field of management accounting is very wide. The areas included within the ambit of this subject may be characterized as:

1. General Accounting

This includes recording of external transactions covering cash receipts and payments, recognition of liabilities and setting up of sales and receivables. It also covers preparation of regular financial statements.

2. Cost Accounting

It consists of the application of double entry technique to internal transaction, which means the application of costs to jobs, operations, processes and products.

3. Budgeting and Forecasting

This envisages the forming of budgets in cooperation with operating and other department preferably using standard measure for amount included in the budgets.

4. Cost Control Procedure

These provide for internal reports, which will compare actual and desired performance. They also help in converting a budget into an operating plan.

5. Cost and Statistics

It is concerned with provision of statistical and analytical services to the various departments of the business.

6. Taxation

This requires the computation of income in accordance with the income-tax laws and regulations, filing of returns and making tax payments.

7. Audits

It needs devising a system of internal control by establishing internal audit coverage for all operating units. [M.M Goyal]

2.7 Limitation of Management Accounting

Management accounting must not be taken as remedy for all problems as it is not without limitations. The following are some of the limitations of management accounting.

1. Difficult in Installation

The installation of management accounting system requires restructuring of present organizational structure.

2. Dependent on Other Sources for Information

Management accounting has no information pool of its own. Information are usually derived from different sources including financial accounting and cost accounting. So the accuracy of information supplied by management accounting and effectiveness of decision based on such information ultimately depends upon the accuracy of the information provided by respective sources.

3. Development Stage

Management accounting is the recent branch of accounting and is still very much in a state of development. So it faced with the problem of fluidity of concepts, improvement in techniques etc.

4. No Substitute for Management

Management accounting can give pertinent information but actions and decision are the prerogatives of management.

5. Knowledge of the Manager:

Management accounting has a wide coverage and is broad based. For taking decisions based on management accounting. The management should have a through knowledge in different field such as: Accounts, Tax-

low, Economic, Statistics, management Principle etc. Lack of these knowledge decision based on management accounting is usefulness.

2.8 Relevance of Management Accounting in Nepalese Perspectives

“Management accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation and communication of financial information”. MA is a new concept and it is still in a developing stages. It is a valuable accounting tools because it supplies relevant information, which is required for performing managerial activities i.e. planning to decision-making. Management accounting provides base line for decision to take right decision in right time, so that organization goal could be achieved with the given time frame.

Nepal is a small country situated between the two large countries with in a huge and rapid growth in business, industrial and economic sector, and the country has been creeping and trying to develop its economy. However country is under serious political instability for such a long period of time. As a result unsecured and instability in business environments are appeared. Due to this reason multinational companies are hesitate to come and establish their subsidiaries here. Nepalese investors are also not very interested to invest within the country. The existing companies are running in traditional approach with in the autocratic leadership and majority of the people are illiterate. Now rapid change in technology and the globalization of the market have become the real challenges today and existing business environment are also completely changed. To get success in this environment is not possible without proper vision, mission, goal and objectives.

Management accounting is a new concept and it is still in developing stages in the content of Nepal. The decisions that take place are usually based on the intuition of the strategic manner. It can be said that the role of MA is yet to be recognized in Nepalese business society. However, after country's entry into the WTO, the function and important of management of MA has

been realized by the business society in Nepal too. Accounting association and institution are trying to cover the wide range of MA in different business sectors. But lack of information about the tool, traditional approaches of concerned authorities, lack of such type of culture, lack of experts and lack of extra cost burden might be the main reasons behind the not practicing of such tools.

2.9 Brief Profiles of Commercial Bank of Nepal

Commercial banks are the major components in the financial system. They work as the intermediary between depositors and lenders and facilitate in overall development, of the economy with major thrust in industrial development.

Commercial bank comes into existence mainly with the objectives of collecting the idle funds, mobilizing them into productive sector and causing an overall economic development. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving. A sound banking system is important because of the key roles it plays in the economy, intermediation, maturity, transformation, facilitating payments flows, credit allocation and maintaining financial discipline among borrowers. Bank are the gatherers of saving, the allocates of resources, provides of liquidity and payment services.

The banking sector in Nepal started with the establishment of Nepal Bank Limited. Today, we have 25 commercial banks in operation (NRB reports 2008). The commercial banks of Nepal can be categorized into two types public sector and private sector. Private sector commercial banks can also be categorized into two parts, joint venture and domestic commercial bank.

Public Sector (Oldest) Commercial Banks

a. Nepal Bank Limited

Before the establishment of Nepal Bank Limited (NBL) there was not any kind of bank or the financial institutions operated in Nepal. The economy of Nepal had to face and suffer from many economic and banking problems because of absence of banking institutions. Thus to remove all disadvantages and inconvenience brought in by non-existence of banking concern in Nepal. NBL was the first commercial bank established in 1937 AD (1994 BS). There was no banking legislation in Nepal until 1964 and "The Nepal Bank Act" 1937 itself required a through revision to suit the changed circumstances. Hence, commercial bank act was passed on 28th Feb. 1964 and it replaced Nepal Bank Act. Before establishment of the Nepal Rastra Bank, it did all the Commercial function and some functions of central bank. The authorized capital of Nepal Bank Ltd. Rs. 10 million divided into 100 thousand shares of Rs. 100 each. The share composition of the Bank was 51% of government and 49% was private sector. Only Nepalese citizens are allowed to purchase the shares of Nepal Bank Ltd. Due to the process of privatization, the government started to sell its share to public sectors. Now the share holding composition is as follows:

)	Government of Nepal	=	40.49%
)	A class financial institution	=	4.92%
)	NRB licensed financial institutions	=	3.42%
)	Other institute	=	0.52%
)	General public	=	49.94%
)	Other	=	<u>0.71%</u>
			100%

So now the government hold only 40% and private sector hold 60% of total shares. At percent 98 branches excluding head office are operating. Out of 98 branches: 46 branches are computerized and 44 branches are single linked computer network (NB Report 2065).

b) Rastriya Banijya Bank (RBB)

RBB is one of the key players in the Nepalese financial sectors. Established on 2022 Magh 10 (January 24, 1966) with Rs. 15.57 million authorized capital. RBB is the largest and wholly government owned commercial bank of Nepal. Initially established with the objective of facilitating government transactions and Nepalese Currency, it provides services to the wide range of customers including banks, insurance companies, industrial trading houses, airlines, hotels and many other sectors. RBB now ranks no. 1 in terms of deposits, and loan portfolio with most extensive banking network of over 112 branches serving approximately 1.2 million deposit customers and about 300000 borrowers. The Head Office of RBB is located at Singhadurbar plaza.

Private Sector Commercial Banks

a. Joint Venture Banks

Joint venture is the joining of forces by two or more parties for the purpose of carrying out a special operation i.e. industrial and commercial investment, production and trade. By this definition any agreement between two or more than two parties for special purpose is called joint venture. The first joint venture bank of Nepal is Nepal Arab Bank Limited (NABIL) Bank Ltd.

i. NABIL Bank limited

NABIL Bank, the first joint venture bank in Nepal was incorporated on 11th May 1184 as a Nepal Arab Bank Limited under the company Act 1964. This bank was established by the joint venture investment of Dubai Bank Limited and Nepalese promoters. But later, the ownership of Dubai Bank Limited was transferred to Emirate Bank International Ltd. which is currently managing NABIL. At presently it has 28 operating branches excluding head office.

ii. Himalayan Bank Limited

Himalayan Bank Limited came into existence as the seventh commercial bank of Nepal by starting its banking operations from 18 Jan, 1993 with an objective of “To become the Bank of first choice”. HBL is joint Venture with Habib Bank of Pakistan. The bank has paid up capital of Rs. 10135.1 million.

HBL has been providing wide-range of modern banking services through 18 points of representations located in various urban and semi urban part of the country, 13 outside and 5 inside the valley. HBL is going to operate 6 new branches inside valley as well as outside valley very soon. Legacy of HBL lives on in an institution that’s known through Nepal for its innovative approach to merchandising and customer service. Products such as premium saving account, HBL propriety card besides services; the bank is pioneer in providing some of the latest lucrative such as ATM and Tele-banking were first introduced by BHL. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value. The adoption of modern Globus Software, developed by Temenos NV, Switzerland. All braches of HBL are integrated into Globus, the single Banking software where the bank has made substantial investments. This has helped the bank provides services like Any Brach Banking Facility’, Internet Banking and SMS Banking. Living up to he expectations and aspiration of the customer and other stakeholders of HBL very recently introduced several new products and services small business enterprises loan, subida loan, pre-paid visa card, international travel quota credit financial and consumer finance through credit card and online TOEFL,SAT, IELTS, etc. HBL also has a dedicated offsite ‘Disaster Recovery Management System’. Looking at the number of Nepalese workers abroad and their need for formal money transfer channel, HBL has developed exclusive and proprietary online money transfer software-Himal Remit TM. By deputing its own staff with technical exchange house and banks, in the Middle East and Gulf region,

HBL is the biggest inward remittance-handling Bank in Nepal. Similarly the bank has been providing 365 days banking facilities, extended banking hours till 7 PM in the evening, utility bill payment services, inward and outward remittance services, and various other banking services.

Visa Electron Debit Card, which is accessible in entire VISA linked ATMs and POS (Point of Sale) terminals both in Nepal and India, has also added convenience to the customers. The bank has been able to get recognition as an innovative and fast growing institution striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance and total quality management as the organizational mission.

iii. Everest Bank Limited (EBL)

EBL was established in 1992 under the company Act 1964, with a view and objective of extending professionalized and efficient banking services to various segments of the society. It is also a Joint Venture Commercial Bank with foreign partner United Bank of India Ltd. This bank was managed by its foreign partner United Bank of India Ltd. Later on, Panjab National Bank Ltd. India manages it. They hold 20% equity shares of this bank, 50% shares are hold by the promoters and 30% shares by the general public. The Bank has been providing service through a network of 26 branches excluding the head office. The bank is awarded with "Bank of the Year 2006" by the Banker, a publication of London.

b) Domestic Commercial Banks

The private sector domestic commercial banks are those commercial banks which are totally financed, operated and managed by Nepalese promoters and shareholders. For example KBL, LBL, CBL etc.

i) Kumari Bank Limited

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 B.S

(April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs. 750 million, of which 70 % is contributed from promoters and remaining from public.

KBL has been providing wide-range of modern banking services through 9 points of representations located in various urban and semi urban part of the country, 5 outside and 4 inside the valley. The bank is pioneer in providing some of the latest lucrative banking services like E-Banking and SMS banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value. The adoption of modern Globus Software, developed by Temenos NV, Switzerland and arrangement of centralized data base system enables customer to make highly secured transactions in any branch regardless of having account with particular branch. Similarly the bank has been providing 365 days banking facilities, extended banking hours till 7 PM in the evening, utility bill payment services, inward and outward remittance services, and various other banking services.

Visa Electron Debit Card, which is accessible in entire VISA linked ATMs (including 11 own ATMs) and POS (Point of Sale) terminals both in Nepal and India, has also added convenience to the customers. The bank has been able to get recognition as an innovative and fast growing institution striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance and total quality management as the organizational mission.

ii) Bank of Kathmandu Ltd.

Bank of Kathmandu Limited has become a prominent name in the Nepalese banking sector. It has put in conscious efforts to glorify the corporate slogan; “We make your life easier”.

BOK started its operation in March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. BOK also aims to facilitate

the nation's economy and to become more competitive globally. The vision of the bank is "To become a significant contributor to the economic development of Nepal by distinguishing the bank as an efficient, competitive, safe and top quality financial institution." BOK's infrastructure has been designed to facilitate internal and customer convenience. Nationwide, all the branches are connected to the central database via Wide Area Network (WAN) powered by Finacle, state-of-the-art banking application software supported by hardware like SUN Fire V880 RISC server, VSAT etc. Internally, BOK relies on Information & Communication Technology (ICT), for a quick, reliable, efficient system. Banking operations are powered by Finacle, which is listed among the top 40 companies that have reshaped the global economy as per the Wired Magazine (www.bok.com.np).

iii) Citizens Bank International Ltd.

Citizens Bank International Ltd is located at Sharada Sadan, Kamaladi, Kathmandu. It is promoted by eminent personalities/business and industrial houses and reputed individuals having high social standing. It is managed by a team of experienced bankers and professionals. The bank's corporate vision is "To be the leading bank known for its service excellence in the region." The bank has two Billion authorized capital and 560 million paid up capital.

iv) Laxmi Bank Limited.

Laxmi Bank was incorporated in April 2002 as commercial bank. At present laxmi bank has been providing banking service through twelve different branches. The current shareholding constitute promoters holding 55.52 percent, citizen investment trust holding 9.02 percent and the general public holding 35.56 percent. Promoter represent Nepal's leading business families with diversified business interest. The bank's shares are listed and actively traded in the Nepalese stock exchange.

With a view to providing safe, seamless, quick and advance banking service, the bank has been heavily investing in contemporary banking technologies. The bank uses flexcube as its main banking platform. Flexcube incidentally has been ranked the number one selling core banking solution globally, and has been embraced by over 500 financial institutions across over 90 countries. The bank provides its services through a host of delivery channels including cell phone, internet, ATM, point of sales(pos) etc. , in additional to a network of physical branches. Internet banking facility comes with capabilities of online shopping in addition to regular internet banking features, similarly, through the bank's alliance with smart choice technologies (SCT), the ATM/Debit cardholders of laxmi bank has access tor an network of SWIFT net, the advanced version of the SWIFT technology which is used for speed and secure payment and messaging services

Under a professional management team, the bank has established itself as an emerging key player. Today the bank is recognized as an innovative and progressive bank geared to providing shareholder and customer with quality earnings and value- added services. Transparency, good governance and sound business growth are banks driving forces.

2.9.1. Role of Commercial Banks in the Economic Development

A well-developed banking system plays an important role in the economic development of a country. The banking services have become pre-conditional for overall development in the modern economy. A country needs adequate and wide distributed banking service for fast industrialization. Besides providing financial resources, commercial banks can also influence the direction in which these resources are to be utilized for industrialization.

In the developing country like Nepal, not only the banking facilities are limited to a few urban areas but also the banking activities are limited mostly to trade and commerce. Therefore a well-developed and diversified

banking system is needed giving adequate attention to industry and agriculture. To fulfill this purpose, structural as well as functional reforms in the banking system are needed to enable the commercial banks perform development role in the country.

In modern economy, commercial banks are to be considered not merely as dealers in money, but also leaders in development. They are not needed only for string the nation's wealth, but also are needed to providing resources for economic development.

At present scenario of our country is moving forwards in keeping slogans "To Build New Nepal". To achieve this goals banking sector play significant role. Banking sector is only one those sectors, who have power to collect the unused resources and investment into highly growth and most needed sectors. At present situation our country is facing huge energy crisis. As a result our government is compelled to declare emergency situation in energy sector. Without energy, economy revolution couldn't achieve and without economic development prosperity and new Nepal is remain only slogans. To make our country's dream true, huge investment is needed. To get rid of this situation huge amount of investment is needed in this sector and banking sector is only the reliable sector that have power to fulfill this requirements.

While many people believe that commercial banks play a narrow role in the economy, taking deposit and making loans. The modern commercial bank had to adopt new role to remain competitive and responsive to public needs. Mainly commercial banks are essential for following roles.

- ❖ The agency role
- ❖ The risk management role
- ❖ The intermediate role
- ❖ Payment role
- ❖ The safekeeping/certificate of valuables role
- ❖ The policy role

- ❖ The saving and investment role
- ❖ The employment generators role

The above trends and role have profoundly changed the importance of commercial banks in word and in the year ahead will continue to make contribution in the economic development of a country making itself a dynamic institution both as a topic of study as a new career path. Therefore it is very important in the economy.

2.10 A Short View of Management Accounting Tools

Management accounting as a quantitative approach helps to discharge function like planning, organizing, staffing, directing and controlling properly and efficiently. (Paul, 1994: 5)

Tools and techniques provide by management accounting to discharge management functions can be identified as follows

2.10.1 Cost Allocation and Estimation

Cost refers to expenditure. From accounting point of view, cost is the amount of resources given up in exchange for some goods or services. The costing terminology of the institute of cost and work accountants, London defines cost as the amount of expenditure (actual or notional) incurred on or attributable to a given thing.

2.10.1.1 Cost Classification

Cost are associated with all types of organization i.e. profit and non profit organization. The kind of costs that are incurred and the way in which these costs are classified depends on the types of organization involved. Classification of costs depends on various factors. The cost can be classified in many ways as given below:

On the basis of Nature of Production or Manufacturing Process:

- ❖ Process Costing
- ❖ Job Costing

Classification of Costs on the Basis of Time

- ❖ Pre-determined Costs
- ❖ Historical Cost

Cost for Managerial Decision Making

- ❖ Managerial Costing
- ❖ Out of Pocket Costs
- ❖ Incremental and Decremental or Differential Cost
- ❖ Uniform Costing
- ❖ Opportunity Cost
- ❖ Replacement Cost
- ❖ Relevant and Irrelevant Cost
- ❖ Inputted Cost
- ❖ Sunk Cost

Cost According to functions:

- ❖ Manufacturing or Production Costs
- ❖ Administration Cost
- ❖ Selling and Distribution Costs
- ❖ Research and Development Costs

Classification of Cost Based on Establishment of Relationship Between input and Output

- ❖ Engineering Cost
- ❖ Managed Costs

Criteria Controllability

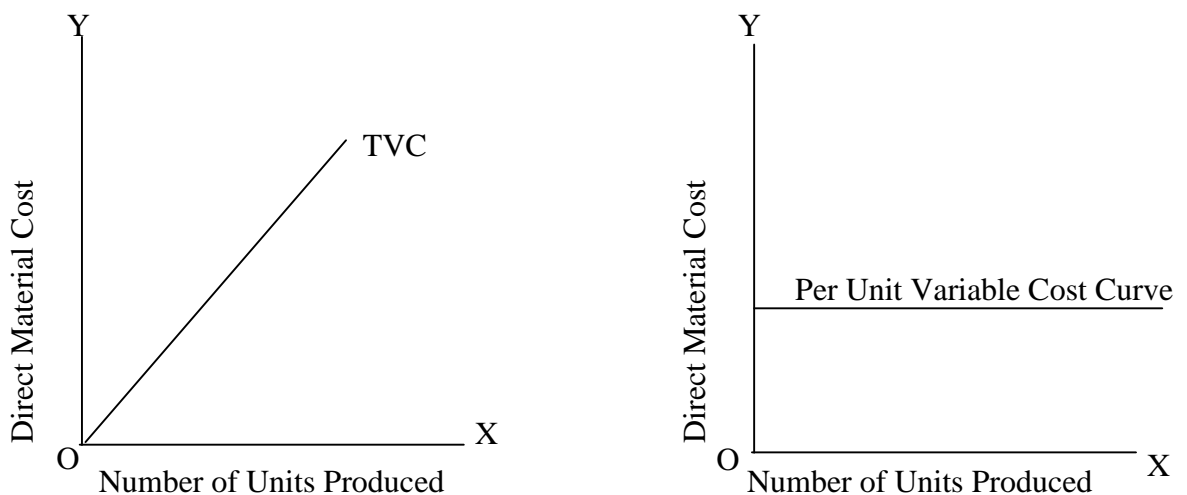
- ❖ Controllable Costs
- ❖ Uncontrollable Costs

Classification of Cost on the Basis of Behaviors

a. Variable Cost:

In the words of Hongren, Roster & Datar, "Variable costs are the costs that tend to vary in direct proportion and same direction to change in production activity, sales activities or some other measures of volume/cost driver. The costs of these inputs increase/decrease in proportion to increase/decrease in volume or cost drivers."

