MANAGEMENT ACCOUNTING PRACTICES IN COMMERCIAL BANKS OF NEPAL

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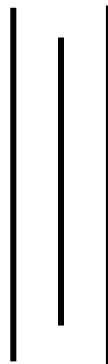

In partial fulfillment of the requirement for the degree of Master of Business Studies (MBS)

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RECOMMENDATION

This is to certify that the thesis

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MANAGEMENT ACCOUNTING PRACTICES IN COMMERCIAL BANKS OF NEPAL

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

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VIVA-VOCE SHEET

We have conducted the viva –voce of the thesis presented

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

Master of Business Studies (MBS)

<u>Viva-Voce Committee</u>

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DECLARATION

I hereby declare that the work reported in this thesis entitled "**Management Accounting Practices in Commercial Banks of Nepal**" submitted to the Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Master of Business Studies (MBS) under the supervision of **Associate Prof. Yamesh Man Singh** of Shanker Dev Campus, T.U.

..…………..……………………

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Though management accounting is a new evolving phenomenon of accounting concept in modern business world, whatever the tools and techniques have been developed, are accepted as the inevitable management instruments for effective, efficient and rational decision-making. Realizing this fact, an attempt has been made in this thesis to shed light on the present practice of management accounting tools and techniques in commercial banks of Nepal.

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Lastly, I am equally grateful to all the authors, whose books, reports and thesis have been consulted during my thesis preparation period.

Dirgha Raj Bhandari

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CHAPTER- I
INTRODUCTION

1.1 Background of the Study

Nepalese economy was closed and isolated type before 2007BS. Nepal applied mixed economic policy after the establishment of democracy in 2007 BS, which continued even after the political change in 2017 BS. After the establishment of multi-party system in 2046 BS, Nepal pursued liberal, open and market oriented economy. Foreign direct investment is promoted in almost all sector of the economy, including in development, operation and management of infrastructure like road, transport and electricity, especially hydroelectricity of which the country has immerse potentially.

A higher economic growth is necessary for all round development of the country. Nepal has a policy to obtain higher economic growth by broadening and strengthening stability and fiscal discipline is given emphasis so as to make the economic development process sustainable and sound. It is tried to convert rural areas into the focal point of development through the participatory development and rural empowerment process.

Main features of Nepalese economy are as follows:

- A poor and agro based economy;
- Landlocked, mountainous and developing nation;
- Mixed economic policy;
- High rate of population growth;
- Low rate of capital investment;
- Rich in Natural resources;
- Unequal distribution of national income.

Financial institution is considered as the catalyst to economic growth of a country. Banking is a vital part of national economic and a vehicle for the

mobilization of economy's financial resources and extension of credit for the business and service enterprises. Commercial banks are the heart of the financial system. They hold the deposit of individual, government enterprises and business units. They make funds available through their lending and investing activities to borrower, individual, business firms and government establishment. In doing so, they assist both the flow of goods and services from the producers to consumers and the financial activities of the government. They provide a large portion of medium of exchange and they are the media through which monetary policy is applied. These facts show that the commercial banking system of a nation is very important to the functioning of its economy.

1.2 Evolution of Banking System in Nepal

The history of banking in Nepal may be described as a component of gradual and ordinary evolution in the financial and economic sphere in the Nepaleses life. Even now the financial system is still in the evolutionary phase. The establishment of "Kausi Toshi Khana" as a banking agency during the time of king Prithvi Narayan Shah and "Tejaratha Adda" can be regarded as the initial steps in the direction of start of banking development in Nepal. In the context of Nepal, the development of banks can be summarized in three phases:

Phases 1: The establishment of 'Tejaratha Adda' during the tenure of Prime Minister Ranoddip Singh in 1933 B.S. was the first step towards the institutional development of banking in Nepal. It was fully subscribed by the government in Kathmandu. Tejarath provided credit loans to the general public at 5 percent interest rate on securities i.e. gold, silver and other ornaments. Their objective was to provide credit or loans to the general public but it failed to accept deposits from public.

Phase 2: During the time of Chandra Shamsher (1901-1929), credit facilities of 'Tejaratha' were extended by operating its branches. Later, 'Tejaratha' was replaced by the first commercial bank, Nepal Bank Limited established on 30th

Kartik 1994 B.S. is the first commercial bank in Nepal with authorized capital of 10 million rupees. Then Nepal Rastra Bank was established on B.S. 2013.01.14 as the central bank under the Nepal Rastra Bank Act 2012 B.S. Its function was to supervise commercial banks and to guide the basic monetary policy of the nation. In 2013 B.S., industrial Development Center was established and later it was converted into Nepal industrial development Center was established and later it was converted into Nepal industrial Development Corporation (NIDC) in 2016B.S. As the monetary transaction got more and more complicated on 2022.10.10, Rastriya Banijya Bank was established as a fully government owned commercial bank. Agricultural development bank was then established in 2024.10.07 to help the agricultural side of the nation.

Phase 3: To operate all commercial banks uniformly under single act. "Commercial Bank Act 2031" was enacted. According to the Nepal Commercial Bank act of 2031 B.S. "Commercial banks are banks that deal with money exchange, accepting deposits, advancing loans and other commercial transactions except some special functions done by specified cooperative, agriculture and industrial banks". In 2041 B.S., Nepal Government established five rural development banks under the control and supervision of Nepal Rastra Bank. The establishment of these banks helped in spreading the banking services to both urban and rural areas but banking services to the customer satisfaction was still far.

After the re-establishment of democracy, the government has taken liberal policy in banking sector so different private banks are getting permission to establish with the joint venture of other countries. Nabil is the first joint venture bank as Nepal Arab Bank. Similarly, two foreign commercial banks Nepal Indosuez Bank Ltd and Nepal Grindlays Bank Ltd. Entered in Nepal in the form of joint venture and the trend is continuing till today as many Nepalese owned banks are also running. Today, there are altogether 27 commercial banks are operating in Nepal (Thapa et.al., 2005:6-7).