Figure 2.4: Variable Cost

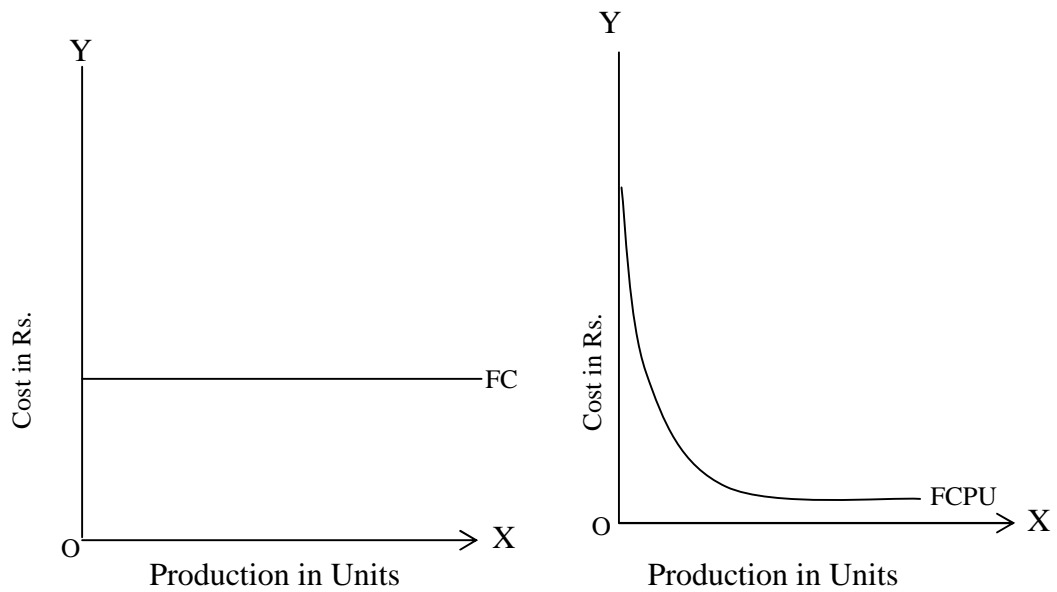


Such type of cost increases as the production/activity increase and decrease when production/activity volume is decreased in same proportion and direction. But per unit cost will be fixed as shown in the figure.

b. Fixed Cost:

If any cost remains constant in total at any activity level of activity within the relevant range, it is called fixed cost. It remains constant up to organizations 100 percent of capacity. The examples of such costs are rent, depreciation etc. The feature of the fixed costs is as follows:

Figure 2.5: The Feature of FC Cost

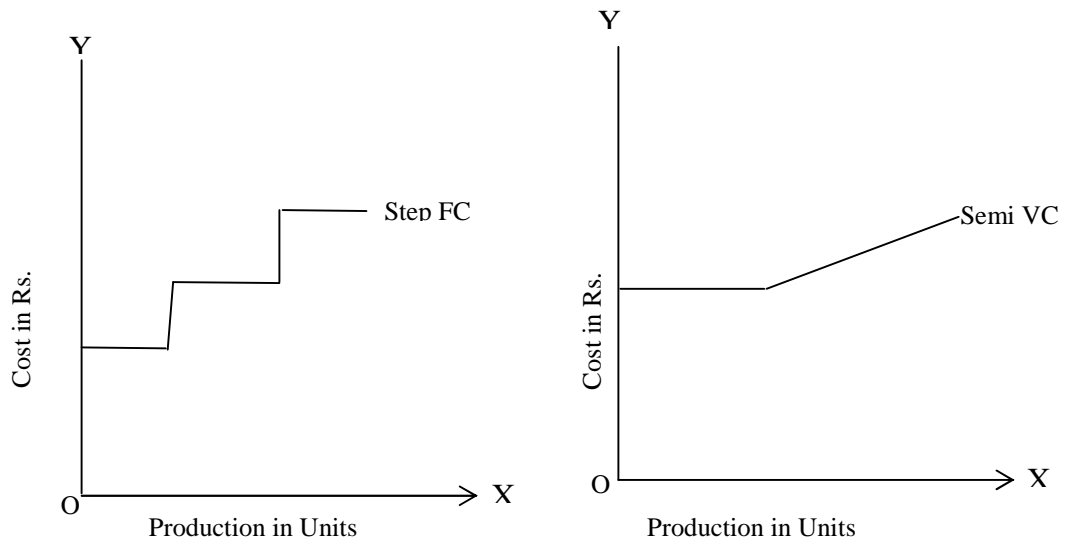


The figure shows that the total fixed cost will be constant irrespective of activity level and fixed cost per unit will decrease with increase in level of activities.

c. Step Variable Cost/Semi Variable Cost:

Those cost which are partly fixed and partly variable are called semi variable or semi fixed costs. It is constant up to certain level of activity but when company increases certain level of activities semi variable or semi fixed cost increase dramatically.

Figure 2.6: Semi-Variable Cost



2.10.1.2 Cost Estimation

Management must have some way of estimating fixed and variable costs. Different costs exhibit a variety of cost behaviors or patterns. Cost estimation is the process of determining how a particular cost behaves. It is a process of determining the cost of certain levels of output. [Wagle and Dahal, 2004: 2.8]

Cost estimation is the process of determination about the behavior of cost in relation to level of activity. They are known as variable costs, which vary in total with change in volume of activity. They are known as variable costs.

Likewise, there are other types of costs, which do not change in total regardless of the volume, or level of activity. Besides, there are another types of cost that contains both fixed and variable element known as mixed cost. For use in planning and decision-making all these costs have to be estimated. For the purpose of cost estimation, semi variable cost must be broken down into fixed and variable element. The broken down of mixed cost into fixed and variable cost is termed as segregation of mixed cost. Some methods that help to breakdown mixed cost into fixed and variable are:

a. High-Low Methods

In this non-sophisticated method, difference in cost of two-activity level (high and low) within relevant range is taken into consideration. In the words of Jain and Narang, "As the name suggest, this method considers two level of activity to split cost. It considers the output at different levels i.e. high or low point is compared with the amount of expenses incurred at these different periods." These data are taken from old records of organizations.

$$\text{Variable cost per Unit (VCPU)} \times \frac{\text{Cost at Higher Level} - \text{Cost at Lowest Level}}{\text{Output at Highest Level} - \text{Output at Lowest Level}}$$

or

$$VCPU = \frac{\text{Difference on Total Cost}}{\text{Difference on Total Activity Level}}$$

$$Y = FC + VCPU \times \text{Units}$$

Where, Y = Mixed Cost

VCPU = Unit Variable Cost

This method is simple to use. However as it considers only two points, it may lead wrong conclusion. Only two points are not enough to define the complete cost behavior.

b. Least Square Methods/Regression Analysis:

This method assumes linear relationship between dependent and independent variables. Cost depends on level of activities. As level of activities increase cost also increase. Regression analysis further assumes the magnitude of change is same. It provides best-fitting straight line eliminating judgmental estimate at all. It is a statistical method. It determines regression by minimizing the sum of the squares of the vertical distance between the actual Y volume and the predicted values of Y.

$$Y = a + bx$$

$$\text{Slope of regression line } b = \frac{n \sum xy - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$$

Where,

X is a value of independent variable

Y is the number of items in the sample

n is the v variable summed

x is the x variable summed

y is the y variable squared and the squares summed

x² is the X variance squares and the squared sum

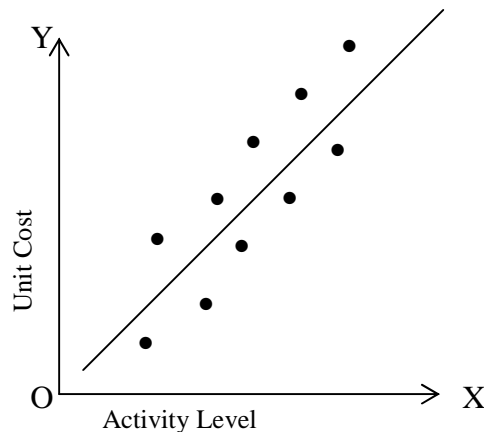
xy is the sum of products of x and y

y^2 is the y variable squared and the squares summed.

It is more accurate than high low point method. It reduces the error but it is complicated and time consuming.

c. Graphical Method/ Visual fit Method

Figure 2.7: Graphical Method



This figure shows graphical method of cost segregation. This is a simple method which uses scatter diagram. Cost of different activities is plotted then a line is drawn in judgmental basis. It's subjective and result may be different as per the people and estimates.

d. Average Method

In this method simple average is done to segregate variable and fixed cost. Although it is a quite simple method, it does not give accurate results. So it is rarely used.

e. Accounting Estimate Method

It is also a kind of judgmental method. Department manager and accounting personnel analyze each item of cost ledger and segregate them into variable

and fixed cost. To segregate the mix cost, they will arrive at certain agreed percentage, which will best describe the cost behavior judgmentally.

f. Engineering Method

It is the new-sophisticated method, Detailed analysis of work methods are done in this method. Standard input and standard costs are determined; time and motion study is carried out then cost behavior is found out. With detailed study cost pattern for various activity level are determined. It is highly accurate method but time consuming and expensive.

2.10.2 Income Recognition, Measurement and Reporting

Net Income is a balancing figure of sales over costs. It can be stated as the difference between the realized revenue and incurred expenses. The net income is essential for the growth or long-term survival of a business. The success of business measure by profit. So earning profit is the main objective of business.

One of the main objectives of accounting is to measure and report the profit of a business. There are two method of computing net income, they are:

-) Absorption/Full Costing
-) Variable Costing

a. Absorption Costing

Absorption costing is also known as traditional or conventional costing method. Absorption costing is a method of recording and reporting costs that considers all manufacturing cost fixed as well as variable as product costs.

The Institute ICMA (U.K) defines absorption costing as "The practice of charging all costs, both variable and fixed costs to operations, process or products".

Figure 2.8: Income Statement Under Absorption Costing

Items	Amounts (Rs)	Amounts (Rs)
Sales Revenue (Sales.....units @ Rs./Units) (A)		XXX
Less: Cost of Good Sold		
Direct Material (Production.....units @ Rs...../units)	xx	
Direct Labour (Production.....units @ Rs...../units)	xx	
Other Direct Expenses (Production.....units @ Rs...../units)	xx xx	
Fixed Manufacturing Cost (Production.....units @ Rs...../units)	xx xx	
Total Manufacturing Cost (Production.....units @ Rs...../units)	xxx xx	
Add: Opening Stock (.....units @ Rs...../units)	xxx	
Total	xx	
Less: Closing Stock (.....units @ Rs...../units)		
Total Cost of Good Sold Before Treatment of Over or Under Absorption of Fixed Cost	XXX	XXX XXX
± Under/Over Adsorption of Fixed Cost		
Total Cost of Good Sold (B)		XX
Gross Profit (A-B)		
Less: Total Selling and Distribution Cost Fixed as well as Variable Cost (Sales.....units @ Rs./Units)		XXX
Net Income or Profit		

b. Variable Costing:

Variable costing is a system of segregating costs between fixed and variable components and charging the product Manufactured only with variable manufacturing costs. It is method of recording and reporting costs, which regards as product cost only those, which tends to vary directly with volume of activity. It is also known as direct costing and marginal costing. The fixed costs are treated as period cost, which will be incurred during the period regardless of the volume of output.

Figure 2.9: Income Statement under Variable Costing

Items	Amounts (Rs)	Amounts (Rs)
Sales Revenue (Sales.....units @ Rs./Units) [A]		xxx
Less: Variable Cost of Goods sold		
Direct Material (Production.....units @ Rs...../units)	xx	
Direct Labour (Production.....units @ Rs...../units)	xx	
Other Direct Expenses (Production.....units @ Rs...../units)	xx	
Total Variable Manufacturing Cost (Production....units @ Rs...../units)	xxx	
Add: Opening Stock (.....units @ Rs...../units)	xxx	
Total	xx	
Less: Closing Stock (.....units @ Rs...../units)	xxx	
Total Variable Cost of Goods Sold		
Gross contribution Margin	xxx	
Less: Variable Selling and Administrative Cost (Sales.....units @ Rs./Units)	xxx	
Net Contribution Margin		
Less: Fixed Cost	xx	
Manufacturing	xx	xxx
Selling and Administrative Cost		
Total Fixed Cost		xxx
Net Income		

2.10.3 Cost-Volume-Profit Analysis (CVP Analysis)

Cost: Cost is a measurement in monetary terms of the amount of resources sacrifice for some special purpose.

Volume: Level of activity in the organization for a certain period i.e. volume of production, volume of sales.

Profit: Excess of revenue over the expenditure

The relationship between cost, volume and profit is known as cost-volume profit (CVP) analysis. Cost-volume-profit (CVP) analysis examines the behavior of total revenue, total costs, and operating income as changes occur in the output level. The selling prices, the variable cost per unit, and/or the fixed costs of a product. [Horngren, Datar and Foster, 2003]

Cost-volume-profit analysis is a systematic method of examining the relationship between the changes in activity (i.e. output) and charges in total sales revenue, expenses and net profit. As a model of these relationship CVP analysis simplifies the real world condition that a firm faces. Like most models which are abstractions from reality, CVP analysis is subject to a number of underlying, assumption and limitations. Nevertheless, it is a powerful tool for decision making in certain situations. As a model of these relationship cost volume analyzes, simplifies the real world conditions that a firm will face. First of all "no loss no profit" situation is found then, on the basis of the cornerstone further profit planning is done CVP analysis studies important variable such as selling prices, sales volume, expenses and tax. These variables have unique relation for different organization. CVP analysis is an accounting technique showing the relationship between these variables. CVP analysis is immensely helpful for developing alternative strategies in sales planning and the cost estimation.

Below presented is the BEP graph. Since fixed cost remains constant within relevant range, the fixed cost curve is parallel to 'ox' axis. Variable costs slope upward from the origin to right but the slope depends on variable cost ratio.

In the below figure 'ox' axis measure the units where as 'oy' axis measure revenue cost and profit.

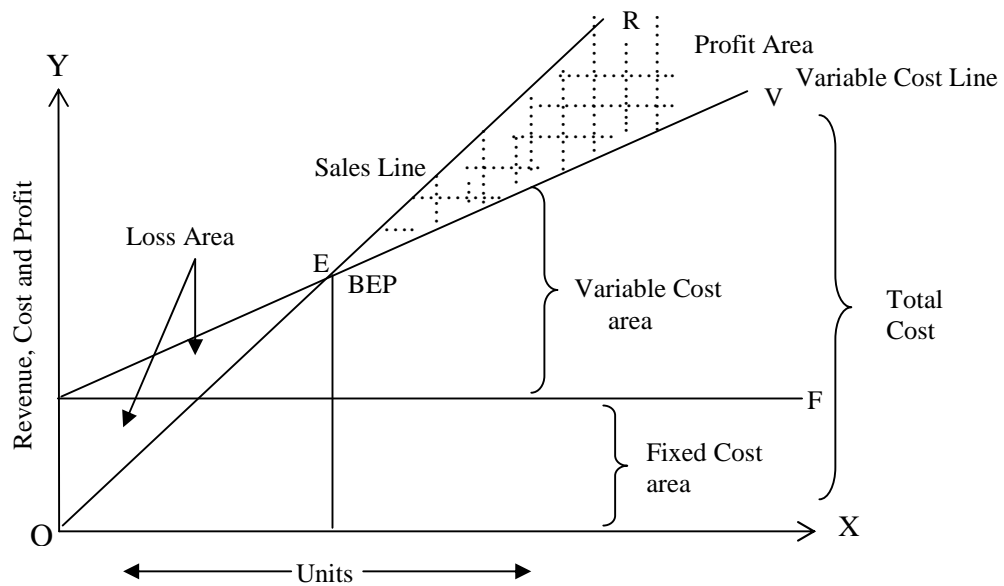
Here,

PF is the total fixed cost curve

PV is the total variable cost curve

And OR is the total revenue curve

Figure 2.10: Cost Volume Profit Analysis



Here, the revenue curve intersects total cost curve at point E. This point is called breakeven point. At this point, the total revenue equals the total cost. The graph states that if the company can reach the point of the BEP it can generate sufficient revenues to cover all of its operating expenses.

Approach to CVP and BEP

The CVP relationship and break-even point can be analyzed through different approaches. Mainly, the BEP and other required CVP relationships could be explained through different method.

1. Variable Income Statement Method
2. Contribution Margin Method
3. Mathematical Formula Method
4. Graphical Method

1. Variable Income Statement Method

Sales Unit	XX
Sales Revenue	XX
Less: Variable Cost of Good Sold	XX
Contribution Margin	XX

Less: Fixed Cost	xx
Net Income before Tax	xxx

2. Contribution Margin Method

Contribution margin reflects the revenue remaining after covering all variable costs. Contribution margin is the excess of sales revenue over variable costs. So, contribution margin mean how much is left from sales revenue, after covering variable expenses that are contributed toward the covering of fixed expenses and then towards profit for the period.

Total Contribution Margin = Total Sales Revenue – Total Variable Cost

CMC (Per Unit) = SP Per unit – VC Per Unit

CM (Total) = Sales-Variable Cost

CM (Ratio) = $\frac{CM}{Sales}$ or $\frac{Sales - VC}{Sales}$ or $\frac{Changes\ in\ Profit}{Changes\ in\ Sales}$

A break even point is reached when contribution equals to the total fixed cost. BEP in units and Rs can be calculated as follows:

BEP in Units = $\frac{Total\ Fixed\ Cost}{Unit\ Contribution}$

BEP (in Rs) = $\frac{Total\ Fixed\ Cost}{CM\ Ratio}$

Using the contribution margin, the sales volume for the desired profit can be ascertained.

Required sales in unit for desired profit X $\frac{Fixed\ Cost\ \Gamma\ Desired\ Profit}{Contribution\ Margin\ Per\ Unit}$

Required sales in Rs for desired profit X $\frac{Fixed\ Cost\ \Gamma\ Desired\ Profit}{Contribution\ Margin\ Ratio}$

3. Mathematical Formula Method

This is the most widely practiced approach to the breakeven point and cost volume profit analysis. The formula uses an algebraic equation to calculate the BEP.

Sales Volume = FC + VC ± Profit

Where,

FC = Total Fixed Cost

VC = Total Variable Cost

4. Graphical Method

A breakeven chart is used to graphically depict the relationships among revenues, variable costs, fixed cost and profit (or Loss). The no profit/no loss point (BEP) is located at the point where the total cost and total revenue lines cross. Below this point the firm incurs losses and above this point, the firm earns profit.

2.10.4 Standard Costing

It is management accounting tool for management control. Control is an important function of management. Without control, objective of organization can not be achieved. For control actual performance should be compared with predetermined costs/level of performance. Then deviation should be found out and correction action should be taken on time.

Standard costing is the process of the preparation and the use of standard costs, their comparison with actual costs and the analysis of variance to their causes and points of incidence. [ICMA]

Standard cost for a given job is the predetermined cost to complete the job as per specification. Standard costing is a system before starting the production and then comparing this with the actual costs of the job after completing the production. The difference between the predetermined or standard costs and the actual costs is termed "the variance". [Bajracharya & et al, 2004: 495]

Application of Standard Costing

Budgeting:

Budgeting is numerical expression of action. The budget is prepared with detailed analysis of every activity. Direct labor, direct material and

manufacturing expenses are the main components of budget. To set the budget standard costing provides bases.

➤ **Economic Decision**

Standard costing provides appropriate standard for each activity, which helps in making decision regarding special offer, further processing etc.

➤ **Pricing Decision**

Pricing in a competitive market is a choice between the pressure of covering the cash outlay of the products to be supplied and the competitor's price for the same product. The optimum prices should be less than or at least equal to the competitors price and at the same time total cost of product should be recovered. So to achieve this goals Standard cost tools is appropriate to decide what minimum price could be offered.

➤ **Cost Control**

To control is compare the actual output with standard one, find deviation and take corrective action promptly. Standard costing measure the deviation, search the reasons and take corrective action to keep the outcome within acceptable limit.

2.10.5 Budgeting For Planning and Control:

Budgeting a Key to Planning

Budgeting is the numerical planning for profits covering the area of future revenues and costs. The various activities within a company should be coordinated by the preparation of plans of actions for future periods. These detailed plans are usually referred to as budget. [Drury, 2000]. A budget is a detailed plan outlining the acquisition and use of financial and other

resources over a given period of time. It represents the future activities expressed in formal quantities terms. The act of preparing a budget is called budgeting. The uses of a budget to control a firm's activities are known as budgetary control.

A budget is a numerical plan of action, which generally covers the area of revenue and expenditures. A budget is a quantitative expression of a plan of action and an aid to coordination and control. A budget may be formulated for an organization as whole or for its sub-units. Budgets, basically are forecasted financial statements-formal expressions of a managerial plans. They are target that encompass all phase of operation including sales, production, purchasing and manpower and financing. [Ojha, Bajracharya, Goet and Sharma, 2005: 344]

Planning: A Core Management Function

Planning is the cornerstone of effective management, and a vital part of good planning is budgeting. Planning is the first essence of management and all other functions are performed within the framework of planning, Planning means deciding in advance what is to be done in future. Planning starts with forecasting and predetermination of further events.

During the planning process, managers attempt to agree on company goals and objectives and strategies to achieve them. Planning is the process of developing enterprise objective and selecting future course of action to accomplish them. It includes

-) Establishing enterprise objectives
-) Developing an analysis of the environment in which they are to be accomplished
-) Selecting a course of action to accomplish the objective
-) Initiating activities necessary to translate plans into action
-) Re-planning to correct current deficiencies. [Ojha, Bajracharya, Goet and Sharma, 2004: 344]

2.10.5.1 The Budgeting Process

The main objective of a business firm is to make an excess of revenue over expenses so as to maximize profits. But it is not a matter of dream or chance. There are no magic formulas of boosting the figure of profit overnight. Budgeting, if followed properly, can increase the chance of making profits within the given environment. A systematic budgeting should encompass the following procedures.

1. Evaluating the business environment
2. Setting specific goals
3. Identify potential strategies
4. Communicating the planning guidelines
5. Developing the long term and short term plans
6. Implementation of budget.
7. Periodic performance report and follow up.

2.10.5.2 Functions of Budget

Budget covers the following major activities of the management process

1. Planning
2. Communicating
3. Coordination
4. Control

2.10.5.3 Budgeting Technique

A. Incremental Budgeting

Most of the running organizations start budgeting for the next year based on previous budgets or the actual results. If the budgets for a given time are based on the budget or actual data of the same unit of previous time, this techniques is called the incremental budgeting or base budgeting. For example, while projecting expenses for next month review of the amount of the last month's budget or actual expenses is made and then adjust the event for likely changes is made to get the figure of the next month's expenses. It

is not only comfortable to do so but also seems logical. If the past data shown increasing trend you may add some percent and vice versa may be added to estimate the future amounts. In case of a business organization a percent to sales method or a least square regression line method can be used to forecast the financial figures for the budgeted year.

The main idea of incremental budgeting is to make an increase over the past years figures to give budget allowance for the next year. This means that existing operations and the current budgeted allowance for existing activities are taken as the starting point for preparing the next annual budget. The base is then adjusted for changes, which are expected to occur during the new budget period. This approach is called incremental budgeting. Since the budget process is concerned mainly with the increment is operations or expenditure that will occur during the forthcoming budget period. (Ojha, Bajracharya, goet, Sharma, 2004:353).

B. Zero Based Budgeting

ZBB is a technique and tool of planning and decision making. It reverse the working process of traditional budgeting. In traditional budgeting, departmental manager need to justify only increase over the previous year budget. This means what has been already spent is automatically sanctioned. In case of ZBB, no reference is made to the previous level of expenditure.

Every department function is reviewed comprehensively and all expenditure rather than only increase are approved. ZBB is a technique, by which the budget request has to be justified in complete detail by each manager starting from the Zero-Base. The zero base is indifferent to whether the total budget is increase or decreasing. The managers have to starts from zero level justifying all costs in terms of cost and benefits.

Benefits of ZBB

1. Results in efficient allocation of resources as it is based on needs and benefits.
2. Drives managers to find out cost effective ways to improve operations.
3. Detects inflated budgets.
4. Useful for service department where the output is difficult to identify.
5. Increases staff motivation by providing greater initiative and responsibility in decision making.
6. Increases communication and coordination within the organization.
7. Identifies and eliminates wastage and obsolete operations.
8. Identifies opportunities for outsourcing.
9. Forces cost centers to identify their mission and their relationship to overall goals.

Drawback of ZBB

1. Difficult to define decision units or decision packages, as it is very time-consuming and exhaustive.
2. Force to justify every detail, related to expenditure. The R&D department is threatened where as the production department benefits.
3. Necessary to train managers- ZBB should be clearly understood by managers at various levels, otherwise they cannot successfully implement.
4. Difficult to administer and communicate the budgeting because more managers are involved in the process.
5. Honesty of the managers must be reliable and uniform. Any manager that is prone to exaggeration might skew the result.

C. Activity-Based Budgeting (ABB)

ABB or activity cost management means budgeting related to activities rather than conventional departments. ABB recognize that it is activities which cause costs and is a more focused method of budgeting. Activity-based costing can lead to improved budgeting decision making. Activity – based costing principle extend budgeting. ABB focuses on the lots of activities to produce and sell products and services. It separates indirect cost into separate homogeneous activity cost pools. Management uses the cause and effect criterion to identify the cost drivers for each of this indirect cost pool. To manage costs more effectively organizations that have implemented Activity-based costing (ABC) have also adopted Activity – based budgeting (ABB). The main aim of ABB is to authorize the supply of only those resources that are needed to perform required to meet the budgeted production and sales volume.

Key Steps in ABB

-) Determine the budgeted costs of performing each unit of activity at each activity area.
-) Determine the demand for each individual activity based on the budgeted production, new product development and so on.
-) Compute the costs of performing each activities.
-) Describe the budget as the costs of performing various activities.

Objective of ABB

The main aim of ABB is to authorize the supply of only those resources that are needed to perform activities required to meet the budget production and sales volume.

ABB recognize that:

-) It is activities which drive costs and the aim is to control the causes (drives) of costs directly rather than the cost themselves.

-) Not all activities add value so it is essential to differentiate and examine activities for their value than the cost themselves.
-) The majority of activities in a department are driven by demand and decision beyond the immediate control of the budget holder.
-) More immediate relevant performance measures are required than are found in conventional budgeting system. These consist exclusively of traditional financial measures which are insufficient to fulfill the objective of continuous improvement.

Procedure of ABB

ABB involves the following stages.

1. Estimate the production and sales volume.
2. Estimate the demand for organizational activities.
3. Estimate resources to perform organizational activities.
4. Estimate the quantity of resources.
5. Compare the quantity of resources supplied with the quantity of resources currently committed.

Benefit of ABB over Conventional Budgeting

-) Ability to set more realistic budgets.
-) Better identification of resources needs.
-) Highlights the cost of activities and thus encourage new thinking.
-) Identification of activities and their costs helps to focus attention on those activities which add value and those that do not.

D. Planning, Programming Budgeting System (PPBS)

PPBS are famous in government projects and other not-for-profit organization. Under the PPBS technique, budget allocation is made based on the achieved performance of the previous period. How well the resource has been utilized and what results were achieved become the parameters of resource allocation during this period to the center. Non-profit

organizations have found line item budgets to be unsatisfactory mainly because they fail to provide information on planned and actual accomplishments. In addition, such budget do not provide information on the efficiency with which the organization's activities have been performed or its effectiveness in achieving its objectives. A further deficiency with line item budgets is that they fail to provide sound basis for deciding how the available resources should be allocated. Planning, programming budgeting system (PPBS) are intended to overcome these deficiencies.

The aim of PPBS is to enable the management of a non-profit organization to make more informed decisions about the allocation of resources to meet the overall objective of the organization. PPBS forces management to identify the activities, functions or program to be provided, thereby establishing a basis for evaluating their worthiness. In additions, PPBS provides information that enable management to assess the effectiveness of its plan. [Jrury, 2000:413].

E. Master Budget

Planning is the key to good management. So that budget are the manager's tools to understand plan and control operations. It highlights potential problems and advantages early, allowing managers to take step to avoid these problems or use the advantages wisely. A budget is a tool that helps managers in both their planning and control functions. Interestingly budget help managers with their control function. Not only by looking forward but also by looking backward. Budget of course; deal with what managers plan for the future. However, they also can be used to evaluate what happened in the past. Budget can be used as a benchmark that allow manages to compare actual performance with estimated or desired performance. [Horngren, Sundem, Stratton, 2003: 270]

Therefore, Budgeting shows management's desire to allocate scares resources and priority for activity of future. The master budget is compilation of all functional budgets. A master budget is basically a

summary budget of all the budgets. It represents the overall plan of the enterprises. Master budget sometimes called a comprehensive budget, is the summary or total budget package for a business firm. It is tool for coordinating acceptable effective plan.

Components of Master Budget

Master Budget are categorized into two parts. They are as follows:

- (A) Operating Budget/functional Budget
- (B) Financial Budget

(A) Operational Budget:-

A major part of master budget that focuses on the income statement and its supporting schedules. It consists of the following Budgets.

- (i) Sales Budget
- (ii) Production Budget
- (iii) Direct Material Budget
- (iv) Raw Material Purchase Budget
- (v) Direct Labor Budget
- (vi) Manufacturing Overhead Budget
- (vii) Cost of Good Sold Budget
- (viii) Selling and Distribution Budget
- (ix) Administrative Budget
- (x) Budgeted Income Statement

Sales Budget

Sales budget is starting point, on the basis of this budget other budget are developed. Sales budget is prepared both in units and amounts. It is based on sales forecast, past sales tends, market situation and seasonal influences. These determinants should be analyzed properly to make realistic sales budgets. While marketing sales budget, general economic condition, political and legal trends, market studies, and competitor's analysis etc should be considered.

Production Budget

A production budget incorporates the estimates of total volume of production with the scheduling of operations by days, weeks and months. This budget is prepared by the production managers.

After the sales budget has been prepared, the production requirements for the forthcoming budget period can be determined and organized in the form of a production budgets. Sufficient goods will have to be available to meet sales needs and for desired ending inventory. A portion of these goods will have already existed in the firm of beginning inventory. The remainder will have to be produced. Thus, production needs can be determined by adding the budget sales units to the desired ending inventory and deducting the beginning inventory from the total. [Horngren, Datar and foater, 1999:513]

In preparing the production budget following items should be considered.

- Sales Budget
- Production Budget
- Plant capacity and limiting factor
- The beginning and ending inventory to be held
- Policy of management regarding manufacture of purchase of components.

Material Budget

After production needs have been computed direct material budget should be prepared to show the material that will be required in the production process. A material budget is a coordination of the required raw material and parts inventory level of raw material and parts that must be purchased.

The main objective of preparing material budget are, to provide quantity data for purchase, to establish effective data for purchase, establish effective inventory policy, to prepare effective cash budget and to introduce effective control system on material use etc. In practice, material budget takes two forms.

(i) **Material consumption budget:-** It states the total quantity of material required during the budget period.

(ii) **Material purchase budget: -** It sets out the plan in respect of purchases to be made at different points of time during the budget period.

Direct Labor Budget

The direct labor budget is also developed from the production budget. Direct labor requirements must be computed so that the company will know whether sufficient labor time 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. So, preparing separate direct labor budgets are to provide planning data about the direct labors requirement number of direct labor employees needed, labor costs of each product unit and investment requirements.

In practice labor budget takes two forms.

(a) **Labor consumption budget: -** It states the total quantity of DLH required during the budget period.

(b) **Labor cost budget: -** It is prepared after preparing labor consumption budget.

Manufacturing Overheads Budget

The manufacturing overhead budget should provide a schedule of all costs of production other than direct material and direct labor. The total of the overhead will depend on the behavior of costs of the individual overhead items in relation to the anticipated level of production and a pre-determined overhead rate developed. This rate will be used to apply manufacturing to units of product throughout the budget period. Manufacturing overhead budget = variable manufacturing overhead + fixed manufacturing overhead

Production unit x VMOH rate + (Given)[Wagle& Dahal 2006:6II]

Selling & Distribution Expenses Budget

The selling and distribution expenses budget contains a list of anticipated expenses for the budget period that will be incurred in area other than manufacturing. This budget will be made up of many smaller, individual budgets submitted by various persons having responsibility for cost control in selling and distribution matters. If the number of expenses items is very large, separate budget may be needed for the selling and distribution functions. [Ojha, Bajracharya, Goet, Sharma, 2005:376]

Selling and distribution expenses includes all costs to costumers related to selling, distribution and delivery of products to costumers. In many companies, this cost is a significant percentage of the total expenses. Careful planning of such expenses affects the profit potential of the firm.

Administrative Expenses Budget

Administrative expenses include those expenses other than manufacturing and distribution. They are incurred in the responsibility centers that provides supervision of and service to all functions of the enterprise rather than in the performance of any one function. Because large portion of administrative expenses are fixed rather than variable, the notion presents that they can not be controlled.

Cost of Good Sold Budget

Budgeted manufacturing cost of sales quantity is known as cost of good sold budget. It is a plan for expenses normally prepared at consolidated form of budget period. It is a part of budgeted income statement. It tells us how much of the costs of goods manufactured should be expensed this year and how much cost should be carried to the next year for making of the income statement and the balance sheet.

Budget Income Statement

The budget income statement is one of the key schedules in the budget and is generally prepared at consolidated form. A budget income statement shows the expected revenue and expenses for the budgeted period, assuming that planned operations are carried out. It is the documents that tells how profitable are operations anticipated to be in the forthcoming period.

Financial Budget

The part of a master budget that focuses on the effects that the operating budget and other plans such as capital budget and repayment of debt) will have on cash. It consists of the following budget.

- (i) Cash Budget
- (ii) Budgeted Balance Sheet

Cash Budget

The cash budget is a forecast of expected cash receipt and payment for a future period, which gives planned beginning and ending cash position for the budget period. The objective of cash budget is to ensure that sufficient cash is available at all times to meet the level of operations that are outlined in the each and every organization. It also measures the liquidity of an organization. All the organization operates on money, not in profit so cash should be managed properly. Cash budget helps in effective cash management. It is summary of expected cash inflow/outflows over a projected period.

Budget Balance Sheet

It gives clear picture of financial position of an organization with ending balance of all accounting titles. It shows the expected end of period balances for the organizations assets, liabilities and owner's equity, assuming that planned operations are carried out.

Beginning with the current balance sheet and adjusting it for the data contained in the other budgets develop the budgeted Balance sheet.

[Garrison, 2000:358]

Advantages of Balance Sheet

- It discloses the financial condition.
- It serves as a check on the mathematical accuracy of all other budget.
- It helps management in computation of various ratios.
- It highlights future resources and obligations.
- It provides on overall financial position of the budgeted period so that management may take action to improve it etc.

2.10.6 Flexible Budgeting

A flexible budget is a budget designed to change in accordance with the level of activity actually attained. It presents details regarding output, costs, sales and profit for varying levels of business operations. A flexible budget is also called a variable budget, dynamic budget, step budget, sliding-scale budget, expenses formula budget and expenses control budget.

[Wagle & Dahal2006: 7.1]

Budget can be categorized as static and flexible by nature. Master budget is static in nature and prepared for certain activity level. It is estimated that the activity will no change significantly. But it's only coincident that there will not be significant deviation. In the uncertain future anything can be happen, so different alternatives should be kept ready for these purpose. If there is significant change whole budget has to be modified and readjusted with great deal of effort. Such drawbacks are eliminated in flexible budget. Flexible budget is not based on only one level of activity rather it shows wide range of estimates within relevant range of activity. It helps in control of overhead setting bases for control.

$$\begin{aligned}\text{Overheads (Y)} &= \text{Fixed Cost} + \text{Variable cost (per activity)} \times \text{Activity} \\ &= \text{FC} + \text{UVC} \times \text{activity}\end{aligned}$$

In above formula after ascertain the fixed cost and unit variable cost (UVC), it can be calculated for different activities. So it is automatically geared to change in volume.

Desirability of Flexible Budgeting

-) It is desirable for such type of business which has unpredictable sales.
-) It is also desirable for organization having fluctuating activity levels.
-) For those organizations which activities are entirely customer's demands driven.
-) For new ventures/launches prediction of volume of activities is very hard. So different alternative can be prepared with flexible budget.

Flexible budgeting helps in marginal analysis by presenting details regarding output costs, sales and profit for different performance level and can be compared with budgeted one for actual activity level. It can not be done is static budget. Thus it is indispensable management accounting tools for cost reduction and control. It also gives information about usage of capacity (in terms of percentage) of both plan and human resources.

2.10.7 Cash Flow Statement Analysis

The cash flow statement is that type of statement which shows the inflows and outflows of cash and cash equivalents during the year. Cash equivalent generally includes highly liquid short term investments such as treasury bills, money market funds, commercial papers etc. Information about cash receipt and payment can also be obtained from cash book, but cash flow statement provides more information to decision maker about increase and decrease of in operating, investing and financing activities.

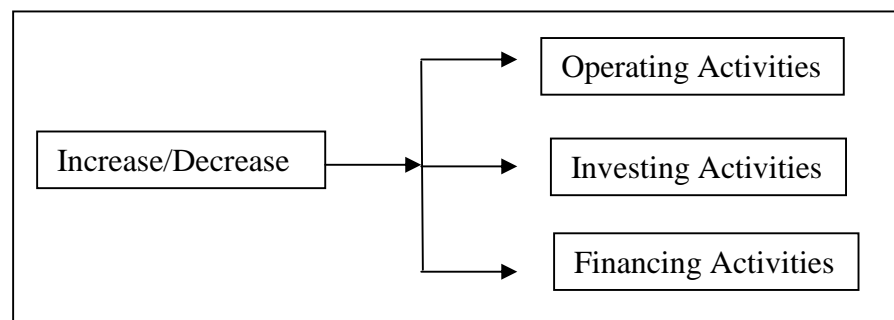
The institute of cost and work accountants of India defines cash flow statement as "A statement setting out the flow of cash under distinct heads

of sources of funds and their utilization to determine the requirements of cash during the given period and to prepare for its adequate provision.

The main objective of a statement of cash flows is to convey information about the cash receipts and cash payments of a firm during the accounting period. The statement of cash flows reflects the ability of the company.

-) To generate positive cash flow in future periods.
-) To meet its obligations and to pay dividends

Figure 2.11: Cash Flow Statement



In this statement accrual based accounting information is converted into cash based information and rearranged under the group of operating, investing and financial activities. Hence cash flow statement provides vivid description about the solvency and financial position of business.

Importance of Cash Flow Statement

It provides following information

-) Ability to generate positive future cash flows
-) Ability to meet financial obligation
-) Assess the reasons for differences between income, cash receipt and payment.
-) Information about both cash and non-cash aspects of investment and financial activities.
-) Liquidity, solvency and financial flexibility
-) It is also helpful in planning the repayment of loan, replacement of fixed assets other long-term cash planning

Preparation of Cash Flow Statement

There are two method of preparation of cash flow statement. Those are as follows:

- i. Direct Method
- ii. Indirect Method

2.10.8 Management Accounting Control System and Responsibility Accounting

Control involves the process of establishing results and performance targets, measuring performances and providing rewards or punishment based on employee's ability to achieve the performance target. Control procedures are implemented for reasons of effectiveness, efficiency and utilization.