1.3 Definition of Commercial Bank

Commercial bank is an institution which accepts deposits, makes business loans, and offers related services. Commercial banks also allow for a variety of deposit account, such as checking, saving and time deposit. These institutions are run to make a profit and owned by a group of individuals, yet some may be members of the Federal Reserve System. While commercial banks offer services to individuals, they are primarily concerned with receiving deposits and lending to businesses (http//en.wikipedia.org).

1.4 List of Commercial Banks of Nepal

27 Commercial Banks came into operation by mid April and few are in Pipeline.

S. N.	Names	Operation Date	Head office	Paid up Capital (Rs. In Million)
1	Nepal Bank Ltd (NBL)	15-Nov-37	Kathmandu	380.4
2	Rastriya Banijya Bank(RBB)	23-Jan-66	Kathmandu	1,172.3
3	NABIL Bank Ltd. (NABIL)	16-Jul-84	Kathmandu	965.8
4	Nepal Investment Bank Ltd (NIBL)	27-feb-86	Kathmandu	2,407.1
5	Standard Chartered Bank Nepal Ltd (SCBN)	30-Jan-87	Kathmandu	932.0
6	Himalayan Bank Limited(HBL)	18-Jan-93	Kathmandu	1,216.2
7	Nepal SBI Bank Limited(NSBl)	9-July-93	Kathmandu	874.5
8	Nepal Bangladesh bank Limited(NBBL)	5-jul-93	Kathamandu	1,822.7
9	Everest Bank Limited(EBL)	18-oct-94	Kathamdnu	838.8
10	Bank Of Kathmandu Limited(BOK)	12-mar-95	Kathmandu	844.4
11	Nepal Credit and Commerce Bank Ltd (NCC)	14-oct-96	Siddharthanagar	1,399.5
12	Lumbini Bank Limited(LBL)	17-jul-98	Narayangadh	1,015.3
13	Nepal Industrial & Commercial Bank Ltd (NIC)	21-jul-98	Biratnagar	1,140.5
14	Machhapuchhre Bank Limited(MBL)	3-oct-00	Pokhara	1,479.1
15	Kumari Bank Limited(KBL)	3-Apr-01	Kathmandu	1,078.3
16	Laxmi Bank Limited(LAXM)	3-Apr-02	Birgunj	1,098.1
17	Siddhartha Bank Limited(SBL)	24-dec-02	Kathmandu	952.2
18	Agriculture Development Bank Ltd (ADBL)	16-mar-06	Kathmandu	10,777.5
19	Global Bank Ltd (GBL)	2-Jan-07	Birgunj	1,000.0
20	Citizens Bank International Ltd (CBIL)	21-Jun-07	Kathmandu	1,000.0
21	Prime Commercial Bank Ltd (PCBL)	24-Sep-07	Kathmandu	1,000.0
22	Bank Of Asia Nepal Ltd(BOA)	12-Oct-07	Kathmandu	1,000.0
23	Sunrise Bank Ltd(SRISE)	12-oct-07	Kathmandu	1,000.0
24	DCBL Bank Ltd(DCBL)	25-may-08	Kathmandu	1,107.5
25	NMB Bank Ltd(NMB)	02may08	Kathmandu	1,100.0
26	Kist Bank Ltd(KIST)	7-may-09	Kathmandu	2,000.0
27	Janata Bank Ltd(JBL)		Kathmandu	14,000.0

(Shah and Dahal, 2010:96)

1.5 Definition of Management Accounting

Management Accounting or Managerial Accounting is concerned with the provisions and uses of accounting information to managers within organizations, to provide them with the basis to make informed business decisions that will allows them to better equipped in their management and control functions (http//en.wikipedia.org).

Managerial accounting is the process of identifying, measuring, analyzing, interpreting and communicating information in pursuit of an organization's goals. Managerial Accounting is an integral part of the management process, and managerial accountants are important strategic partners in an organization's management team (Hilton, 2008:4).

1.6 Statement of the Problem

The commercial banks have been operating well from the very establishment except government owned banks and few commercial banks. Number of commercial banks is increasing in these years which indicate the expansion of banking services and in the same time there is stiff competition among banks. Well management and planning are the key tools to achieve the determined goal of any business organization for that management accounting provides the techniques to aid the management functions. It gives the proper and necessary information and guidelines to the manager for planning and division making. Hence, the business complexity can be changed into opportunity by using various tools and techniques of management accounting.

The research questions will help to study the scenarios of management accounting tools being used in commercial banks:

- What type of management accounting tools is used by financial sector?
- Which management accounting tools are mostly practiced in commercial banks?

- What are the major difficulties in the application and implementation of management accounting tools?
- In which areas of the commercial banks can management accounting tools are applied to improve the competitiveness?

1.7 Objectives of the Study

The main objective of the research is to examine and study the state of practice of management accounting tools in the commercial banks in Nepal.

The specific objectives are:

- To find out the practice of MA tools and techniques use in commercial banks in Nepal.
- To identify the major difficulties in using MA tools and techniques in commercial banks in Nepal.
- To make suggestions to overcome the difficulties in practicing MA tools and techniques in commercial banks in Nepal.

1.8 Significance of the Study

This research work is the study of the practice of management accounting tools in commercial banks in Nepal. Each and every activity has significance. This study also has gone some significance which is as follows:

- It examines the application of MA tools and techniques in commercial bank in Nepal.
- It explores the problems and potentialities of application of Management accounting tools in the commercial banks.
- It will be useful to potential investors, lenders, managers, policy makers and stockholders of the financial sectors.
- It provides guidelines to the researches who want to do further research in management accounting.
- It provides information on the application of the MA tools under different situations and encourages the use of MA tools in decision making.