A well-designed management control system aids and coordinates the process of making decisions and motivate individuals throughout the organization to at in accordance with the decisions. It also facilitates forecasting revenue and cost-driver level, budgeting, measuring and evaluating performance. [Horngren, Sundem and Stration, 2000:526]

Management accounting system plays a dominant role in cost control, in profit making and the non making organizations. It is because the monetary measure meets the requirements of wide range of dissimilar activities using common measures. The objectives of management control system are:

-) To communicate results of actions across the organization.
-) To ensure that the management control system adjust to change in the environment.
-) To clearly communicate the organization's goal.
-) To ensure that manager and employees understand the specific actions required of them to achieve organizational goals.

2.10.8.1 Responsibility Accountability

In today's complex and dynamic world, all organization can not be managed and controlled centrally. Decentralization is the must. Responsibility accounting is a form and process of decentralization. Whole organization is divided into smaller unit-division, segments, departments, branches, product lines etc. Every unit is managed and controlled by responsible person, manager. Authority and responsibility are delegated to the respective manager making him/her accountable. The managers should report the performance of the unit to the top management.

Responsibility accounting helps to identify what parts of the organization have primary responsibility for each action, developing measures and targets to achieve, and creating reports of these measures by organization subunit or responsibility centre. [Horngre, Sudem, Stratton, 2000: 355]

Responsibility Accounting is a system of accounting that assigns revenues, costs and capital to responsibility centers (IOMA, USA).

Traditionally responsibility accounting refers only to financial performance (Cost, revenue and Profit) of subunits, But now a days it measure overall performance of the unit.

Process of Responsibility Accounting

-) Identifying the responsibility centre
-) Delegation of authority and responsibility
-) Controllability of the object
-) Establishing performance evaluation criteria
-) Selecting cost allocation bases.

In conclusion, we make it clear that responsibility accounting is based on the recognition of individual areas of responsibility as specified in the organization structure of the firm. It is a method of accumulating and reporting both budget and actual cost and revenue by individual managers

responsible for them. Thus, it is accounting designed around the organizational structure or accounting for authority responsibility relationships.

2.10.8.2 Management Accounting Control System

Management is the process of planning, decision making and control. Control is the management function that ensures the proper implementation of plans and policies. Management control system focuses on motivating managers for the sake of enhancing total profitability of the organization.

2.10.9 Long-Term Investment Decision

Investing decision regarding long term assets for increasing the revenue of the organization is known as capital budgeting. Capital budgeting is an important managerial tool. One duty of a financial manager is to choose investments with satisfactory cash flows and rates of returns. Therefore, financial manager must be able to decide whether an investment is worth undertaking and be able to choose intelligently between two or more alternatives. To do this, a sound procedure to evaluate, compare and select projects is needed. This procedure is called capital budgeting capital budgeting is investment decision making as to whether a project is worth undertaking or not. Capital budgeting is basically concerned with the justification of capital expenditures. It may be decision regarding replacement, expansion, diversification etc. Character of capital budgeting is as follows.

-) Long term investment
-) Bulk amount of investment effect of time value of money
-) Risk and uncertainty

In the word of Khan and Jain, "Capital budgeting is of paramount importance as a frame work of future developments, and as major determinant of efficiency and competitive of power of a firm. It relates to fixed or long term assets, which are defined as assets that are in operation

and yield returns over a period of time. It, therefore, involves a current outlay in return for a series of anticipated future benefits."

2.10.9.1 Procedure of Capital Budgeting

- i. Generation of investment proposal
- ii. Estimation of cash flow
- iii. Evaluation of investment proposal based on different methods of screening the proposal.
- iv. Selection of the proposal based upon the selection criteria.
- v. Continual evaluation of the proposal after their acceptance.

i. Generation of Investment Proposals

Investment proposal may relate with the establishment of a new business or expansion in present line or diversification of the existing business replacement of a machine etc. as per the necessity.

ii. Estimation of cash flow

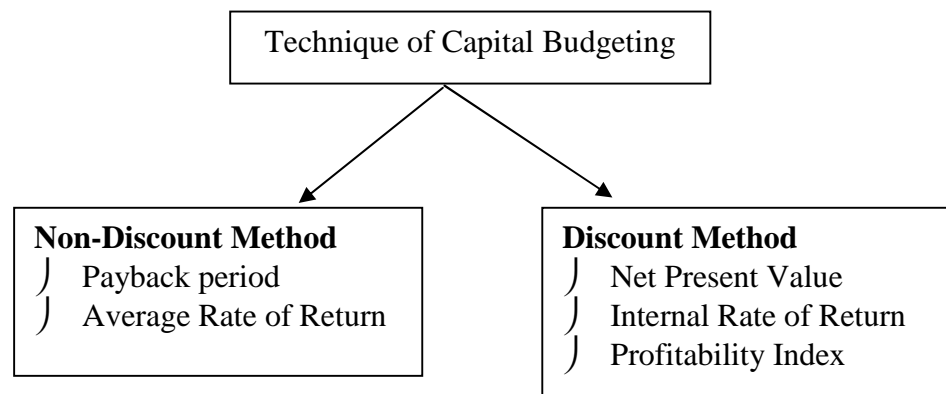
It involves the calculation of cost and benefits of the proposal to serve as a base for judging the commercial viability of the proposal. Cost of the proposal is determined in the form of net cash outlay or net cash cost and involves the cash out flows from an organization. On the other hand, benefits from the proposal is determined in the form of annual cash flow after tax (CFAT) and represent the inflow of cash to an organization.

iii. Evaluation of investment proposal based on different methods of screening the proposal.

The methods of evaluating capital investment proposal are as follows:

- a. Traditional Method
- b. Discounted cash flow method

Figure 2.12: Technique of Capital Budgeting



a. Traditional Method

i. Payback Period Method (PBP)

The payback period is the number of year required to recover the initial investment. It does not consider the inflows after the payback period. The projects having short payback period are desirable.

In Case of Even Cash Flow

$$PBP \times \frac{\text{Intitial Outlay (NCO)}}{\text{Annual Cash Flow}}$$

In Case of Uneven Cash Flow

$$PBP \times \text{Minimum year } \Gamma \frac{\text{Amount of RevoeryIntitial Outlay (NCO)}}{\text{Cash Flow During the Year}}$$

Where,

Amount to Recover = Investment – Minimum Year's – Cumulative Cash Flow

Decision

Single Project

Project PBP < Standard PBP (Accept the Project)

Project PBP > Standard PBP (Reject the Project)

Mutually Exclusive Project

According to this decision rule is to accept that proposal with the minimum PBP. This requires the calculating the PBP of each alternative proposal. Checking to see if its PBP is minimum and then investing the project with the minimum PBP. If none of the proposal has less than average standard or acceptable PBP, none will be accepted.

ii. Average Rate of Return (ARR)

It is also called the accounting rate of return. It is based on the average rate of return after tax over initial outlay. Higher rate of return is preferable. It is computed as follows:

$$\text{ARR} \times \frac{\text{Average Net Income After Tax}}{\text{Average Investment}}$$

Decision

Single Project

ARR > Minimum Acceptable Rate of Return (Accept the Project)

ARR < Minimum Acceptable Rate of Return (Reject the Project)

Mutually Exclusive Project

According to this rule accept the proposal with the highest ARR which is greater than acceptable rate of return.

b. Discounted Cash Flow Method

This method is superior to traditional cash flow method because it considers the time value of money. This method considers all benefits and costs occurred during the life of the project. The amount which is converted to present value from the future value is known a discounted value. On the basis of discounted value, it evaluates the investment proposal. So it is called the discount flow. The following methods are under it.

i. Net Present Value (NPV) Method

It is widely used method. It is present value of future returns discounted at the firm's cost of capital, minus cost of investment. This method requires the determination of three items of for a project.

-) Initial Cash Outflow
-) Future Net Cash Inflow and
-) Minimum Required Rate of Return

Mathematically,

$$\begin{aligned} \text{NPV} &= \frac{CF_1}{(1+k)^1} + \frac{CF_2}{(1+k)^2} + \dots + \frac{CF_n}{(1+k)^n} - NCO \\ &= (\text{Present Value of Future Cash Flows}) - \text{Initial Outlay} \\ &= (\text{PVIFA}_{k\%n}) - \text{NCO} \end{aligned}$$

Decision

Single Project

If NPV > 0 (Accept the Project)

If NPV < 0 (Reject the Project)

Mutually Exclusive Project

According to this decision rule is to accept that proposal with the largest positive NPV. This requires calculating the NPV of each alternative proposal checking to see if its NPV is positive and then investing in the project with the largest positive NPV. If none of the proposals has a positive NPV, none will be accepted.

ii. Profitability Index (PI)

Profitability Index is also called benefit-cost ratio. It is the ratio of the present value of the future cash flows to initial outlay.

$$\text{PI} = \frac{\text{Present Value of the Cash Inflow (TPV)}}{\text{Present Value of Cash Outlay (NCO)}}$$

Decision

Single Project

If $PI > 1$ (Accept the Project)

If $PI < 1$ (Reject the Project)

Mutually Exclusive Project

The PI decision rule is to take the project with the largest acceptable PI, where an acceptable PI is greater than one. If none of the mutually exclusive projects has a PI greater than one, none would be acceptable.

iii. Internal Rate of Return (IRR)

The Internal Rate of Return is usually the rate of return that a project earns. It is defined as the discount rate, which equates the aggregate present value (PV) of the net cash inflows (CFAT) with aggregate present value of the cash outflows of a project. In other words, it is that rate which gives the project net present value zero. The internal rate of return is determined on the basis of trial and error method.

PV Inflows = PV Investment Costs

$$\frac{CF_1}{(1 + IRR)^1} + \frac{CF_2}{(1 + IRR)^2} + \dots + \frac{CF_n}{(1 + IRR)^n} - ZI_0 = 0$$

$$\text{or, } \sum_{t=1}^n \frac{CF_t}{(1 + IRR)^t} - ZI_0 = 0$$

Decision

Single Project

If $IRR > \text{Cost of Capital}$ (Accept the Project)

If $IRR < \text{Cost of Capital}$ (Reject the Project)

Mutually Exclusive Project

The IRR rule is to accept that proposal with the largest accepted IRR where an acceptable IRR is greater than the cost of capital. This procedure entails calculating each project's IRR and accepting that project whose IRR is both is greater than the cost of capital. If none of the competing proposals has an IRR greater than cost of capital, all will be rejected.

Advantage of IRR

-) It considers time value of money
-) Use of cash flow
-) Consistent with the firm's goal of shareholder wealth maximization

Disadvantages of IRR

-) Possibility of Multiple IRRs
-) Can Involve Tedious Calculations

Selection of Investment Proposal

The next procedure in capital budgeting involves the selection of projects. Projects proving their worth (as per the acceptance criterion fixed) are finally selected for their execution in conformity with the funds available for such events.

Follow-up of Investment Proposal

A Continual evaluation of proposals implemented is also necessary to judge their effectiveness in the time frame and the firm should also be ready to go for alternative proposals if the implemented proposals do not turn out as expected.

2.10.9.2 Capital Budgeting Under Risk and Uncertainty

A capital budgeting decision is based on the benefits from the project. These benefits are measured in terms of cash flows. The estimation of

future returns is done on the basis of various assumptions. The actual return in terms of cash inflow depends on a variety of factors such as price, sales volume, effectiveness of the advertising campaign, competition, cost of raw materials, manufacturing costs and so on, each of these in turn depends on other variable like the state of the economy, the rate of return, inflation etc. The accuracy of the estimate of the future returns and therefore the reliability of the investment decision would largely depend upon the precision with which these factors are forecast. Whatsoever technique is followed for forecasting precisely, actual returns can never tally to the estimation. As a result actual, results vary from the estimation. This variation is technically referred to as a risk. The term risk with an investment can therefore be defined as the variability in the actual returns emanating from a project in future over its working life in relation to the estimated return as forecast at the time of initial capital budgeting decision. [Horngren, Foster and Datar, 9.81:1999]

The decision situations with reference to risk analysis in capital budgeting decisions can be broken up into three categories.

-) Uncertainty
-) Risk
-) Certainty

The risk situation is one in which the probabilities of a particular event's occurring are known. These probabilities are not known under the situation of uncertainty. The difference between risk and uncertainty therefore lies in the fact that the variability is less in risk than in uncertainty. [Luce and Raiffa, 478:1957]

In conclusion, risk with reference to capital budgeting result from the variation between the estimated and actual returns. The greater the variability between two is considered as highly risky project and lower the variability between the two is considered as lower risky project.

Techniques of Risk Analysis

For incorporating the risk factor in analysis of capital budgeting, the techniques are used:

- A. Risk Adjusted Discount Rate
- B. Certainty Equivalent Co-efficient
- C. Sensitivity Analysis
- D. Probability Assignment
- E. Standard Deviation
- F. Co-efficient of Variance.

2.10.10 Financial Statement Analysis

Financial statement represents the overall economic personality of business firm in hand to date. Financial statement represents the firm's financial position to the users. Generally, a firm's financial statement includes Income Statement, Balance sheet, cash flow statement and statement of retained earnings. It is prepared by top-management. The financial report of a company is prepared periodically, generally annually. This gives a complete account of the financial health of the company. The report generally consists of the following:

-) Auditors report
-) The report of the chairman/director
-) Profit and Loss Account
-) Balance Sheet
-) Cash Flow Statement
-) Statement of Retained Earnings
-) Various Schedules
-) Notes and Disclosures on Accounting Policies.

In conclusion, Financial Statements and reports that provide information regarding the operating performance, financial health and the direction chosen by the firm to the different users of information both internal and external. Users of accounting information generally are: owners,

management, creditors, investors, researcher, government, customers, employee trade, union etc.

2.10.10.1 The Major Parts of a Financial Statement

-) The Income Statement
-) The Statement of Retained Earnings
-) The Balance Sheet
-) The Statement of Cash Flow

The income statement tells us about the operating results of a particular accounting period, say a month or a year. The statement of retained earnings shows the change in retained earnings between the beginning and the end of a period. The balance sheet reflects a company's solvency. It shows the position of all assets, liabilities, and equities to date. The statement of cash flow shows the cash inflows and outflows of a company over a period of time.

Financial statement analysis is an act of selecting, relating and interpreting the information contained in the financial statement with specific purpose and tool. Figures or amounts contained in financial statement do have their individual significance. But meaningful references or conclusions can be drawn when their relationship is established with other figures or when their change over the years are identified. The most commonly used tools of financial analysis that help in establishing relationship and identifying changes constitute the following.

1. Comparative Statements/Horizontal Analysis

When the financial statements of previous year along with current year are presented horizontally with added columns to reflect absolute change in amount and percentages for each item from the previous year to current years. Its form is the horizontal Analysis.

2. Common Size Statement/Vertical Analysis

Common size statements express all items in the statement as a percentage of a selected item in the statement. Vertical analysis consists of the study of a single financial statement in which each item is expressed as a percentage of significant totals. Vertical analysis is especially helpful in analyzing income statement data such as the percentage of the cost of goods sold to sales.

3. Trend Analysis

Trend analysis is nothing more than the extension of horizontal analysis for several years. It is carried out by assigning a value of 100 to the items of base year's financial statement items in the following years as a percentage of base year value.

4. Ratio Analysis

Simple ratio analysis means an expression of quantitative relationship between two numbers. This ratio gives more than quantitative information if they are properly interpreted. Ratio analysis is a widely used technique to evaluate the financial position and performance of business. The term ratio refers to the numerical or quantitative relationship between two variables. It gives a meaningful technique of measuring and evaluating financial performance of a business with relevant industry firm average or specific standards such as past ratio of same firm. It is a powerful tool of financial analysis. For the purpose of ratio analysis, it can generally be classified into the following major groups functionally.

-) Liquidity Ratios
-) Leverage or Capital Structure Ratios
-) Activity or Turnover Ratios
-) Activity or turnover Ratios
-) Profitability Ratios

a. Liquidity Ratio

Liquidity ratios are the ratios that provide the quick measure of the liquidity position or the ability of the firm to meet its current obligation. In other words, liquidity ratios are the indicator of short-term solvency or financial strength. Liquidity ratios are as follows:

i. Current Ratio

It establishes the relationship between current assets and current liabilities. It is computed as:

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

Current assets are those assets which can be converted into cash within short period of time, normally not exceeding one year. Cash in hand, cash in bank, bills receivable, marketable securities, short-term investment, inventory etc. Likewise, current liabilities are those obligation which are payable within a short period normally not exceeding one year. Creditors, bank overdraft, short-term loan, bills payable, are current liabilities.

Interpretation

Higher the quick ratio, better the liquidity position. For many types of business 2.1 is considered to be an adequate ratio.

ii. Quick Ratio

A ratio between quick assets and current liabilities is known as quick ratio.

$$\text{Quick assets} = \text{Current Assets} - \text{Inventory} - \text{Prepaid Expenses}$$

Interpretation

Higher the quick ratio, the better the liquidity position. For many business 1:1 is considered to be an adequate ratio.

b. Leverage Ratio

It shows the proportions of debt and equity in financing the firm's assets. Leverage or capital structure or solvency (long-term) ratio shows the degree or extent of debt availed by the organization and its capacity to serve such debt. In other words, creditworthiness and the financial risk of the organization can be judged with the help of these ratios. To judge the long-term financial; position of the firm, following ratio are computed:

i. Debt Ratio

A ratio between total debt to capital employed or net assets is known as debt ratio.

$$\text{Debt Ratio} = \frac{\text{Total Debt}}{\text{Capital Employed/Net Assets}}$$

Where,

$$\text{Total Debt} = \text{Current Liabilities} + \text{Long Term Debt}$$

$$\text{Capital Employed} = \text{Total Liability} - \text{Current Liabilities}$$

ii. Debt Equity Ratio

A ratio between borrowed fund and owner's equity is known as debt-equity ratio.

$$\text{Debt Equity Ratio} = \frac{\text{Long Term Debt/Total Debt}}{\text{Shareholders Equity (SE)}}$$

Where,

$$\text{Total Debt} = \text{Current Liabilities} + \text{Long Term Debt}$$

$$\text{SE} = \text{Ordinary Share Capital} + \text{Preference Share Capital}$$

$$\text{Ordinary Share Capital} = \text{Ordinary Share} + \text{Reserve and Surplus} + \text{Retained Earning etc.}$$

Interpretation

A high ratio shows the large share of financing by the creditors, as compare to that of owners.

iii. Debt to Total Capital Ratio

A ratio between long term debt and total capital is known as debt to total capital ratio.

$$\text{Debt to Total Capital Ratio} = \frac{\text{Long Term Debt}}{\text{Total Debt} + \text{Permanent Capital}}$$

Where,

Permanent Capital = Share Holders Equity + Long Tern Debt

Or,

$$\text{Debt to Total Capital Ratio} = \frac{\text{Total Debt}}{\text{Permanent Capital} + \text{Current Liabilities}}$$

iv. Interest Coverage Ratio

A ratio between earning before interest and tax (EBIT) and interest is known as interest coverage ratio. It measures the debt servicing capacity of a firm. It is also known as time-interest- earned ratios (TIE Ratio)

$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest}}$$

Interpretation

A high ratio is a sign of low burden of borrowing of a business firm, the point of view of the creditors, the larger the coverage, the greater the ability of the firm to make the payment of interest to creditors.

v. Fixed Charge Coverage Ratio

A ratio between earning before interest and tax to fixed charge is known as fixed coverage ratio.

$$\text{Fixed Charge Coverage Ratio} = \frac{\text{EBIT}}{\text{Fixed Charges}}$$

Where,

Fixed Charge = Interest + Preferred Dividend + Debt Payment + Lease Payment

Interpretation

The higher the fixed charge coverage ratio, the better it is from the preference shareholder's point of view.

c. Activity Ratios

Activity ratios are employed to evaluate the efficiency with which the firm managers and utilizes its assets. These ratios are also called turnover ratios because they indicate the speed with which assets are being converted turnover into sales. Thus this ratio involves a relationship between sale and assets. The following ratios are included in activity ratios.

i. Inventory Turnover Ratio

It indicates as to how fast the goods are sold.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Good Sold}}{\text{Average Inventory}}$$

Where,

CGS = Sales – Gross Profit

$$\text{Average Inventory} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$$

Or

ITOR = Sales/Closing Inventory

Interpretation

A high inventory turnover is indicative of goods inventory management and low inventory turnover is indicated poor inventory management.

ii. Debtors Turnover Ratio

It indicates the number of time debtor's turnover each year.

$$\text{Debtors Turnover Ratio} \times \frac{\text{Credit Sales}}{\text{Average Debtors}}$$

Interpretation

The higher the value of debtor's turnover, the more efficient is the management of credit sales and vice versa.

iii. Average Collection Period

It represents the average number of days for collecting the cash from debtors.

$$\text{Average Collection Period} \times \frac{\text{Days in Year}}{\text{Debtors Turnover}}$$

Or

$$\text{Average Collection Period} \times \frac{\text{Debtors} \times \text{Days in Year}}{\text{Sales}}$$

Minimum ACP is Preferable

iv. Fixed Assets Turnover Ratio

A ratio between the fixed assets and sales is known as fixed assets turnover ratio.

$$\text{Fixed Assets Turnover Ratio} \times \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

Interpretation

The higher the value of fixed assets turnover, the more efficient is the management and utilization of fixed assets and vice versa.

v. Total Assets Turnover Ratio (TATO)

$$\text{Total Assets Turnover Ratio} \times \frac{\text{Sales}}{\text{Total Assets}}$$

Interpretation

Same as fixed assets turnover ratio

vi. Capital Employed Turnover Ratio

A ratio between sales and capital employed is known as capital employed turnover ratio.

$$\text{Capital Employed Turnover Ratio} = \frac{\text{Sales}}{\text{Capital Employed}}$$

Interpretation

A higher ratio is preferable which shows that the firm is very efficient on sales activity.

d. Profitability Ratio

Profit is difference between revenue and expenses over a period to time. Profit is lifeblood for every organization to service long time and grow. Therefore, the financial manager should continuously evaluate the efficiency of its company in terms of profits. The profitability ratios are calculated to measure the operating efficiency of a company.

Generally two major types of profitability ratios are calculated.

- i. Profitability in Relation to Sales
- ii. Profitability in Relation to investment

Profitability in Relation to Sales

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Sales}}$$

Interpretation

A higher ratio is a sign of efficient management, which reflects lower cost of good sold and maximum profit.

$$\text{Net Profit Ratio} \times \frac{\text{Net Profit After Tax}}{\text{Sales}}$$

Higher Ratio is the sign of efficient management.

$$\text{Operating Ratio} \times \frac{\text{Operatig Expenses}}{\text{Sales}}$$

Where,

Operating Expenses = CGS + Administrative Expenses + Selling and Distribution Expenses

Lower operating ratio indicates the higher operating profit.

Profitability in Relation to Investment

Under this, following ratios are computed:

a. Return on Assets $\times \frac{\text{NPAT}}{\text{Total Assets}}$

The higher ratio implies that the available sources and tools are employed efficiently and vice versa.

b. Return on Shareholder's equity $\times \frac{\text{NPAT}}{\text{S.E}}$

Higher ratio is more efficient of management and utilization of shareholder's fund and vice versa.

c. Return on Capital Employed $\times \frac{\text{NPAT} \Gamma \text{Interest}}{\text{C.E}}$

Where,

CE = Capital Employed

This ratio shows the efficiency of the firm on the utilization of total capital.

A higher ratio is preferable.

d. Return on Shareholder equity $\times \frac{\text{NPAT} - \text{Preference Share Dividend}}{\text{Common Shareholders Equity}}$

Higher ratio indicates the efficiency of management in the utilization of equity shareholder's fund and vice versa.

e. Earning per Share = The income per Common Share in known as Earning Per Share (EPS).

$$\text{EPS} \times \frac{\text{NPAT} - \text{Preference Share Dividend}}{\text{Number of Common Shares}}$$

Higher EPS is preferable.

f. Earnings Yield Ratio $\times \frac{\text{EPS}}{\text{Market Value per Share (MPS)}}$

It evaluate the shareholder's return in relation to market value per share

g. Price Earning Ratio $\times \frac{\text{MPS}}{\text{EPS}}$

P/E ratio indicates investor's judgment or expectations about the firm's performance.

h. Dividend per Share $\times \frac{\text{Dividend Paid to Equity Shareholder}}{\text{Number of Equity Shares}}$

It is considered excellent when it is higher.

i. Dividend Payout Ratio $\times \frac{\text{DPS}}{\text{EPS}}$

j. Earning Power Ratio = The overall profitability can be measured on the basis of combination of these two ratios, which is known as earning power ratio. It has two elements.

) Net Profit Margin

) Investment Turnover

Earning Power

Ratio \times Ratio Net Profit Margin \times Investment Turnover

=====

Users of Ratios

a. Owners

- i. EPS
- ii. DPS
- iii. Market Value per Shares
- iv. ROE
- v. Book Value per Share
- vi. Debt equity ratio, debt to total capital ratio
- vii. Efficiency Turnover Ratios

b. Management

Management would like to see the overall ratios of the firm.

c. Potential Investors

They are concerned with the ratios of their interest.

d. Creditors

i. Short-Term Creditors

They are interested in the following ratios: quick ratio, current ratio, debt ratio, interest coverage ratio.

ii. Long-Term Creditors

They are interested in the following ratios: Interest coverage ratio, debt ratio, debt-equity ratio, long-term debt to fixed assets ratio, fixed charge coverage ratio, profitability ratio.

Ratio Analysis For Management Performance

Management of every organization is entrusted with resources contributed by the owners and creditors to carry out the operations effectively and efficiently. Management have to protect the interest of all parties and see the organization grows profitability, which, in turn, depends upon the overall performance of the management. Nature and size of organization may require different types of ratios to measure management's performance

but the most common groups of ratios that can be used for the analysis of management's performance can be listed out as follows:

a. Ratios Measuring Productivity

Under this group, ratio tries to measure the productivity of various inputs by establishing their relationship with the output. The following ratios are being computed under this group.

$$\text{Sales per Employee X} \frac{\text{Net Sales}}{\text{No. of Employees}}$$

$$\text{Net Added Value per Employee X} \frac{\text{Net Value Added}}{\text{No. of Employees}}$$

$$\text{Labour Equipment Ratio X} \frac{\text{Net Fixed Assets}}{\text{No. of Employees}}$$

$$\text{Wage Base X} \frac{\text{Total Wages}}{\text{No. of Employees}}$$

$$\text{Wage Distribution ratio X} \frac{\text{Total Wages}}{\text{Net Value Added}}$$

b. Ratios Measuring Profitability

A profit is considered as the measuring rod of success, the performance of management in terms of profit are also be evaluated. The following ratios can be computed to meet the very purpose

$$\text{Total Capital Profit Ratio X} \frac{\text{Net Profit}}{\text{Permanent Capital}}$$

Where,

Permanent Capital = Long term fund or capital employed, long term debt.

$$\text{Sales/Gross Profit Ratio X} \frac{\text{Gross Profit}}{\text{Net Sales}}$$

$$\text{Sales/Operating Profit Ratio X} \frac{\text{Operating Profit}}{\text{Net Sales}}$$

$$\text{Net Profit/Sales Ratio X} \frac{\text{Net Profit}}{\text{Net Sales}}$$

$$\text{Owned Capital /Net Profit Ratio X} \frac{\text{Net Profit}}{\text{Owned Capital/ Net Worth}}$$

c. Ratios Measuring Activity

Management is entrusted with the activity of utilizing the resources or funds of owners and creditors effectively and efficiently. As the resources are invested in various assets to generate sales and profit the efficiency with which these assets are being turned over to sales are to be judged. For the attainment of this purpose, the following ratios are usually computed under this group.

$$\text{Total Capital Turnover Ratio X} \frac{\text{Sales}}{\text{Permanent Capital}}$$

$$\text{Current Assets Turnover Ratio X} \frac{\text{Sales}}{\text{Total Current Assets}}$$

$$\text{Inventory Assets Turnover Ratio X} \frac{\text{Sales}}{\text{Inventory}}$$

$$\text{Fixed Assets Turnover Ratio X} \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

d. Ratios Measuring Stability

These ratios measure the short-term and long-term solvency position of the organization. The higher the debt, the greater will be the insolvency risk.

Short-term Solvency = Liquidity Ratios

Long Term Solvency = Debt Equity and Interest Coverage

$$\text{Interest Expenses Ratio X} \frac{\text{Annual Interest}}{\text{Net Sales}} | 100$$

$$\text{Interest Coverage Ratio X} \frac{\text{EBIT}}{\text{Interest}}$$

$$\text{Current Ratio X} \frac{\text{Total Current Assets}}{\text{Total Current Liability}}$$

$$\text{Owned Capital Ratio X} \frac{\text{Shareholder Equity}}{\text{Permanent Capital}}$$

$$\text{Quick Ratio X} \frac{\text{Total Current Assets - Inventory}}{\text{Total Current Liability}}$$

$$\text{Ratio of Fixed to Long - term Capital X} \frac{\text{Net Fixed Assets}}{\text{Permanent Capital}}$$

2.10.11 Decision Regarding Alternative in Business Operation

Decision making is one of the major functions of management. The process of decision making is selecting the best alternative from among the various course of action available. The main goal of decision making is to select wisely. One source of action amongst the alternatives plans of action, which is expected to optimize the objective of the decision maker's concerning area. It is concerned with the future and involves choice between alternatives. It is an important as well as difficult task of management. MA is a subject matter, which provides some logical tool and technique to the management rational decision-making.

Decision-making is more of an art and less of a science. Not only is the world growing more complex and on certain at a faster and faster pace, but the old decision making models are also failing and we expect their failure to accelerate as well. Accounting information can improve but can not be perfect, a management's understanding of the consequences of various resources allocation decision. To the extent that accounting information can reduce the management's uncertainty about the economic facts, outcomes and relationship involved in various course of action, such information is valuable for decision-making purpose and necessary for conducting business. (Bajracharya, Ojha, Goit and Sharma, 2004:619)

2.10.11.1 Process of Decision Making

Decision Making is the art of choosing the best alternative among the various alternative available to solve a given problem. Incase of business, the best alternative is one, which is likely to provide maximum profit and involves a minimum cost without violating the social responsibilities.

The process involves the following steps:

- i. Recognize and define the problem
- ii. Identify the appropriate alternatives to solve the problem.
- iii. Collect the relevant information of alternatives
- iv. Make different revenue/cost analysis.
- v. Consider the opportunity costs and qualitative factors.
- vi. Select the best alternatives implement the selected alternatives
- vii. Evaluation and follow up the decision.

2.10.11.2 Cost Factors in Decision Making

Cost refers the amount of expenses spent to generate product or services. There is inverse relationship between the cost and revenue. If the cost is increased revenue is decreased and vice versa. That's why management must consider the various factors while making the managerial decisions.

The cost may be:

- i. Relevant cost and irrelevant cost
- ii. Sunk cost (committed costs)
- iii. Avoidable and unavoidable cost
- iv. Incremental cost and different cost.
- v. Opportunity cost

2.10.11.3 Types of Decision Model

Decision-making is also known as decision model. It is the process of evaluating two or more alternatives leading to a final choice. There are different types of alternative choice decision. Some examples of alternative choice decisions is:

- i. Drop or Continue
- ii. Make or Buy Decision

- iii. Accept or Reject a Special Offer Decision.
- iv. Sell or Further Process Decision
- v. Assets/Equipment Replacement Decision
- vi. Leasing or Purchase Decision.

i. Decision to: Drop o Continue

Firms having different products its product line or operating various departments may sometime face the problem of dropping the product dept,deemed to be unprofitable. The decision is related to eliminating of unprofitable product or department by evaluating profitability. An important factor in the decision to drop or continuing a product line is whether it will increase or decrease the future income of business. The income statement, by showing clearly appropriate cost and profit, must be developed for each alternative. If overall profit of the company increases by dropping the product, that product should be dropped and vice versa.

ii. Make or Buy Decision

Making or buying of a component part is the challenging type of decision which is may be faced by the management. Decision on whether to produce components o provide service within the organization or to acquire them from outside supplier are called make or buy decision. The organization produces these goods (i.e. components/parts), if they are not available in the market. Similarly, it purchases, if there is no capacity to produce them within organization. But when both the conditions are available at the same time, then a manager should take decision whether to manufacture the parts in the factory or purchase from outside suppliers. In order to reach decision, comparative cost analysis is necessary.

iii. Decision to: Accept or Reject a Special Offer

Special order arises when a company has excess or idle capacity. Generally, if the company has got idle capacity, the fixed cost doesn't increase by

accepting the special order. It will not change in total whether the order is accepted or rejected. In that, case it is irrelevant cost. Only variable cost is relevant cost. Variable cost increase by accepting special offer. But if there is no spare capacity, in such a case, the additional fixed cost has to be dealt as relevant cost. To make a decision, an income statement is prepared which shows clearly the marginal cost, fixed cost and profit. If the profit increase on accepting of the special offer, that order should be accepted and vice versa.

iv. Decision to: Sell or Further Process

Another special decision area that requires managers attention consists the sale of a product at split-off point or to process some or all products further. Joint products are those products, which are produced in single production process. Joint products have common process and joint cost of production up to split-off point. Cost incurred for common process till split-off point are identified as joint cost where as the cost incurred after split-off points are taken a separate cost. To decide between sell and further processing alternative, the organization functions on the contribution margin or profit margin of the organization.[Wagle and Dahal, 2004:8.11]

v. Decision to: Assets/Equipment Replacement

Replacement of assets or equipment is a capital investment or long-term decision requiring use of discounted cash flow techniques. One aspect of assets replacement decisions, which is to be understood clearly at this stage, is how to treat the book value of old equipment. In deciding whether to replace or keep existing equipment, we must consider the relevance of following commonly encountered items:

-) Cash operating cost of old and new equipment
-) Cost of new equipment
-) Disposal value of old equipment
-) Book value of old equipment

) Gain or loss on disposal

vi. Decision to: Leasing or Purchase

Leasing is a contract between the lesser and the lessee for the hiring of specific asset that allows lessee retaining the legal ownership with the lesser to obtain possession and use of assets in exchange for lease rentals agreed upon. The lease agreement its two types:

) Operating Lease

) Financial Lease

Short term (Period of the lease being shorter than the economic life of the assets or single period during which the lessor does not recover its investment is assets) and cancelable lease agreement are called operating lease. The cost of maintenance, repair, insurance and taxes are borne by lessor under an operating lease.

Long-term (Period of the Lease being almost equal to the expected economic life of the assets or single period during which the lessor recovers his investment and usually earns profit as well) and non cancelable lease are financial leases.

In order to purchase the assets, lessee may borrow the funds or use surplus fund. The process of evaluating purchasing alternatives varies under these conditions. If the company uses surplus funds to purchase, the tax shield benefit of the company in this condition is less than of under the borrowing condition because interest is tax-exempt item in addition to depreciation expenses. [Wagle and Dahal, 2004:8.14, 8.15]

2.10.12 Pricing Decision

Pricing means establishing/setting the price of goods and services. Pricing decisions have a direct bearing on the profitability of a company. They are instrumental in affecting the future growth of sales of an enterprise, market share and customer acceptance. Clearly, pricing decisions are crucial decision. In a way, they determine the destiny of a company.

An act of establishing the price for an organization, product or service is called pricing. The most desired, regular and reliable source of revenue for the sustainable development of any firm comprise sales which in turn is the product of price charged multiplied to/by volume or units of sales. As sales determined the funds flow, profitability and financial position of the organization, pricing decision is one of the most crucial decisions a manager faces. It is also one of the most difficult or challenging because it should appeal to customers, beat competitor, recover cost and provide surplus for social responsibility, honor government's regulation, comply with business ethics, enhance organization's image etc. [Wagle & Dahal 2004:9]

The pricing decisions arise in virtually all types of organizations. Manufactures set prices for the products they manufacture, merchandising companies set prices for their goods, service firm set price for such service as insurance policies, train tickets, theme park, admissions and bank loans. Also nonprofit organizations often set prices, for example, government unit price for vehicle registrations, park user fees and utility service. (Hilton, 2000:514)

Pricing decision are the decision that managers make about what to charge for the products and service they deliver. The pricing of a product is not just a marketing decision or a financial decision, rather it is a decision touching on all aspects of a firm's activities and as such it affects the entire enterprise. As the price charged on product largely determine the quantities that customers are willing to purchase, the setting of both low and high prices dictates the inflow of revenues consistently failing to cover all the costs of the firm and then in the long run, the firm can not survive. [Garrison. 1985]

For pricing decisions, economists have their own view while accountants have their own perspective. Economic theory indicates that companies acting optimally should produce and sell units, until the marginal revenue s

equal marginal costs. The market price is the prices that create a demand for these optimal numbers of units.

2.10.12.1 Factor Influencing the Pricing Decision

Pricing Decision are influence by different factors, which are as follows:

- i. The cost structure of the firm and product
- ii. The firm's objective
- iii. The demand for the products and its elasticity
- iv. Level of activity
- v. Government guidelines
- vi. The availability of substitutes
- vii. Types of Competition
 -) Perfect or Imperfect
 -) Oligopolistic or Monopolistic
 -) Working full or below capacity
- viii. Economic and Political climate and trends and likely change in them in future.

2.10.12.2 Method of Pricing

The different methods of pricing are as follows:

A. For Sales External to the Firm i.e. its Customers

i. Full/Variable/Manufacturing Cost Pricing

Full Cost Pricing

In this method selling pricing is determined on the basis of total costs i.e. variable (Manufacturing + Non-Manufacturing) cost and fixed and fixed (Manufacturing + Non-Manufacturing) cost. It is also known as absorption cost or total cost pricing. The desired profit is added to the total cost in order to fix the selling price.

Price = Total Cost + Total Cost x Markup per Percentage on Total Cost

Where,

$$\text{Mark - up Percentage on Total Cost} \times \frac{\text{Target Profit}}{\text{Total Cost}} | 100\%$$

Variable Cost Pricing

Under this method, selling price is determined on the basis of variable cost. It is also known as marginal cost pricing. The desired profit and fixed cost is added to the total variable cost in order to fix the selling price.

$$\text{Price} = \text{TVC} \times \text{Mark-up percentage on TVC}$$

Where, TVC = Total Variable Cost

$$\text{Markup on TVC} \times \frac{\text{Target Profit} \Gamma \text{Total Fixed Cost}}{\text{Total Variable Cost}} | 100$$

Manufacturing Cost Pricing

In this method selling price is determined on the basis of total manufacturing cost. The desired profit and non-manufacturing cost (selling and distribution cost and administrative cost) is added to the total manufacturing cost in order to fix the selling price.

$$\text{Price} = \text{Total Manufacturing Cost} \times \text{Mark-up percentage on Total Manufacturing Cost}$$

Where,

$$\text{Markup Percentage on Total Manufacturing Cost} \times \frac{\text{Target Profit} \Gamma \text{Total Non - manufacturing Cost}}{\text{Total Manufacturing Cost}} | 100$$

ii. Return on Investment (ROI) Pricing

Over the long run the firm needs to price its product so that it can recover all organizational costs and obtain an adequate return on invested capital. Many large corporations as well as smaller firm attempt to set prices to achieve a specified return on invested capital. ROI is the composite cost of a company, which takes into account the cost of both owner's and borrowed capital. So, ROI based pricing is also referred as cost of capital based

pricing. The price under ROI pricing can be determined by using following steps.