1.9 Limitation of the Study

This research work has some limitation, which is as follows;

- The study has been done only in respect to the 26 commercial banks of Nepal which are listed in Nepal stock exchange Ltd to the date 4 July 2010.
- The study is concerned in MA tools and techniques in commercial banks in Nepal but it does not show economic aspects.
- This study covered only commercial bank in Nepal. Thus, the finding would not represent to other financial sectors.
- The data and other information were collected mainly through primary sources because this is the survey type research.

1.10 Organization of the Study

This research work has been organized into five chapters. They are:

Chapter –I Introduction

This chapter included background of study, a brief introduction of development of commercial bank in Nepal, statement of problem, significance of the study, limitation of the study.

Chapter - II Review of literature

The review of literature dealt with the perspective of management accounting, a brief review of MA tools and techniques, a brief review of previous related studies and research gap.

Chapter – III Research methodology

The research methodology dealt with the research methodology to be adopted for the study consisting research design, sources of data, data gathering procedure, population and sample, research variables and data processing procedure.

Chapter – IV Data Presentation and Analysis

It included introduction, tabulation, and presentation, analysis and interpretation of data, and major findings.

Chapter – V Summary, Conclusion and Recommendations

This chapter included summary, conclusion and recommendation of the study. Finally list of bibliography, appendixes were included.

CHAPTER-II

REVIEW OF LITERATURE

2.1 Perspective of Management Accounting

Management accounting is concerned with the provision and use of accounting information to managers within organizations, to provide them with the basis to make informed business decisions that will allow them to be better equipped in their management and control functions. In contrast to financial accountancy information, management accounting information is designed and intended for use by managers within the organization, whereas financial accounting information is designed for use by shareholders and creditors. Thus, management accounting is unique since the information provided by it is:

- Usually confidential and used by management, instead of publicly reported;
- Forward-looking instead of historical;
- Computed by reference to the needs of managers often using management information systems, instead of by reference to financial accounting standards.

This is because of the different emphasis that management accounting information is used within an organization, typically for decision making (Wikipedia, the free encyclopedia).

"Management accounting is the process of identifying, measuring, analyzing, interpreting and communicating information in pursuit of an organization's goals. Managerial accounting is an integral part of the management process, and managerial accountants are important strategic partners in an organization's management team" (Hilton, 2008: 4).

“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 under taking”. 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. (The Institute of Certified Management Accountants).

2.2 Objectives of Management Accounting

The main objective of managerial accounting is to provide relevant economic information to the top level management to make strategic plans and decisions more competitive. This objective comes true by:

1. Providing Information for Planning and Decision Making

Virtually all major plans and important decisions made by internal users (i.e. managers) rely largely on managerial accounting information; this information includes financial and non-financial data to help managers with strategic planning and decision-making.

2. Budgeting

One means of achieving goals is through budgeting. The budget indicates the top management's desire to allocate resources and emphasize certain activities.

3. Assisting in Daily Operation

Directing and controlling day-to-day operation require a variety of data about the process of providing a goods or services. The attention-directing function of

managerial accounting information directs a manager's attention to issues that need their attention.

4. Controlling

The management team needs data about the cost of providing goods or services in order to set fees and prices. Management compares actual cost incurred with those specified in the budget (e.g., analyzing and comparing actual performance to budget plans). When actual operations do not conform to the budget, managers will be asked to explain the reasons for the deviation. This creates both an incentive to conform to the budget and possible negative consequences.

5. Motivating Managers and Employees

A key purpose of managerial accounting is to motivate managers and other employees to direct their efforts towards achieving the organization's goals. This motivates managers to achieve the organizations' goals by communicating the plans, providing a measurement of how well the plan was achieved, and promoting an explanation of deviations from the plan. Another way to motivate employees to assist in achieving the organization's goals is through empowerment. Employees' empowerment is the concept of encouraging and authorizing workers to take the initiative to improve operations, product quality and customer service and to reduce costs.

6. Measuring the Performance of Managers and Sub-Units within the Organization

One way of motivating employees toward the organization's goal is to measure their performance in achieving their goals. In addition to measuring the performance of people, managerial accountants measure the performance of an organization's sub-units, such as divisions, product lines, geographical territories, and department. Such measurements help top management decide whether a particular sub unit is a viable economic investment. Many large

corporations compensate their executives, in part, on the basis of the profit achieved by the subunits they manage.

7. Assessing the Organization's Competitive Position

A crucial role of managerial accounting is to continually assess how an organization compares with the competition, with an eye toward continuously improving.

8. Monitoring

This allows the firm to evaluate its financial and internal performance, customer satisfaction, and innovation compared to its goals, its own past records and that of other similar firms (Bajracharya, Ojha, Goet and Sharma, 2005:18).

2.3 Functions of Management Accounting

The functions of managerial accounting that satisfy the various needs of management for arriving at appropriate business decisions may be described as follows:

1. Collection of Data

Managerial accounting information system (MAIS) has to procure and store data relating to the internal operation of a company and the external environment. Internal data include the capacity available, current utilization of capacity, cost structure, past results of operation, etc. Data relating to external market include the competitors' position, socio-political movements, market characteristics, globalization, etc.

2. Identification and Modification of Relevant Information

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

3. Analysis and Interpretation of Data

Managerial accounting is concerned more with records of past achievements, maintenance of values, fixation of responsibilities 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.

4. Providing Information for Planning and Decision-Making

Planning, which is a creative aspect of management job, is carried out by managerial accounting through the process of budgeting, business decisions are based on relevant economic information provided by managerial accounting.

5. Facilitating Management Control

Managerial accounting enables all accounting efforts to be directed towards control of the destiny of an enterprise. This is made possible through budgetary and standard costing, which are integral parts of managerial accounting.

6. Use of Qualitative Information

Managerial accounting does not restrict itself merely to financial data for helping management in the decision making process and frequently draws upon sources, other than accounting, for such information as is not capable of being readily convertible into monetary terms (Bajracharya, Ojha, Goet and Sharma, 2005: 18).