Step 1 – To find out Total Capital Employed (TCE)

$$CE = \text{Permanent Capital} + \text{Working Capital}$$

Step 2 – To find out Target Point

$$\text{Target Profit} = CE \times \text{Planned Percentage Rate of Return on Capital Employed}$$

Step 3 – To find out Total Cost

Step 4 – To find out Markup Percentage

On the Basis of Total Cost

$$\text{Markup Percentage} \times \frac{\text{Target Profit}}{\text{Total Cost}} | 100\%$$

On the Basis of Variable Cost

$$\text{Markup Percentage} \times \frac{\text{Fixed Cost} \Gamma \text{Target Profit}}{\text{Total Variable Cost}} | 100\%$$

On the Basis of Manufacturing Cost

$$\text{Markup Percentage} \times \frac{\text{Total Non - manufacturing Cost} \Gamma \text{Target Profit}}{\text{Total Manufacturing Cost}} | 100\%$$

Step 5 – To find out Selling Price Per Unit (SPPU)

On the Basis of Variable Cost

$$SPPU = \text{Total VCPU} + \text{Total CPU} \times \% \text{ Mark-up on Variable Cost}$$

On the Basis of Variable Cost

$$SPPU = \text{Total Manufacturing Cost Per Unit} + \text{Total Manufacturing Cost Per Unit} \times \text{Mark-up Percentage on Total Manufacturing Cost}$$

iii. Target Cost Pricing

Target Cost pricing is a method of determining the cost of a product or service based on the target price that customer are willing to pay. According to peter Drucker, "This is true but irrelevant: Customer do not see it as their job to ensure manufacturers a profit. The only sound way to price is to start out with what the market is willing to pay"

This pricing method is widely used by companies in the development stages of next product. To determine the price of the products firstly, the total cost for the product is estimated. If the total cost of the product is sufficiently low, the product may be launched. Conversely, if the total cost is too high, the product may not be launched. In the conclusion it is driven by external market factors.

iv. Activity Based Costing (ABC) Pricing

In ABC, the overhead allocation is done on the basis of activity involved. It is that costing in which costs are first traced to activities then to products. This costing assumes that product demands activities and cost is required for activities. The cost should be assigned to products based on individual product's consumption or demand for each activity after computing the total cost under each activity. The mark-up percentage is added and then pricing is completed.

Steps of Pricing Determining under ABC Pricing

Step 1 – Determination of Cost Driver

Step 2 – Computing of Overhead Cost Driver Rate

Step 3 – Computing of Total Cost Per Unit

Step 4 – Computing of Mark-up Percentage on The basis of Total Cost Driver Rate

Where,

$SPPU = \text{Total CPU} + \text{Total CPU} \times \text{Markup Percentage}$

B. For Internal Transfer Between Department of Same Organization

In organization there may be more than one department. If one department transfers goods/services to other and charge for the products/services it is called transfer pricing.

A transfer price is a price that a subunit of an organization charges for products or services supplied to another subunit of the same organization. The transfer price creates revenue for the selling subunit and a purchase cost for buying subunit, affecting operating income for both subunits. The operating income can be used to evaluate the performance of each subunit and to motivate managers. [Horngrén, Foster and Datar, 560:2003]

So transfer pricing is that notional value at which goods and services are transferred between divisions in a decentralized organization.

Methods of Transfer Pricing

The transfer pricing methods are broadly classified into four categories, which are as follow:

i. Market Based Transfer Pricing

Transfer prices set equal to the price in the external markets of the product or service or work in progress is known as market based transfer pricing.

When the producing division has no excess capacity and perfect competition prevails, where no single producer can affect the market price, the general transfer pricing rule and the external market price yield the same transfer price. [Bhattarai 2060:9.32]

Transfer Pricing = Outlay Cost + Opportunity Cost

Transfer Price = External Market Price

If the producing division has excess capacity or the external market is imperfectly competitive the general rule and the external market price will not yield the same transfer price.

If the transfer price is set at the market price, the producing division should have the option of either producing goods for internal transfer or selling in the external market. Similarly, the buying division should have the autonomy to buy from internal division or outside supplier.

ii. Cost Based Transfer Pricing

Cost based transfer pricing is used when:

-) Market price is not available like for semi-finished/specialized product
-) There is difficulty in determining the market price
-) Product Manufactured is of secret nature, where company use full transfer pricing or variable cost transfer pricing.
-)

a. Full Cost Transfer Pricing

Transfer = Total Cost + Total Cost x Mark up Percentage on Total Cost

b. Variable Cost Transfer Pricing

In this method, the transfers are made at variable cost. By passing only variable costs alone to the next division. Production and pricing decision are based on a cost volume profit relationship for the firm as a whole.

iii. Negotiated Pricing Method

The price is set by negotiation between the buying and selling division in this method. The buying division obtains quotation from the supplier division as well as from external suppliers. A decision is then taken whether to purchase from outside or to obtain internally. While taking

decision, the marginal cost of the product and capacity available for its manufacture should not be ignored.

iv. General Transfer Pricing

The general rule specifies the transfer price as the sum of two cost components. The first component is the outlay cost incurred by the division that produces the goods or services to be transferred and another component is the opportunity cost incurred by the organization as a whole because of the transfer. Opportunity cost here can be defined as revenue forgone by the company as a whole if the goods and services are transferred internally.

Transfer Price = Additional outlay cost per unit incurred because goods are transferred + Opportunity Cost per Unit to the Organization because of transfer

If the company has excess capacity, then opportunity cost = nil

If the company has no excess capacity then, opportunity cost = Forgone contribution Margin

Opportunity Cost = Selling Price Per Unit in External Market – Outlay Cost Per Unit

2.11 Review of Some Previous Research Study

The previous research studies related to management accounting practices in Nepalese context are found very few. However, most of the research studies have been made in the area of profit planning and control in Nepalese context. Profit planning and control also covers some of the aspects of management accounting so that for the review of previous research studies these researches are also taken into consideration to examine how profit planning and control is practiced in Nepalese Companies. Some researches were also conducted in banking sector but all of them focus only in joint venture bank. Out of these research studies some selected research has been reviewed.

2.11.1. Mr. Sagar Sharma (2002)

Mr. Sharma has conducted a research work entitled "Management Accounting Practice in Listed Company of Nepal." On the basis of primary data, he has focused on management accounting practices by these listed companies. Major findings of his research are:

- ❖ Budgeting, cash flow, ratio analysis are widely used management accounting tools.
- ❖ Cost segregation, break even analysis, standard costing, long term budget are slightly in use. Activity based costing, responsibility accounting are not in use.
- ❖ For capital budgeting payback period and Net present value are widely used
- ❖ 70% and more practice master budgeting among them 87% used actual expenses to prepare the budget.
- ❖ Mostly profit and loss is used to measure overall performance of company.
- ❖ Cost based pricing is used to price the products/service.

2.11.2. Mr. Ram Kumar Subedi (2007): Mr. Subedi has conducted a research study on the topic "Management Accounting Practices in Joint Venture Banks of Nepal". Necessary information and data were mostly collected from primary sources. He has pointed out various finding in his study; some of them were as follows.

- ❖ Most of the joint venture of Nepal are practicing management tools like capital budgeting, ratio analysis, cash flow analysis, Break Even Analysis for planning and controlling
- ❖ On average, five management accounting tools are practiced by Nepalese joint venture bank. Out of total samples number of joint venture Banks, 50% banks did not meet the average no of tools, while nearly 17% meet exactly average no of management accounting tools

and remaining 33% banks are practicing more than average no of management accounting tools.

- ❖ For preparing budget, actual expenses of previous year and Activity Base Budgeting are widely used as the base in the joint venture Banks.
- ❖ In the context of time period covered in budget, cent percent Nepalese joint venture Banks prepare short term budge(1 year or less) only 17% Nepalese joint venture Banks prepare long term budget.
- ❖ Nearly sixty seven percent of joint venture Banks of Nepal used Past Trends Analysis for cost and revenue estimation

2.11.3. Mr. Amit Pathak (2008)

Mr. Pathak has conducted a research study on the topic "Management Accounting Practice in Joint Venture Banks of Nepal." His main focus of the study is the current practices of MA in joint venture bank in Nepal. Necessary data and information were mostly collected from primary sources. He has point out various findings in his study. Some of them were as follows:

- ❖ Nearly 83% of joint venture bank were found practicing analysis method of segregate mixed cost into fixed and variable costs.
- ❖ At the time of preparing the budget past actual expenses and past budget estimate are found widely practicing in JVB in Nepal. 83% JVB were found practicing actively based for the preparation of budget. 33% and 17% JVB were also found practicing for budget preparation based on past actual expenses and past budget estimate and zero based respectively.
- ❖ While pricing mechanism for the product/service produced by them, 67% of JVB are practicing ABC pricing. 33% JVB are practicing going rate pricing technique and 17% of JVB are practicing cost base.
- ❖ Regarding performance measurement and control, most of the banks measured their performance on the basis of profit and losses made by them during a year.

- ❖ To adjust for risk while evaluating capital investment, it is found that banks preferred practicing probability distribution of cash flow 83%. Almost 50% of JVB practiced higher IRR and 33% of banks practiced sensitivity analysis for risk adjustment.

2.11.4. Mr. Poshan Nepal (2008)

Mr. Nepal has conducted a research study entitled "Management Accounting Practices in Nepalese manufacturing Enterprises" (with special reference to Bottler's Nepal Ltd.). His main focuses of the study of the practices of MA in multinational companies like Bottler's Nepal Ltd. He collected necessary information from primary sources. He has pointed out various findings in his study. Some of them were as follows:

- ❖ Practicing process of management accounting tools in manufacturing and service enterprise are slightly different and major MA tools and techniques.
- ❖ Nepalese manufacturing and non-manufacturing companies are in infant stage in practicing new management accounting tool and techniques.
- ❖ While preparing budget there was no practice of taking consultancy service and hiring outside experts are nil excepting a few manufacturing companies.
- ❖ To carry out operational activities properly, companies mostly practiced preparation of master budget.

2.11.5. Mr. Durga Bhattarai (2008)

Mrs. **Bhattra**i has conducted research entitled "An analysis of Management Accounting Practices of Insurance Companies in Nepal." She has focused her study to examine and study the practice of management accounting tools practiced by the Insurance companies in Nepal In this research Mrs. Bhattarai pointed out some major findings and recommendation are as follows

- ❖ After examine the management tools and technique practiced in Nepalese insurance company for planning , controlling and decision making , it is found that Cash Flow, Budgeting and Pricing Decision are widely practiced MA tools
- ❖ While analyzing the technique of inventory valuation 60% insurance company applied FIFO technique for inventory valuation
- ❖ Method of segregation of Mixed cost in insurance companies follow average method while 20% follow analysis method to segregate the mixed cost in to fixed and variable cost.
- ❖ Regarding long term investment decision and purchasing fixed assets insurance companies mostly practiced NPV,PBP and ARR.

2.12. A Research Gaps

Most of the selected research has been conducted on management accounting practices in Nepalese manufacturing and non-manufacturing companies. Especially in public enterprises. They were either case study of a particular company or a comparative study of two different companies. The findings of the previous research were mostly based on secondary data. In some research primary data were also used. Some of the previous researches are also related to management accounting tools and technique practices in banking sector but all of them are totally focuses on joint venture bank only. Likewise Mr. Ram Kumar Subedi's research is concerned with practices of management accounting tool and technique in Nepalese's joint venture banks. This study doesn't show the application of management accounting tools in all kinds of Nepalese commercial bank. Similarly Mr. Amit pathak's study is also related to management accounting tools practices in joint venture bank of Nepal. He also focuses the management accounting tools and technique practicing in Nepalese joint venture banks only. They didn't conducted any research on management accounting practices in public sector commercial banks like, RBB, NBL and private sector domestic commercial banks like KBL,BOK,CBL etc. even though they conducted research MA tools and

technique practices in banking sector but Both the researcher mainly focuses on rarely used management accounting tools like pricing technique, inventory management, standard costing etc in banking sector. In reality these tools mostly used in manufacturing enterprises. So there exist of gap between current research and previous research. The previous researches didn't disclose which of the management accounting tools are in practices, which are not and why? So another reason is to conduct current researches to fulfill these gaps. They are also unable to give the specific picture about the practicing MA tools in Nepalese public sector (old) commercial banks as well as domestic commercial banks. So this is another reasons to conduct current research to fulfill the gaps. Current research is especially related to the application of management accounting tools and technique in all kinds of Nepalese commercial banks of Nepal. In some cases this research tries to make comparative study of the practice of MA tools among all kinds of commercial banks. In this research nine commercial banks are taken as sample out of twenty five commercial bank of Nepal and this is survey type of research which is completely based on the primary sources of data. So that outcomes given by this study is nearly cent percent valid. It has disclosed the reasons about the tools and technique, which are not in practice in the Nepalese commercial bank and has been suggested to apply new MA tools like ZBB, ROI pricing, Responsibility accounting etc so for better planning, controlling and decision makings.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology deals with the method of research, used for the study. It is a systematic way to solve the research problems. It describes the method and process applied in the entire aspects of the study.

Methodology refers the various steps that are generally adopted by a researcher in studying his/her research problem along with the logics behind it. It includes the research design, data collection procedure, population and sample, and use of statistical tools.

3.1 Research design

A research design is an overall framework or plan for the collection and analysis of data. It is the overall operational pattern or framework of the projects that stipulate what information is to be collected, from which sources, and by what procedure? Decision regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a research design. 'A research design is the arrangement of conditions for collection and analysis of data in a manner, that aims to combine relevance to the research purpose with economy in procedure.

In facts the research design is the concept structure within, which research is conducted, it constitute the blueprint for the collection, measuring and analysis of data.

The main purpose of the research design is to provide answer to research question and to control variance.

There are many types of research design, but here the historical and descriptive research design has been followed:

3.2 Data collection procedure

Data has been mainly collected from primary sources. The primary data are those which are collected for the first time and thus happen to be original in character. Secondary data has also been used as per necessity. Primary data has been collected through questionnaire, interview and internal discussion with the authorities and secondary data from the published sources.

3.3 Population and Samples

All the commercial banks of Nepal are considered as the total population. Today twenty-five commercial bank in Nepal are operated (NRB, Annual Report 2008). Out of them nine are taken as samples.

They are as follows:

- Two Public sector commercial Bank
 1. Nepal Bank Limited
 2. Rastriya Banijya Bank
- Three Joint Venture Bank
 1. Himalayan Bank
 2. Everest Bank
 3. NABIL Bank
- Domestic Commercial Bank
 1. Kumari Bank
 2. Bank of Kathmandu
 3. Laxmi Bank
 4. Citizen Bank

3.4 Data Processing Procedure

Data collected form questionnaires in raw form are classified and tabulated in the required form and simple arithmetic percentage tools are used for

analysis the data. Major findings are based on the analysis and interpretation of the data.

3.5 Major Management Accounting tools

The major management accounting tools included in this research are Cost-Volume Profit Analysis, Capital Budgeting, Activity Based Budgeting, Zero-Base Budgeting, Ratio Analysis, Standard costing, Budgeting, Pricing Responsibility Accounting, and Cash flow statement.

3.6 Tools for Analysis

Simple percentage is used as an arithmetic tool to analyze the data.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

4.1. Introduction

The main objective of this study is to examine and study the present practice of management accounting tools and techniques applied by Nepalese commercial Banks including both private as well as public sector. Beside, it also aims to identify the future perspectives of management accounting tools application and to scrutinize the major difficulties in the application of management accounting tools in Nepalese commercial Banks are also its objective. For achieving the specific objective of this study, this chapter includes the presentation, analysis and interpretation of data.

Mainly this research is based on primary source of information and the required data had been collected form the respective commercial Banks through a questionnaire. For this study, selected commercial banks with head office in kathmandu valley are taken as samples. Sixteen tick marks and two open-end questions were included in the questionnaire.

Collected raw data have been properly proceed, tabulated and analyzed. To complete this study necessary tables are prepared according to subject matter of questions. The major findings of the research study are based on analysis and interpretation of data. The information collected through open-end question is arranged in this chapter in a descriptive way.

4.2 Analysis of Management Accounting tools in practice.

Table-4.1: Practice of Management Accounting Tools in commercial Banks of Nepal

S.N.	Management Accounting Tools	No. of Population Banks	No. of Sample Banks	No. of practicing Banks	Percentage (%)
1	Cost segregation into fixed and variable	25	9	4	44%
2	Responsibility Accounting	25	9	5	56%
3	Flexible Budget	25	9	3	33%
4	Cash Flow Analysis	25	9	7	78%
5	Break Even Analysis	25	9	5	56%
6	Capital Budgeting	25	9	4	44%
7	Ratio Analysis	25	9	9	100%
8	Pricing Technique	25	9	5	56%
9	Budgeting Annually	25	9	9	100%
10	Budgeting Long Term	25	9	-	-

Source: Field Survey, 2008

From the above table 1, we come to know that 44% of Nepalese Commercial Banks segregate cost in fixed and variable, 33% Commercial Banks are practicing flexible budgeting ,56% Commercial Banks of Nepal practices Responsibility accounting , 78% used cash flow statement and 56% use Break even analysis. Similarly 44% of Nepalese Commercial Banks of Nepal use capital budgeting .Likewise 100% of Nepalese Commercial Banks practices Ratio Analysis, Pricing decision technique is practiced by 56% commercial Banks and cent percent of commercial Banks are practicing annual budgeting and none of them is practicing budgeting for long term.

Table-4.2: No of commercial Banks of Nepal practicing one or more management accounting tools.

No .of Management Accounting Tools(x)	No. of Banks(f)	fx
1	0	0
2	1	2
3	2	6
4	1	4
5	1	5
6	2	12
7	1	7
8	0	0
9	1	9
10	0	0
	N= 9	fx = 42

Source: Field survey, 2008

Average No. of management accounting :

$$\text{Per Bank} = \frac{fx}{N} = \frac{42}{9} = 4.67 \text{ i .e. } 5 \text{ (Appro.)}$$

Table 2 represent that the no of commercial bank of Nepal practicing one or more Management accounting tools. From the above table, we found that five management accounting tools are applied in a bank on an average. Similarly, it shows that four banks use more than average no of management accounting tools, four banks uses less than the average number of management accounting tools. one banks uses exactly uses five management accounting tools.

Table- 4.3:Base for Budget preparation in commercial Banks of Nepal

S. N.	Base for Budgets	No.of Population Banks	No.of sample Banks	No.of Practicing Banks	Percentage (%)
1.	Based on past budget estimate	25	9	6	67
2.	Based on past actual expenses	25	9	9	100
3.	Zero based budgeting	25	9	1	11
4.	Activity Based budgeting	25	9	-	-
5.	Other (if any)	25	9	5	56

Source: Fields Survey, 2008

(Here, other (if any) means combination of more than one base out of above either past estimation and actual past expenses or zero based and past actual expenses and vice versa.)

The above table- 3 represents the base for budget preparation in commercial Banks of Nepal. From this table, we come to know that 100% of commercial banks of Nepal prepare their budget on the basis of actual expenses of past year, none of the above sample commercial Banks prepares budget taking a base of the activity based budgeting, 67% of commercial banks prepare their budget taking base of past estimate budget and 11% commercial Banks prepares budget on the basis of zero base budgeting. We also come to know that 56% of commercial Banks are practicing more than one base for preparing budget.

Table-4.4: No. of Nepalese commercial Banks taking one or more base for preparing budget.