2.4 Evolution of Management Accounting

The last three decades have witnessed an almost Significant changes in the development of accounting from a mere device of recording and compiling of income and expenditure relating to past business events to a formidable instruments of forecasting, planning, regulating business of economic activity. Starting with systematic recording of transactions and costs. Subsequently supplemented by integration of financial and cost records the basic structure of traditional accounting has been enlaced by financial and cost control,

embellished by production, planning and control, and engrafted by a system of reporting on performance.

In short, it has led to the emergence of what in technical language is known as management accounting. The term management accounting is of recent origin even in USA where though a lot was heard about controllership function, financial control, operational control, management services, system work, methods and procedures production planning and other methods connected with management till recently very few people looked upon “management accounting” as a subject distinct from accounting , this subject was discussed under the title “budgetary control” and corresponding modernization of accounts at the International Accounting Congress held at Amsterdam. So far as evidence goes, the term management accounting was first coined and used by the British Team of Accountants that visited the United States in 1950 under the auspices of Anglo-American Productivity Council. Since then the term has become quite familiar in USA as well as in other countries (Goyal and Singh, 1997: 6-7).

2.5 Limitations of Management accounting

Management accounting suffers from some limitations which are mentioned below: (Dangol, 2007:3).

1. Management accounting is prepared on the basis of financial account and cost account. So its effectiveness is limited to the reliability of those sources.
2. A management accountant should have the knowledge of accounting, statistics, economics, principle of management, engineering etc. and only then, the application of management accounting will be useful. The imperfect knowledge of stated discipline may lead to erratic decisions.
3. Management accounting provides only information for helping the management in collecting, analyzing and presenting the data. So,

management accounting should no be considered as alternative or a substitute for management.

4. The personal feeling and thinking of an interpreter may affect the decision making, which may lead to same wrong decision.
5. Management accounting may not be beneficial for small organization, because it is a very costly affair to install this system.
6. Management accounting is still in evolutionary stage and it has not been able to reach the final stage.
7. The establishment of management accounting demands re-arrangement of personal and their activities and hence there is a possibility of opposition from some quarters or the others within the organization.
8. Conclusions or decisions derived by management accounting are insignificant unless they are properly executed at all levels of business operations.

2.6 A Review of Management Accounting Tools

Management accounting is that branch of the accounting information system of business firm, which uses accounting information for planning, controlling and decision making to achieve organizational goal and objectives. Management must use various tools and techniques of management accounting for organizational success. Those tools and techniques are as follows

2.6.1 Cost Estimation

How does management go about actually estimating the fixed and variable costs? Management must have some way of estimating fixed and variety of cost behavior pattern. Cost exhibits a variety of cost behavior pattern. Cost estimation is the process of determining how a particular cost behaves. It is a process of determining the cost for certain levels of outputs. Several methods or models are commonly used to estimate the relationship between cost and activity and thereby have total mixed cost for given level of activity (Munankarmi, 2002: 25).

2.6.2 Methods of Mixed Cost Segregations

Mixed costs should be separated into variable and fixed components before entering into financial planning, decision making and controlling. Mixed cost separation method are such as Graphic at method, high-low point method, Analytical method, average method and least square method which are describe as follows.

1. Graphical Methods (Scatter Diagram)

The graphical method of dividing mixed costs into their fixed and various components makes use of all relevant past data pertaining to cost- volume relationship. The data are plotted in a scatter graph. Each point in a chart represents cost for particular months/days in relation to number of units produced or level of activity (Khan, 2000:5.11).

2. High-low Method (Two Point Method)

As the name suggest, that method makes of two observations rather than all the observation for drawing the cost line. The two points chosen are : (i) The high cost point; and (ii) The low cost points corresponding to same specific volume (may be number of units produced or any other measure of volume such as labour-hours, machine-hours, telephone calls made, power consumed and so on) The algebraic method will yield identical results which formula as follows: (Khan, 2000: 5.12).

Y = a + bx

$$\text{Value Variable X} \frac{\text{Difference in Cost (CH ZCL)}}{\text{Difference in Level of Activity Production (PH ZPL)}}$$

In statistical terms, total cost (Y) is a function of (i) Fixed element, a, and (ii) variable element, b, multiplied by number of units produced or level of activity, X:

3. Least Square Method

Least square method is a statistical method. It follows regression equation to segregate mixed cost into variable. It is an accurate and trusted method of segregation fixed and variable cost from mixed cost. In this method, first of all, variable cost per unit is calculated. And then fixed cost is calculated by using the following formula.

$$b \,X\, \frac{N \quad xy \,Z \quad x \quad y}{N \quad x^2 \,Z (\quad x)^2}$$

$$a \,X\, \frac{Ny \,Z b (\quad x)}{N}$$

Where, a = Fixed cost per unit/paper

b = Variable cost per unit

N = No. of observations

X = activity measures

Y = Total mixed cost

4. Analysis Method

This method also knows as “Degree of variability” techniques because the genesis of this method lies in measuring the extent of variability of costs on a careful analysis of each item to determine how for the cost varies with volume, variable overheads under this method computed as follows: [Brown & Howard, 1964: 149] Variable overhead = Budgeted mixed overhead × Degree of variability

5. Average Method

Under this method, total cost is divided by total units for find out cost per unit. Total cost may be cost of product and other indirect examples. So it is simplest method for calculation.

2.6.3 Product Costing Method

Profits are the excess of revenue over expenses. For the purpose of profit determination in business finished and semi-finished goods in a firm heed a true and fair valuation. So income statement is prepared for the evaluation of the performance of the organization. Income statement is prepared under two product costing method for showing the detailed behavior and classification of overhead as follows.

1. Variable Costing

This method is also known as direct costing and marginal costing. This is a method of separating cost between variable and fixed cost for product under this method only variable manufacturing costs are charged on the product. The components of variable manufacturing cost are direct material, direct labour and manufacturing overhead. Fixed manufacturing costs are not included on the cost of product (Gyawali, Fago and Subedi, 2006: 3.3).