No of base for budget (x)	NO. of banks(f)	fx
1.	2	2
2.	4	8
3. or more	3	9
	N = 9	fx = 19

Source: Fields Survey, 2008

$$\text{Average no of base for budget preparation per bank } (\bar{x}) = \frac{fX}{N} = \frac{19}{9} = 2.11$$

(Appro.2)

Above table no- 4, show that a commercial Banks of Nepal uses two bases for its budget preparation on an average. Out of nine commercial Banks, four banks use exactly two bases for preparation their budget, two banks use one base for preparation their budget and remaining banks uses three or more than three base for preparation their budget.

Table- 4.5: Type of budget practiced by the commercial Banks of Nepal

S. N.	Types of budget	No. of population	No. of sample banks	No. of Practicing banks	Percentage (%)
1.	Cash budget only	25	9	-	-
2.	Operational budget only	25	9	1	11
3	Annual budget	25	9	7	80
4.	Others(if any)	25	9	1	11

Source: Fields Survey, 2008

(® Other means quarterly budget)

Above table 5 shows the type of budget practiced by the commercial Banks of Nepal. The table show that 80% of commercial Banks of Nepal practice annual budget. This table also indicates that 11% commercial Banks practice operational budget. Likewise,11% commercial Banks also practices quarterly budget as well.

Table-4.6: Nepalese Commercial Banks and Their Budget Preparing System.

S.N.	Budget Preparing System	No.of population Banks	No.of samples Banks	No.of practicing Banks	Percentage (%)
1.	Budget committee	25	9	1	11
2.	Planning Departments	25	9	2	22
3.	Financial Departments	25	9	3	33
4.	Outside Experts	25	9	-	-
5.	Other ® (if any)	25	9	3	34

Source: Fields Survey, 2008)

(® Other includes: - Budget Committee
- Planning Departments
- Outside Experts
- Financial departments)

Above presented table no.6 represents Nepalese commercial Banks budget preparing system. In the above table, it can be seen that in 11% of the commercial banks, the budget committee prepares budget while in 22% banks, planning departments prepare budget. Like wise in 33% of commercial bank, budget is prepared financial departments and in 34%

commercial banks, other methods are used for preparing budget. None of commercial Banks hire the outsiders expert for preparing the budget.

Table- 4.7: Methods of Segregating Mixed cost in Fixed and Variable in the Commercial Banks of Nepal.

S. N.	Methods	No.of Population Banks	No.of Samples Banks	No of Practicing Banks	Percentage %
1.	High-low point method	25	9	3	33
2.	Regression Methods	25	9		-
3.	Average Methods	25	9	5	56
4.	Analysis Methods	25	9	1	11
5.	Other(If Any)	25	9	-	-

Source: Field Survey, 2008

In the above table, the method practiced for segregating mixed cost into fixed and variable cost in the commercial Banks is presented. This table clarified that 56% of commercial banks use average methods for segregation of mixed cost into fixed and variable and 33% of them uses high-low method for this purpose. It is also found that none of commercial banks are practicing regression and other methods. The reasons for not practicing such methods in banking sectors is normally not necessary like the trading business and manufacturing industry.

Table -4.8: The Period Covered in Budget of Commercial Banks of Nepal.

S. N	Time Period	No.of Population Banks	No.of samples Banks	No.of Practicing Banks	Percentages (%)
1.	Short-Term budget(1 year or less)	25	9	7	78
2.	Medium term(3years)	25	9	2	22
3.	Long term budget(5 years)	25	9	-	-
4.	If other	25	9	4	44

Source: Fields Survey, 2008

(Other includes at least two out of them either both long-term and short-term or medium term or short –term and vice versa.)

Above table- 8 represents the budget preparation system in the commercial banks of Nepal. From this table, we come to know that, 78% of commercial banks are practicing short-term budget. Like wise 22% commercial banks of Nepal practice medium term budget and we also come to know that 44% commercial banks practiced more than one base of above for preparing their budget.

Banks were not found interested in preparing long-term budget because at one hand, it is time consuming and need lots of expenses. On the other hand, future is so uncertain that budget might not lead the activities all the time. In some circumstance, budget need to be kept at bay and intuition as well as judgmental decision should be use to carryout the activities. So long term planning do not have any meaning in business. Another reason for not practicing long term budget is due to the uncertain business environment because today business environment is so dynamic that, decision should be made instantly. At that time, decision may differ than budget. So that due to these some reasons the Nepalese commercial banks are realizing that making long term budget is just waste of time and resources.

Table-4.9: Methods of Allocating Joint Costs Practiced by Nepalese Commercial Banks.

S. N	Method of allocating joint cost	No.of Population banks	No.of Samples of banks	No.of Practicing banks	Percentage (%)
1.	Transaction method	25	9	6	67
2.	Negotiated basis	25	9	3	33
3.	If any (Other)	25	9	-	-

Source: Field Survey, 2008

Above presented table represents the method of allocating joint cost practiced by Nepalese commercial Bank. Form the above table, it is cleared that 67% of commercial Banks of Nepal (i.e. out of 9 CBS) are practicing transaction method for allocating joint costs. Where as 33% commercial banks uses negotiated base for allocation joint costs.

On going through interview with the bank manager and accountant in chief, it was known that major expenditure are administrative expenditure. There was no occurrence of joint cost, so no question arose of allocation joint cost among the departments. Besides, department wise expenditures were included under administrative head, so allocation of joint cost did not keep any meaning in banks.

Table-4.10: Cost and revenue estimation techniques practiced by commercial Banks in Nepal.

S. N	Cost and revenue estimation Technique	No.of Population Banks	No.of Samples Banks	No.of Practicing Banks	Percentage (%)
1.	Zero based budgeting	25	9	1	11
2.	Past trend analysis	25	9	6	67
3.	Engineering analysis	25	9	-	-
4.	Market survey	25	9	5	56
5.	Judgment analysis	25	9	4	44
6.	Other (if any)			-	-

Source: Fields Survey, 2008

Cost and revenue estimation technique practiced by commercial Banks has been presented in above table -10. From the table, it is known that 67% of Nepalese commercial Banks are practicing past trend analysis for cost and revenue estimation. Similarly 56% of commercial banks use market surveys, like wise 44% commercial banks used judgment technique and only 11% commercial banks are practicing zero base budgeting for cost and revenue estimation. We also come to know that none of the above banks are used engineering analysis for cost and revenue estimation technique.

Table-4.11: No. of commercial Banks and number of cost and revenue estimate technique.

No. of cost and revenue estimate Technique (x)	No.of Banks (f)	fx
1.	2	2
2.	3	6
3. or more	4	12
	N = 9	fx= 20

Source: Field Survey, 2008

Average no of cost and revenue estimation technique practiced by a Nepalese

Commercial Banks give by,
$$\bar{x} = \frac{fx}{N} = \frac{20}{9} = 2.22 \text{ i. e. } 2$$

Above table 11 reflects that on an average two technique of cost and revenue estimation are applied by Nepalese commercial banks. Out of 9 commercial banks of Nepal, two banks practiced only one technique, three banks uses exactly average no of technique (i.e. 2) for estimating cost and revenue. Similarly four banks use three or more than that techniques for cost and revenue technique estimation.

Table-4.12: Methods of risk adjustment technique while evaluating capital investment practiced by commercial Banks in Nepal.

S. N.	Risk adjustment methods	No of Population Banks	No of Samples Banks	No of practicing Banks	Percentages (%)
1.	Sensitivity analysis	25	9	4	55
2.	Increase the required rate of return	25	9	3	33
3.	Shortened pay back period	25	9	1	11
4.	Estimate profitability distribution of future cash flow	25	9	4	44
5.	Other (if any)	25	9	-	-

Source: Fields Survey, 2008

The above table 12 shows, risk adjustment method practiced while evaluating capital investment by commercial banks of Nepal. From the above table it is obvious that 55% commercial banks practiced sensitivity analysis, 44% banks practiced estimation profitability distribution of future cash flow for risk adjustment while capital investment. Likewise 33% commercial banks practiced increase the required rate of return and only 11% commercial banks use shortened pay back period to adjust risk while evaluating capital investment.

Beside of the tools mentioned above, banks risk bearing fund ranging from 1% for every loan to minimize the risk in investment.

Table-4.13: No of risk adjustment technique practiced by the commercial Banks of Nepal.

No of risk adjustment technique (X)	No of Banks (f)	fX
0	1	0
1	4	4
2	4	8
	N= 9	fX= 12

Source: Field Survey, 2008

Average no of risk adjustment technique practiced by Nepalese commercial Banks is given by,

$$\bar{x} = \frac{fX}{N} = \frac{12}{9} = 1.33 \text{ i e 1}$$

From above table, it is cleared that on an average one risk adjustment technique is practiced by Nepalese commercial banks. No of banks using average no of risk adjustment technique is four. Similarly no of banks using more than average no of risk adjustment technique is also four and one banks use none of the risk adjustment technique for capital investment purpose.

Table -4.14: Capital Budgeting Technique Practiced by Commercial Banks in Nepal.

S. N.	Capital budgeting technique	No of Population Banks	No of Samples Banks	No of Practicing Banks	Percentage (%)
1.	Pay Back Period (PBP)	25	9	2	22
2.	Average Rate of Return (ARR)	25	9	1	11
3.	Net Present Value (NPV)	25	9	4	55
4.	Internal Rate of Return (IRR)	25	9	4	44
5.	Profitability Index (PI)	25	9	1	11
6.	Others (if any)	25	9	-	-

Source: Field Survey, 2008

The above table -14 presented the capital budgeting technique practiced by commercial banks of Nepal. It is found that 55% commercial banks used Net present value (NPV) methods for capital budgeting purpose. The percentage of banks using Payback period (PBP) for the same purpose is 22%. Similarly 44% commercial banks of Nepal practiced Internal rate of return (IRR) for the same purpose. Likewise we also come to know that both Profitability index (PI) and Average rate of return (ARR) are used by 11% commercial banks of Nepal for the capital budgeting analysis purpose. None of the banks used other than above methods for capital budgeting technique.

Table-4.15: No of capital budgeting techniques practiced in commercial banks of Nepal.

No of capital budgeting tools (X)	No of Banks (f)	fX
0	1	0
1	3	3
2 or more	5	10
	N= 9	fX= 13

Source: Field Survey, 2008

Average no of capital budgeting technique practiced by commercial Banks of Nepal

$$\text{is given by, } \overline{(X)} = \frac{fX}{N} = \frac{13}{9} = 1.51 \text{ i.e. } 2$$

From the above computation we found that on an average, two capital budgeting technique is practiced by the commercial banks of Nepal. Above table shows that three commercial banks used less than average no of capital budgeting techniques. Likewise five commercial banks out of nine used more than on an average capital budgeting techniques. We also found that one of the commercial banks is not practicing the capital budgeting techniques.

Table-4.16: Year ending overall performance measuring and controlling techniques practiced by Commercial Banks of Nepal.

S. N	Performance measuring and controlling techniques	No of Population Banks	No of Samples Banks	No of Practicing Banks	Percentages (%)
1.	Profit and loss a/c made by Banks	25	9	9	100
2.	Budgetary measure and control	25	9	4	44
3.	Standard costing	25	9	-	-
4.	Flexible budgeting	25	9	1	11
5.	Ratio analysis	25	9	6	67
7.	Other(if any)	25	9	-	-

Source: Field Survey, 2008

The above table represents the ending overall performance measuring and controlling techniques practiced by commercial banks of Nepal. The table shows that 100% of commercial banks in Nepal measure and control overall performance of their banks on the basis of profit or loss made by banks. Similarly 67% banks measure their performance on the basis of ratio analysis, where as 44% commercial banks practiced budgetary measure and control techniques for their overall performance measuring and controlling purpose. Likewise we also found that only 11% commercial banks used flexible budget techniques to measure and control the overall performance of their banks at the end of the year. From the table it is found that none of the commercial banks of Nepal use standard costing and other (if nay) techniques use to measure and control the overall performance of banks.

Table-4.17: No of Year Ending Overall Performance Measuring and Controlling Techniques Practiced by Commercial Banks of Nepal.

No of performance measuring and controlling techniques (X)	No of Banks (X)	fX
1.	1	0
2.	3	6
3. or more	5	15
	N = 9	fX=21

Source: Field Survey, 2008

Average no of year ending overall performance measuring and controlling techniques practiced by commercial banks of Nepal

$$\text{is given by, } (\bar{X}) = \frac{fX}{N} = \frac{21}{9} = 2.33 \text{ i.e. } 2$$

From this calculation it is found that on an average two techniques are practiced to measure and control the overall performance of commercial banks of Nepal at the end of the year. This table shows that three commercial banks practiced exactly on an average number of year ending overall performance measuring and controlling techniques. Similarly five commercial banks used more the average (i.e.2) number of ending overall performance measuring and controlling techniques. We also found that one commercial banks of Nepal use less than the average number of year ending overall performance measuring and controlling techniques.

Table-4.18: For the Purpose of Cash Flow Statement prepared by Commercial Banks of Nepal.

S. N.	Purpose of cash flow Preparation	No of Population Banks	No of Samples Banks	No of Practicing Banks	Percentage s (%)
1.	Only information about cash receipt or payment	25	9	4	44
2.	Only provide information about change in cash position	25	9	1	11
3.	Only evaluate liquidity position	25	9	33	33
4.	To assets short term planning	25	9	-	-
5.	Only to meet the legal requirement	25	9	1	11
6.	To evaluate operating, investing and financial activities	25	9	9	100
7.	If other (any)	25	9	-	-

Source: Field Survey, 2008

The above table 18 represents the purpose of cash flow statements practiced by commercial banks of Nepal. From the above table we come knew that cent percent (i.e. 100) commercial banks of Nepal practices cash flow statement for the purpose to evaluate their operating, investing and financial activities. Likewise 44% commercial banks use for the purpose to knew information about cash payment or receipt. Similarly 33% banks uses for the purpose to evaluate liquidity position and both 11% banks uses it for the purpose to know information's about change in cash position as well as to meet the legal requirements. We also found that on commercial banks uses cash flow statement for the purpose to prepare their short term planning.

Table-4.19: No of purpose of cash flow statement analysis technique practice by commercial bank of Nepal.

No of purpose of cash flow statement practices	No of Banks	fX
1.	4	4
2.	5	10
3. or more	-	-
	$N = 9$	$fX = 14$

Source: field survey, 2008

Average no of purpose of cash flow technique practiced by commercial banks in Nepal

$$\text{is given by, } (\bar{X}) = \frac{fX}{N} = \frac{14}{9} = 1.55 \text{ i.e. } 2$$

From the above table calculation we found that on an average, two cash flow techniques practiced by commercial banks of Nepal to meet their requirements or purpose. Similarly we found that four commercial banks practiced cash flow techniques to meet their single purpose where five commercial banks of Nepal practiced cash flow technique to meet more than one purpose.

Table-4.20: Practiced of ration analysis tools for analysis & interpretation (measure performance) of financial statement in commercial banks of Nepal.

S. N.	Ration analysis	No of Population Banks	No of Sample Banks	No of Practicing Banks	Percentages (%)
1.	Profitability Ratio	25	9	6	67
2.	Productivity Ratio	25	9	3	33
3.	Activity Ration	25	9	4	44
4.	Stability Ratio	25	9	-	-
5.	Possibility Ratio	25	9	1	11
6.	All of Above	25	9	-	-
7.	Non of the Above	25	9	-	-

Source: Field Survey, 2008

The ratio analysis technique practiced by commercial banks of Nepal is presented in the above table 20. It is found from the table that 67% of Nepalese commercial banks practiced profitability ratio analysis tools for the purpose of analysis and interpretation of financial statements where as 44% commercial banks of Nepal practiced activity ratio analysis for the same purpose. Likewise we also come to know that 33% commercial banks of Nepal practiced productivity ratio analysis tools for measuring performance of financial statements and only 11% commercial banks practiced possibility ratio analysis tools to fulfill the same purpose. From the above table we also come to know that no commercial banks of Nepal practices stability ratio analysis tool for analysis and interpretation of financial statements. Similarly no commercial banks found to practice all of the above or none of the above ratio analysis tools for measuring performance of financial statements.

Table-4.21: No of practices of ratio analysis tools by commercial bank of Nepal.

No of Ratio analysis Tools (X)	No of Banks (f)	fX
1.	4	4
2.	5	10
3. or more	-	-
	N = 9	fX = 14

Source: Field Survey, 2008

Average no of ratio analysis tools practiced by Nepalese commercial banks

$$\text{Given by } \bar{X} = \frac{fX}{N} = \frac{14}{9} = 1.55 \text{ i.e. } 2$$

Above table 21 reflects that on an average two-ratio analysis tools are applied by Nepalese commercial banks. Out of nine commercial banks of Nepal, four banks practiced only one ratio analysis tools where as five commercial banks found used exactly average no of tools (i.e. 2) for analysis & interpretation of financial statements. We also come to know that out of nine commercial banks, no banks found to practices more than average no of ratio analysis tools.

Table-4.22: Banks considering “Management Accounting tools have Provides benefits in every aspect of management activities from planning to decision making”.

S.N.	Name of Banks	Yes	No
		Frequencies	
1.	NBL		1
2.	RBB	1	
3.	HBL	1	
4.	NIBL	1	
5.	EBL	1	
6.	KBL	1	
7.	BOK	1	
8.	LBL		1
9.	CBIL	1	
Total	9	7	2

Source: Field Survey, 2008

Above table presented the benefits of management accounting tools, “especially managerial activities from planning to decision making”. In above table, out of nine samples of commercial banks, seven banks (i.e.78%) are accepted the fact that management accounting tools are really benefited weapons in every aspects of managerial activities i.e. planning to decision making process. Where as two commercial banks (i.e.22%) out of nine banks are not agree with the view of management philosophers, saying that it is an important tools for performing managerial activities in some extents but not fully. In indicated that they are also followed the principal of management accounting in some ways.

Table-4.23: Banks considering “Responsibility Accounting refer to an accounting system that provides information to top level management about the performance of an organization sub-unit”.

S.N.	Name of Banks	Yes	No
		Frequencies	
1.	NBL		1
2.	RBB		1
3.	HBL	1	
4.	NIBL	1	
5.	EBL	1	
6.	KBL	1	
7.	BOK	1	
8.	LBL	1	
9.	CBIL	1	
Total	9	7	2

Source: Field Survey, 2008

Above table presented the responsibility accounting is an accounting system that provides information to top-level management about the performance of an organizational sub-unit. In above table, out of nine samples of commercial banks, seven banks (i.e. 78%) are accepted that responsibility accounting refers to an accounting system that provides information to top management about the performance of an organization sub-unit. Where as two commercial banks (i.e. 22%) are not accepting the above reality. The reason maybe not accepting above reality by two commercial banks is lack of knowledge about responsibility accounting.

Analysis of Open – End Opinions of General Manager and financial controller

Two open- ended questions were asked and discussions were made to the general managers and financial controller of the commercial banks under the study to take their opinions to identify the benefits and difficulties in applying management accounting tools and suggestions for the application of such tools. Some key opinions are presented below.

4.3.1. What are the benefit to apply Management Accounting tools and technique in your Banks?

The first open- end question was asked to the application of management accounting tools and techniques and achieving benefits from it to the respondent banks. They agree up on the fact that management accounting tools are to be effectively applied in every commercial bank as well as other kinds of banks for effective management information system, cost control of banks and accurate and timely decision making. On the basis of their opinions, the following benefits can be achieved by application of management accounting tools in commercial banks of Nepal.