2. Absorption Costing

This is a system of separation cost between manufacturing and non manufacturing. The valuation of inventories includes the costs of manufacturing (variable manufacturing and fixed manufacturing) like direct material, direct labour, variable manufacturing overhead, fixed manufacturing overhead etc. this system includes fixed manufacturing overhead on considers over absorbed or under absorbed of fixed manufacturing overhead on the basis of production volume (Gyawali, Fago and Subedi, 2006: 3.3).

3. Use of Variable and Absorption Costing

Absorption costing is more widely used than variable costing. However, the growing use of the contribution approach in performance measurement and cost analysis has led to increasing use of direct costing for internal reporting purpose. Over half the major firms in the United States use direct costing for some internal reporting, and nearly a quarter uses it as the primary internal

format, in contrast neither the public accounting profession nor the internal revenue services approves of direct costing for external reporting or tax purpose. Thus all firms use absorption costing for there a report to shareholder's and tax authorities (Horngren, 1991: 538-539).

Product costs and period costs are calculated by the variable as well absorption costing based. They are;

Under Absorption Costing

Product Costs: = Direct Material + Direct Labour + Variable Manufacturing Costs + Fixed Manufacturing Costs.

Period Costs: = General and Administration Costs + Selling and Distribution Costs.

Under Variable Costing

Product Costs = Direct Material + Direct Labour + Variable Manufacturing Costs.

Period Costs = Fixed Manufacturing Cost + General Administrative Costs + Selling and Distribution Costs.

(Bajracharya, Ojha, Goet and Sharma, 2005:144).

2.6.4 Inventory System

Either the period inventory system or the perpetual inventory system may be used to account following for inventory management.

1. Perpetual Inventory System

Under a perpetual inventory system, the book figure for me ending inventory is a balancing figure on the accounts, which may be verified periodically by actually counting the items. This counting is referred to as "taking a physical inventory" (Goyal, 1992: 689).

2. Periodic Inventory System

Under a periodic inventory procedure, where a perpetual inventory is not maintained, physical inventory is taken periodically and the cost of material used is the balancing figure in accounts. In this case, the cost of material, used is perhaps more accurately described as the cost of materials which are assumed to have been used (Mohan and Goyal, 1992: 690).

2.6.5 Inventory Valuation Method

There are some inventory valuation methods such as FIFO, LIFO, Weighted Average and specific Items. There are describing as follows:

1. First in First out (FIFO Method)

The FIFO method assumes that the items of inventor which were purchased first are sold or consumed first, and consequently the items remaining in inventory at the end of the period are those most recently purchase or produced (Bajracharya, Ojha, Goet and Sharma, 2005: 175).

2. Last in First out (LIFO Method)

Under the LIFO method, on the other hand, the cost of goods sold and the value of closing inventory can be determined only after the final lot of the year has been received. This is because of the assumption underlying the calculation of inventory, according to this method, as the name LIFO suggests, the use of inventory is valued in the basis of the inverse sequence of receipts (Khan and Jain, 1992: 6.21)

3. Weighted Average Method (End- of-the Months Average Cost Method)

Under this method, the materials issued during the month are generally cost at the weighted average unit cost (total cost of units divided by number of units) as the end of the previous months. Since the weighted average unit costs at end of the previous month are available during the current period for costing

requisitions, this method can be used with either a perpetual or periodic inventory system (Mohan and Goyal, 1992: 695).

4. Identification of Specific Items

The cost of inventories of items that are not ordinarily interchangeable and goods or service produced and segregated for specific project should be assigned by using specific identification of their individual costs are attributed to identify items of inventory. This is an appropriate treatment for items that are segregate for a specific project, regardless of whether they have been bough or produced. However, specific identification of costs id inappropriate when there are a large number of items that remain in inventories could be used to obtain pre determined effects on the net profit or loss for the period (Bajracharya, Ojha, Goet and Sharma, 2005:174)

2.6.6 Managerial Application of the Cost-Volume Profit Analysis

CVP analysis helps the management to set strategies for success. CVP uses contribution margin to project cost in future.

1. Contribution Margin

Contribution margin is the excess of sales price of a unit of output over its variable cost i.e. (S-V). It is the difference between the profits of rupees that is left after variable expenses are deducted. It had to be remembered that “V” is the sum of unit manufacturing costs and the unit marketing and administrative costs (Gyawali, Fago and Subedi, 2006: 4.2-4.3).

Symbolically,

Contribution Margin = Selling Price – Variable Cost

= Fixed Cost + Profit

Profit/Loss = Contribution Margin – Fixed Cost/Expenses

2. Break- Even Analysis

At break- even sales, the company just break even i.e. recovers all of its costs. In other words, break even sales volume is that level of sales volume in which a company neither makes a profit nor suffers losses. It will just be able to recover its cost. To put break even point in other words, that is a point at which a company breaks the loss (minus) zone and enters into profit zone.

Break even analysis helps the management to know whish sales volume will only recovers its cost and after which it starts giving profit. Therefore, it can provide management some insight into profit planning. There are four approaches of calculating break even point (Akshay, Goet and Bhattri, 2005:12.2).

a. Algebraic Equation Method

BEP Sales in Rs. – Variable Cost – Fixed Cost = 0

b. Formula Method

$$\text{BE Sales (Units)} \; X \frac{\text{Fixed Cost}}{\text{CMPU}}$$

$$\text{BE Sales (Rs.)} \; X \frac{\text{Fixed Cost}}{\text{CM Ratio}}$$

c. Income Statement Method

Sales Re venu (BE Sales In Rs.)		xx
Less :	Variable Cost	xx
	Contribution M arg in	xx
Less :	Fixed Cost	xx
		Nil

3. Margin of Safety

Margin of safety (MOS) is a cushion available to a business firm to protect itself against the future business happenings. The large is the margin of safety, the greater is the chances for the firm to earn profit or vice versa. Margin of safety is also defined as excess of actual or budgeted sales over and above the

break even sales. In others words, it is the difference between actual or budgeted sales and break even sales (Akshay, Goet and Bhattarai, 2005: 12.4).

Symbolically,

Margin of safety (MOS) = Actual Sales Volume – BE Sales Volume

$$\text{Margin of Safety Ratio X} \frac{\text{Margin of Safety}}{\text{Actual Sales}}$$

2.6.7 Pricing of the Product

Price is the value of goods and services. Setting price for goods or service in an important function of the manager of an organization. It is the most crucial and difficult decision of a manger. Pricing is always determined for making profit. There is some technique for pricing of product which is described as follows:

1. Variable Cost Pricing

Some firms use variable cost pricing system for determination of selling price of the products. Under this system, mark up is added either on total variable manufacturing cost or total variable costs. This method is also known as marginal cost pricing system. Using variable cost pricing system, the firm sets its price to maximize contribution to cover fixed cost and profit margin (Fago, Subedi and Gyawali, 2006: 9.5-9.6).

Price under this system is, Selling Price = Total variable Cost per Unit + (Mark Up% × Total Variable Cost 2006Unit)

$$\text{Mark Up\% X} \frac{\text{Total Profit } \Gamma \text{ Fixed Mnufacturing Cost } \Gamma \text{ Fixed Selling and Administrative Cost}}{\text{Total Variable Cost}} | 100$$

Target Profit = Capita Employed × Return on Investment (ROI)

2. Full Cost Pricing /Absorption Cost Pricing

Under this system of pricing, selling price is determined by adding certain percentage of mark up on total production cost of goods and service. The total cost includes all variable manufacturing cost as well as fixed manufacturing cost for determination of selling price. In long run, price must cover all costs and normal profit margin. Full cost pricing system covers all variable costs, fixed cost as well as required level of mark up. It provides a just able price that tends to be perceived as equitable by all parties. Consumers generally understand that a company must make a profit on its product or service in order to remain in business. Justifying a price as total case of production, sales and administrative activities plus a reasonable profit margin, seems reasonable to buyers. The selling price is determined under full cost pricing system as follows (Fago, Subedi and Gyawali, 2006: 9.2)

Selling Price = Total Cost Per Unit + (Mark Up% $\times$ Total Cost Per Unit)

$$\text{Mark Up\%}\ X \frac{\text{Target Profit}}{\text{Total Cost}} \mid 100$$

Target Profit = Capital Employed $\times$ Return on Investment (ROI)

3. Transfer Cost Pricing

A transfer price is the price on submit 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 the buying subunit, affecting operation income numbers for both subunits. The operating income can be used to evaluate the performance of each subunit and to motivate managers (Horngren, Foster and Datar, 1999: 377). The transfer pricing methods are broadly classified cost pricing are as follows (Fago, Subedi and Gyawali, 2006:9.31).

a. Market based transfer pricing
b. Cost based transfer pricing

i. Full cost transfer pricing

ii. Variable cost transfer pricing

c. Negotiable transfer pricing

d. General formula approach transfer pricing

4. Activity Based Cost Pricing

It is a technique of allocating manufacturing overheads to products using multiple application rates and variety of costs drivers in multi product firm. It maintains the relationship between overhead costs and the activities that causes them. The manufacturing costs are based up on certain costs drivers and the increasing and decreasing ratio of costs depends upon the quantity of cost drivers. The following steps in taken for making pricing decision under ABC pricing system.

a. Identifying the major activities in the organization
b. Determine the cost driver for each major activity
c. Determine the cost driver rate
d. Calculate total cost based on cost driver
e. Add mark up total cost and determine selling price

(Gyawali, Fago and Subedi, 2006: 9.13)

2.7 Budgeting for Profit Planning & Control

2.7.1 Concept of Budgeting

Planning is the key to good management of business activities. This is true for individuals, small family owned companies, new high technology companies, large corporations, government agencies, and non profit organization, for example most successful students who earn good grades, finance their education, and finish their degrees in a reasonable amount of time do so because they plan their time, their work, and their recreation. These students and budgeting their scare resources to make the best use of their time money, and energy. Owners of successful companies who survive and grow even in different economic times carefully plan or budget their inventory purchase and

their expansion of facilities so that they do not overextend themselves financially but are still able to meet customer's needs. A budget-a formal, quantitative expression of plans (whether for an individual, business, or other organization)- provides a benchmark against which to measure actual performance. A budget can be much more than a limit on expenditure. Although government agencies too often use a budget merely as a limit on their spending, business and other organization generally use budget to focus on operating or financial problems. Thus a budget is a tool that helps managers both plan and control operations (Horngren, Sundrem and Stration, 2002:253-254).

A budget is a detailed plan expressed in quantitative terms that specifies how resources will be acquired and used during the specifies period of time. The procedures used to develop a budget constitute a budgeting system (Hilton, 2000:74).

Planning is a primary function of the management process. Planning is the process of setting goals and objectives and translating them into activities and resources required for the accomplishment within a specified time horizon. A budget is a quantitative expansion of a plan of action and an aid to co-ordination and control. Budgets may be formulated for the organization as a whole or for a subunit. Budgets, basically, are furcated financial statements-formal expression of managerial plans. They are targets that encompass all phases of operations including sates, production, purchasing, and manpower & financing. The annual budgets may be broken down into months, weeks and days of operation (Bajracharya, Ojha, Goet and Sharma, 2005: 403)

2.7.2 Essential of Budgeting

A successful budget depends on many factors. The essentially for successful budgeting are as follows:

- Support of top management
- Clear and realistic goals and objectives

- Assignment of authority and responsibility
- Creation of responsibility center
- Adaptation of accounting system
- Full participation
- Effectives communication
- Budget education
- Flexibility

(Gyawali, Fago and Subedi, 2006: 5.2)

2.7.3 Objectives of Budgeting

The objectives purpose pf budgeting are as follows.
(Fago, Subedi and Gyawali 2006:5.2)

- To determine future expectations and goals in clear and formal forms for avoiding confusion and facilitating their attainability.
- To communicate expectations to all concerned so that they are under stood, supported and implemented.
- To provide detail plan of action for reducing uncertainty and for the proper direction of individual and group efforts to achieve goals.
- To coordinate the activities and efforts in then way those resources are used efficiently and effectively.
- To provide a means of measuring and controlling performance of individual or unit.