- Rational decision making is possible after using management accounting tools
- Accurate accounting
- Proper analysis of the position of banks
- Control or maximum utilization of available limited resources
- Higher profitability
- Regulate the banking activities on an effective manner
- Quality services to the customers
- Provides premises for the future planning, controlling and decision making
- Useful for the trend analysis
- Perfect financial status to the stakeholders
- Applying management accounting tools save the useful time of the management so that excess valuable time could be used in other sectors
- Accurate data can be achieved when required for decision making

4.3.2. What are the difficulties to apply Management Accounting tools and techniques in Commercial Banks in Nepal?

The respondents were in favor of benefits in the application of management accounting tools in commercial banks in Nepal. They also viewed that there

are various causes, which are creating difficulties in the application of management accounting in Nepalese commercial banks. They raised the main causes like this, lack of knowledge about the management accounting, lack of management accounting experts, lack of management's commitments. Besides these, some other causes on the basis of their (respondent's) opinions are,

- Lack of knowledge about management accounting tools
- Lack of proper human resources management
- Not availability of accurate information
- The application of some management accounting tools are difficult because it increase the cost and banks are not in a strong position to meet such kinds of extra costs
- There is quite difference between theoretical and practical application of management accounting tools in reality
- Management accounting is less used in servicing sector like bank comparative to the manufacturing sector.
- Some of the management accounting tools like cost and revenue forecasting are found difficult in applying because it is quite vague, time consuming and expensive too.
- Due to the external forces, decision making could not made on the basis of management accounting principles only.

Regarding suggestion to improve the application of management accounting tools, the following opinions were cited:

- Effective manpower should be produced in the country.
- Training institute should be developed to produce such manpower.
- Academicians should put effort to bring the new techniques and tools in light.
- Information about the new and advance technique should be conveyed thorough different media.

- Seminar, workshop and other campaign should be conducted for company's managers so that they could be acquainted with new tools and its use and benefits.

From the opinion of the managers and finance in chief regarding the suggestions to implement accounting tools in banks, it became clear that information about the tools, its cost and benefits should be disseminated to them. On the basis of cost-benefit analysis, if any tools suit to the company, they are ready to implement it.

4.4 Findings of the study

Based on the presentation and analysis of information and data, the major findings are as follows.

1. While examining the tools practiced in the commercial banks for planning, controlling, and decision-making, it was found that Budgeting annually, Ratio analysis, Cash flow management, cost segregation, Break-even analysis, Responsibility accounting represented 100%, 100%, 78%, 56%, 56%, 56%, out of nine sampled Commercial Banks respectively. Likewise Cost segregation, Capital budgeting, Flexible budgeting are also used in Nepalese Commercial Banks in Nepal representing 44%, 44%, 33% respectively. But the management accounting tools, like standard costing, budgeting for long term is not practiced.
2. With regard to no of commercial Banks of Nepal practicing one or more management accounting tools, it is found that on an average five management accounting tools are practiced in Nepalese commercial Banks out of nine sampled banks. 44% commercial Banks did not meet the average no of tools, while only 11% commercial Banks meet exactly the average no of management

accounting tools and remaining nearly 45% commercial Banks practice more than average no of management accounting tools.

3. While preparing budget, actual expenses of previous year and past estimate are widely used as the base in the commercial Banks, representing 100% and 67% respectively. Zero based budgeting is also used some where as a base for preparing budget representing only 11%. There was no practice of “Activity base budgeting”. The reasons behind not practicing these budgeting was lack of information and cognizance about the format and the way of developing it.
4. On an average, two bases are taken for preparing budget in commercial Banks of Nepal. Out of nine samples, 44% Banks have taken exactly average no of bases, while 22% commercial Banks have taken less than average no of bases for preparing budget. Similarly 33% commercial banks have practiced more than average no of bases for preparing their budget.
5. Regarding types of budget practiced in commercial Banks of Nepal, it was found that 80% Nepalese commercial banks prepare annual budget, where as 11% Nepalese commercial Banks practiced operational budget as well as other budget (i.e. quarterly). Generally the bank did not practice long-term budget at the initial stage of their establishment with the purpose of informing the shareholder and stakeholder about the plan to achieve the goal.
6. While examining the budget preparation system practice by commercial Banks in Nepal, it is found that in 33% of Nepalese commercial banks, financial departments prepare budget. In 22%

commercial Banks, planning department prepare budget. Similarly in 11% Nepalese commercial banks, budget committee prepare budget. It is also found that, in 34% commercial banks, to prepare budget other are involved (i.e. combination of above). Some of the banks prepare their budget by combining outside expert, financial department etc. likewise we also come to know that, in preparing budget, involvement of outside expert solemnly are nil. That means some of the bank take help of outside expert as supporter only.

7. To segregate the mixed cost into fixed and variable, average method is used in 56% of Nepalese commercial banks and 33% of commercial banks of Nepal practiced high-low method for cost segregation. Likewise 11% commercial banks use analysis method to segregate mixed cost into variable and fixed. We also come to know that, some respondents view that normally no segregation of fixed and variable is required in banking sectors.
8. Regarding the type of budget practiced in the commercial banks of Nepal, it was found that 78% commercial banks of Nepal practiced short-term (i.e. 1year of less), where as 11% commercial banks of Nepal practiced medium term(one to five years). Likewise four commercial banks (i e 44%) practiced of budget (on the basis of time) by combining the either shot-term and long term or medium term and long term and vice versa. We also found that long- term budget is not applied in the commercial Banks in Nepal.
9. With respect to allocation of joint cost, 67% commercial banks in Nepal allocated their joint cost on the basis of the volume of transactions where as 33% banks used negotiated basis to allocate joint cost. We also come to know that, the respondent banks

managers, finance officers argued that as no joint cost occurred in the banking sectors so that no question of allocating joint cost among the departments arise.

10. Regarding cost and revenue estimation technique practiced by Nepalese commercial banks, it is found that 67% banks estimate their cost and revenue on the basis of past trend analysis, 56% banks estimated on the basis of market survey. Likewise 44% commercial banks estimate their cost and revenue on the basis of judgmental basis, where as 11% banks estimate on the basis of zero based budgeting. We also come to know that on commercial Banks followed engineering analysis method for their cost and revenue estimation.

11. On an average, two techniques of cost and revenue estimation are applied in commercial banks of Nepal. Out of nine commercial banks, 67% banks practice an average (i.e. 2) or more than average number of techniques for cost and revenue estimation where as only 33% commercial banks practice less than average number of cost and revenue estimation techniques.

12. For adjusting risk while evaluating capital investment, 55% commercial banks practice sensitivity analysis, 33% commercial banks practice increased required rate of return. Similarly 44% commercial banks use estimated profitability distribution of future cash flow and only 11% commercial Banks practice shortened pay back period for risk adjustment while evaluating capital investment.

13. While evaluating capital investment by Nepalese commercial banks, on an average only one method is practiced. We come to

knew that four commercial banks (i.e.45%) practiced exactly average no of risk adjustment techniques. Likewise same no of commercial banks (i.e.4) practiced more than average no of risk adjustment technique while making or evaluating capital investment. Similarly one commercial Bank out of nine samples is found not practicing risk adjustment technique while evaluating capital investment.

14. While analyzing capital budgeting technique practiced in Nepalese commercial banks for purchasing fixed assets or making long term investment decision, it is found that 55% banks adopted net present value(NPV), 44% banks practiced internal rate of return(IRR) and 22% banks used pay back period. We also found that 11% banks practiced average rate of return and profitability index (PI) equally for the same purpose. Likewise none of the commercial banks adopted modified internal rate of return (MIRR) and other method besides of above method while making long term decision.

15. On an average, two capital budgeting technique is practiced in Nepalese commercial banks to make long term investment decision. Out of nine commercial banks,56% banks apply on an average or more than average no of technique while 33% commercial banks apply less than average no of such technique while making capital budgeting or long term decision. Likewise we also found 11% banks do not apply any of the capital budgeting technique while making long term investment decision.

16. For the purpose of measuring and controlling overall performance of the Nepalese commercial banks at the end of the year, 100% banks practiced profit/loss made by banks, while 67% banks practiced ratio analysis technique. Similarly 44% of Nepalese

commercial banks practiced budgetary measure and control and only 11% banks used flexible budgetary analysis techniques to measure and control overall performance. We also found that no bank practiced standard costing technique to measure the overall performance of the banks at the end of year. Regarding to measure and control the overall performance of banks at the end of the year, on an average two techniques are practiced. Out of nine samples banks, 56% Nepalese commercial banks use more than average no of technique, where as only 11% banks practice less than average no of technique to measure and control the overall performance of the banks at the end of the year. Likewise 33% Nepalese commercial banks practice exactly average no of technique at the end of the year for overall performance measurement and controlling.

17. While analyzing the purpose of cash flow statement technique practice by commercial banks in Nepal. It is found that 100% banks practices cash flow technique to evaluate operating, investing and financial activities, where as 44% banks practiced to receive information about cash receipts and payments only. Likewise 33% commercial banks practice this technique to evaluate liquidity position only. Similarly equally 11% banks used this technique to receive information about changing cash position as well as to meet the legal requirement. We also found that no commercial banks used cash flow statement technique to assist short-term planning and to meet other purpose beside mentioned as above.

18. On an average, two purposes are behind the preparation of cash flow statement. Out of nine samples of commercial banks, five banks (i.e.56%) are having more than average no of purposes;

where as four banks (i.e.44%) are having less than an average no of technique to fulfill their purpose.

19. Regarding, the analysis & interpretation of financial statement by using the ratio analysis technique in commercial banks in Nepal, it is found that 67% banks adopted profitability ratios, where as 44% banks adopted activity ratio analysis techniques. Like wise 33% banks used productivity ratio to analysis & interpret the financial statement. No commercial bank is found practicing the stability ratios to measure the financial performance. Similarly none of the banks practiced all of the above or none of the above ratio analysis technique to analysis & interpret their financial statements.

20. On an average two groups of ratios are computed by Nepalese commercial banks to analyze & interpret their financial statements. Out of nine samples of commercial banks, five banks (i.e.56%) are applying on an average or more than average no of ratio analysis technique, where as four banks (i.e.44%) are applying less than an average no of ratio analysis technique to measure their financial statements.

21. In the context of open end questions, it is found that the majority of the banks manager, financial controller/or account managers agreed upon the fact that management accounting tools are to be very effectively applied in every Nepalese commercial Banks for effective management information system, cost control, higher profitability, accurate and timely decision making, better and consistent financial information and so on.

22. While analyzing the problems in the application of management accounting tools in Nepalese commercial banks, various drawbacks identified are as: lack of expertise, lack of information about tools, high cost, lack of top management's commitment,

NRB'S accounting provisions, tax law compliances, time consuming, trend of following past trend and so on.

23. In response to the questions to the management accounting tools provide benefits in every aspect of managerial activities i.e. planning to decision making"? Most of the commercial banks(i.e. 78%) agree upon the fact that management accounting is very effective tools for performing managerial activities. Some of the commercial banks especially public sector commercial banks did not agree with the fact. The reason for not accepting the facts is lack of knowledge about management accounting tools.

24. In response to the another 'yes/No' question, "Responsibility Accounting refers to an accounting system that provides information to top level management about the performance of an organizational sub-units"? It is found that 78% commercial Banks agreed upon the facts that, it provides information to top level management about the performance of sub-units. But as 22% commercial Banks especially public sector commercial Banks did not agree with the facts. During the interview period, I found that the reasons behind not applying this management accounting are lack of enough knowledge about Responsibility Accounting.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Business society today is being operated in a very dynamic environment which involves many forms of management problems. The old techniques of management by intuition are no longer considered dependable. Modern management has realized that even a slight error in policy decision may mean either losing a lot of business opportunity or going out of competition. A second chance may not come or even if it does, it may be costly or risky. Management constantly strive to reduce the risk of making mistake by looking for and analyzing relevant information by means of which it hopes to take judicious decision and direct the administration in a better manner. Managerial skills and competencies are key for organization effectiveness. Management principles can be applied at all organization and at all levels of an organization. It is equally important for all organization such as commercial, non-commercial and private or public.

Management accounting is concerned with the provision and interpretation of information, which is assist management in planning, controlling, decision-making and appraising performance. Management effectively achieves organization objective through the effective use of scare resources. In a changing environment future is uncertain. Uncertainly, exist in all business situations and the information supplied by the management accountant must reflect the uncertainties and variability of the situation. Good management is effective weapon to reduce risk.

Corporate firm carry out the economic activities. Economic activities are the backbone of the economy. These activities impact the economy in one or other ways. Every organization has limited resources. To utilize the limited resources in a better way, different tools and technique have been

developed. Among the various tools and technique management accounting tools have proved beneficial in different aspects of managerial activities. The main objective of management accounting is to help managers in overall managerial activities by providing information and helping in planning, controlling, and decision making. This acts as a strategic business partner in support of management role in decision making.

Management accounting is primarily concerned with data gathering (from internal and external sources) analyzing, processing interpreting and communicating the resulting information for use with in the organization so that management can more effectively plan, make decision and control operations. Accounting data and information are used to represent the underlying economic activities of the organization.

The modern complex economic system cannot function without bank. It carries out the economic activities. It has made easier to develop agriculture, industry and trade. The banks help in mobilization and allocation of scarce resources, which are essential for economic development. For better mobilization of resources, different tools and techniques have been developed. Among them management accounting tools have proved beneficial in different aspects of managerial activities.

Cost segregation, classification, CVP analysis, overall master budget, standard costing, activity base costing, responsibility accounting, financial performance analysis, cash flow analysis are the major management accounting tools. Whether commercial banks in Nepal are applying these tools and getting advantages from the managerial accounting or not? To be familiar with the facts, this study has been conducted.

The main motto of this research is concerned with the present practice of management accounting tools and techniques in Nepalese commercial Banks.

5.2 Conclusion

Management accounting is concerned with the accounting information that is useful to management. Management accounting involves the preparation and use of accounting information for planning, controlling the operations of business and make right decision in right time.

Today business organizations are suffering from many problems due to their inability to take right decision in right time. As a result, most of them are out of the operation and more are nearly to collapse. To survive in this situation, taking right decision in right time is today's basic needs for business society. So management accounting concept emerged to resolve the complexity that has appeared in today's business decision-making process. It is for every level of management because every manager has to be involved in some or other sorts of decision-making process. Management accounting is a new discipline and still in developing stage in the context of modern business organization. Different types of management accounting tools and technique are evolving as new dimension and that facilitates the management to perform the management functions better covering from planning to control. Various kinds of management accounting tools and techniques are taught in the university but they are not completely practiced in Nepalese commercial banks. It shows a vast gap between theory and practice.

The management accounting tools like cash flow analysis, capital budgeting, ratio analysis, responsibility accounting, break-even analysis are widely practiced in Nepalese commercial banks. Likewise standard costing, zero base budgeting, pricing technique, segregation are the least practiced tools in Commercial Banks in Nepal. It is also found that the cause of not practicing standard costing, inventory management tools is not applicable for service industry specially, like banking and financing sector. In Nepalese commercial banks, practices of hiring the outside expert for carrying out different managerial activities are almost nil. Some management accounting tools and techniques were not in practice and some

in least practice due to the lack of proper /sufficient knowledge about those tools in the Nepalese commercial banks.

In summary Nepalese commercial banks are in infant stage in practicing of management accounting tools. They are trying to adopt such tools and techniques more and more to cope with the expected opportunities of the future and challenge to be faced due to the globalization. They also realized that, to sustain and to operate their organization on a regular basis perfect planning, controlling and right decision in right time should be made. To carry out this goal management accounting will be fruitful because management accounting enhances decision making, guides strategy development and focuses efforts related to improved organization performance, and on evaluation the contribution and performance of organization units and member.

5.3 Recommendations

Management accounting plays a vital role for every type and every sizes of business, either they are manufacturing and non-manufacturing or large scale business and small scale business houses. For better utilization of the limited resources and for achieving goals under the circumstances of ruthless competition, application of advanced managerial accounting tools can be of great help. The practice of managerial accounting tools and technique in every organization is not only necessary but also compulsion for the better performance and to sustain the organizations in globalization era. It provides a key idea, guideline and strategies to the management for better performance of management functions.

Management accounting concept emerged to resolve the complexity that has appeared today's business decision-making process. Its aim is to simplify the planning, the decision making process and to provide support to achieve better organization outcomes. It is for every level of management because every manager has to be involved in some sort of business decision-making process.

Now, Nepalese commercial Banks should fit with the global environment. Best-fit managerial strategy should be developed. Managers should think in a global perspective. Information should be update for utilization of limited resources and achieving goal through out cut throat competition. Application of advance management accounting tools can be of great help. From the analysis and interpretation of collected data and information, some findings are extracted. On the basis of these findings, it may be appropriate to give the recommendations, although the given recommendation may not be sufficient. On the basis of findings, this research suggests and recommends the followings.

- ❖ To strength the competitiveness of Nepalese commercial banks and to carryout managerial activities effectively and efficiently, the use of management accounting tools and techniques are recommended. Budgeting cost estimation, classification and allocation, cost volume profit analysis can be applied for the planning activities. Similarly variance analysis, standard costing, responsibility accounting, budgetary control, cash flow statement, flexible budgeting can be used for controlling activities. Like wise marginal analysis, differential analysis and environment analysis can be applied in rational decision-making. The management accounting tools and techniques should be properly implemented by analyzing cost and benefit of such tools.
- ❖ A separate management accounting department should be established within the organization for better implemented of management accounting tools effectively. If it is impossible for them, it can be managed under the existing finance, accounting or planning departments. Outside management accounting expert should be hired for better performance of the organization. Employees training programs should be operated for increasing their efficiency. Consultancy service should be also taken if needed.

- ❖ Interaction between academician and banks is a must. It is recommended that banks should create an environment of interaction between the academician and the banks. Banks can benefit from their knowledge about new tools and techniques of management accounting.
- ❖ For commercial banks, cost segregation and allocation is necessary and it helps management for better planning to control. So it is also recommended to apply cost allocation, segregation and estimation technique properly.
- ❖ Banks are recommended to prepare overall master budget because it is an important management accounting tools for effective implementation. For budget and planning activities become effective, there must be a better co-ordination among various departments such as finance departments, planning departments and company board. If so, budget and planning activities become effective.
- ❖ Budget preparing system should be based on past actual expenses and past budget may not be effective because what happened in the past might not occur in the future because today's business environment is very dynamic. So along with these, zero base budget, activity base budget and environment analysis should taken in to consideration. Nepalese commercial banks should be prepared not only short term budget but also prepare the mid-term and long term budget with especial vision, mission, goal and objectives for better performance.
- ❖ A small portion of the profit earned by the bank should be allocated for the research and development programmes so that new management accounting tools and technique can be developed and adopted in the banks.
- ❖ Most of the banks are found practicing past trend analysis to forecast the cost and revenue for the future. However what happened n the

past might not occur in the future. So other technique like zero banks budget, engineering analysis and market survey should also be taken in to consideration for estimating future cost and revenue of the bank.

- ❖ Regarding preparation of budget and planning activities, co-ordination between planning department, finance department and the committee must be equally necessary. The bottom-up approach should be followed while preparing budget. If possible, the banks should hire the expert professional for planning purpose.
- ❖ From survey, most of the commercial banks have used profit/loss criteria to measure and control the overall performance. They should use other techniques such as budgetary control, standard costing, flexible budgeting and ratio analysis to evaluate the overall performance.
- ❖ Most of the commercial banks especially public and private sector commercial banks are becoming barrier for the application of management accounting tools and technique due to lack information, high cost, long procedure and time consuming. So Nepalese commercial banks should be update with new tools and technique that are practiced around the globe in best performing banks. Activities performance based on traditional management accounting tool in though helpful but not sufficient in the competitive age, new method and technique should be thought and developed so that cost minimization can be exercised and better can be delivered to delight the customer.
- ❖ Nepalese commercial banks should use academicians knowledge by interacting with the through mass meeting and seminars as well as discussion programs so as to beneficial form and understand the new management accounting tools and techniques. To keep their personnel updated, banks should conduct different types of training programs. Similarly top-level management should also pay the

attention for the implementation of management accounting tools and technique in their banks effectively.