2.7.4 Budgeting Over Time

Budgeting over time is an important consideration in planning. Budget range over a time spectrum that runs from the current day to a period some time as for as twenty five year in the future, so, various plan are consideration for budgeting are as follows:

1. Strategic Long-Range Plans

A strategic long range plan is prepared for more than a year (for 5, 7 or 10 year) when plans are prepared on a five to ten years basis, they are called long term or strategic planning. Strategic long-range planning is not concerned with day- to- day operations, although the strategic plan will be the foundation on which short-term planning based (Bajracharya, Ojha, Goet and Sharma, 2005:347).

2. Tactical Short-Range Plan or Budget

Tactical short-range plan or budget is usually prepared for one year; divided into months and quarters. Certainly, the most common from of budget is the annual operating budget. Budget of this kind can be prepared more accurately than can long range forecasts, because they deal with more nearly as certain able facts and probable conditions (Bajracharya, Ojha, Goet and Sharma, 2005:347)

3. Medium Term Plans

A medium term planning is prepared for more than one year but not more man 3 years. So, it takes 3 years plans only. Medium term plans are prepared for medium target or objectives. In Nepal government interim budget is prepared fro 2007 to 2010 year for peace process period and 24% poverty alleviation target is the objective of interim budget (Bajracharya, Ojha, Goet and Sharma, 2005:347).

2.7.5 The Budgeting Process

The main objective of a business firm is to make and 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 chances of making profits within the given environment. A systematic budgeting should encompass the following procedures (Bajracharya, Ojha, Goet and Sharma, 2005: 349-350).

1. Evaluating the business environment
2. Setting objectives

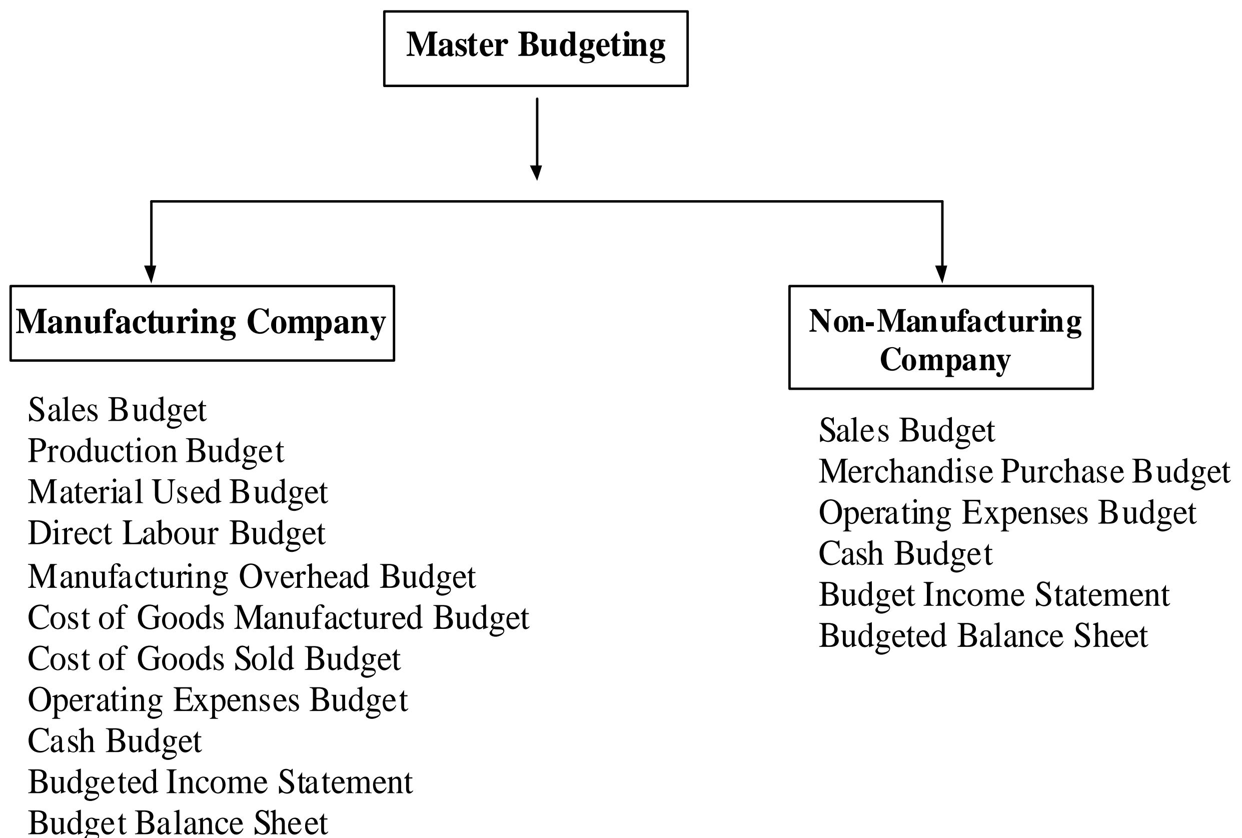
3. Setting specific goals
4. Identify potential strategies
5. Communicating the planning guidelines
6. Developing the long-term and short term plans
7. Implementation of budgets
8. Periodic performance reporting and follow-up

2.7.6 Master Budget

The terms used to describe assorted budget schedules vary from organization to organization, however, most master budget have common elements. The usual master budget for a Manufacturing & Non-manufacturing company has the following components.

Figure 2.1

Master Budget



However, a master budget can be divided into two components. That is operational budget and financial budget.

2.7.6.1 Operational Budget

Operating budgets concerned with the process of preparing the budgets of each operations/activity like production, sales, purchase etc. of the organization. It includes.

1. Sales Budget

Sales budget is the starting point in the preparation of the comprehensive master budget. All the other plans and budgets are dependent upon the sales budget. The budget is usually presented both in units and dollars of the sales revenue or sales volumes. The preparation of a sales budget is based upon the sales forecast. A variety of methods are used to forecast the sales for the planning period (Bajracharya, Ojha, Goet and Sharma, 2005: 363).

2. Production Budget

Production planning is the second step of budgeting. Production budget is concern with determining the quantity of the product to be produced and unit of time production budget is prepared to coordinate the sales budget and inventory policy of organization. Production on budget can be expressed in following formula.

Production Unit = Planned Sales + Closing Stock – Opening Stock

3. Material Usage Budget

Under this budget, the quantities of raw material and parts needed for production goods as per production budget are determined. It is the raw material quantity budget developed to know the material for production. Material usage/consumption budget can be computed by following equation.

Material Usage Budget = Production Budget × Standard Raw Material Usage Rate Per Unit

4. Cost of Material Usage Budget

This budget reports the estimated cost of the materials planned for in the materials budget. Observe that the material budget cannot be costed until the planned cost of purchase. Materials budget is prepared by classifying the types of raw materials, by user responsibility, by interim period, and by types of finished goods. Cost of Material Used = Planned Production Units × Standard Material Usage per Unit × Price per Unit of Raw Material

5. Material Purchase Budget

Purchase budget is the process of determining the quantity of raw materials and to be purchase to meet materials consumption and inventory. In other words, purchase budget determines the quantity and price of materials that should be purchased to meet the raw materials for production and inventory level for seasonal variation. It can be expressed in equation of follows (Gyawali, Fago and Subedi, 2005:5.5).

Material Purchase Budget = Material Usages + Closing Store of Raw Materials – Opening Stock of Raw Materials

6. Merchandise Purchase Budget

In trading company, instead of making budgets like direct materials, direct labors, manufacturing overhead, cost of production and cost of good sold budget, it prepares the merchandise purchase budget.

Purchase Budget = Cost of Good Sold + Closing Stock – Opening Stock

Where,
Cost of Good Sold = Sales – Gross Margin

The purchase quantity should be depended upon the inventory level & policy.

Management policy with respect to purchase and inventory should be specified. The two basic timing factor for purchase policy are (a) How much to purchase at a time (b) whom to purchase (Welsch, Hilton and Gorden, 2000: 244-245).

a) EOQ Technique

EOQ is a purchase volume of goods in an order and also be considered the minimize cost which is computed as formula way under.

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

Where,

EOQ= Economic order quantity

A= Annual quantity to be purchased

O= Average cost of placing an order

C= Annual carrying cost of carrying one unit in inventory

The level where a purchase is made is called the reorder point.

Reorder point= Average usage X Average lead time + Safety Inventory

b) Just In Time (JIT) Purchasing

A recent development in materials and parts inventory is called just in time (JIT). Purchasing and manufacturing. In this approach, materials and parts are not purchased until they are needed for production, thereby minimizing the inventory holding cost. In such an approach, it is important to anticipate exactly when the materials and parts will be needed for production so that the acquisition can be reflected in the materials and parts budget for purpose of profit planning and control (Bajracharya, Ojha, Goet and Sharma, 2005: 372).

7. Materials Inventory Budget

This budget reports the planned level of raw material inventory in terms of quantity and material inventory in terms of quantity and costs. The difference

in units between material requirements as specified in materials budget and the purchase budget is reflected as an increase or decrease in the inventory budget (Singh, Ojha and Acharya, 2004:20.12)

This budget specifies the planned level of raw material in terms of quantities and cost for each product and in total (Goet, Bhattarai and Gautam, 2005: 4.3)

8. Direct Labour Budget

Direct labor cost occupies a significant portion of total production. Therefore, it requires systematic planning a control. The labor budget refers the area of personal needs, recruitment, training, job description and evaluation, performance evaluation, union negotiations and wages and salary administration. The basic objective of direct labour budget is to provide information about direct labour requirement, numbers of direct labour, employees needed, labour cost of each product and investment (Gyawali, Fago and Subedi, 2006:5.5).

Direct Labour Cost = Production × Standards Usage Rate × Wage Rate

9. Manufacturing Overhead Budget

Manufacturing overhead budget includes all the expenses incurred other than direct labour and direct material. Therefore, manufacturing overhead may be variable of fixed overhead. Both costs should be considered as a part of manufacturing cost.

10. Cost of Good Sold Budget

The costs of good sold budget clearly distinguish the total costs of goods manufactured and cost of goods sold from the value of inventory. Indeed, it tells us how much of the costs of goods manufactured should be expressed this year and how much cost should be carried to the next year with the inventory. The cost of goods sold budget facilities the making of the income statement

and the balance sheet. The cost of goods sold is the making cost of the sold units. In case of manufacturing business the cost of good sold include the direct material, direct labour and the variable manufacturing costs (Bajracharya, Ojha, Goet and Sharma, 2005: 379).

11. Operating Expenses Budget

Operating expenses budget represents the all those expenses that are incurred to sell goods and services. It includes selling and distribution expenses, administrative expenses, advertisement, promotion and other expenses. The budget of all these expenses can be prepared jointly or severally (Gyawali, Fago and Subedi, 2006:5.6)

2.7.6.2 Financial Budgets

Financial budget are the budgets that are concerned with the financial implication of operating concern i.e., cash inflows, cash out flows, financial position and operating results. Manufacturing & Non-manufacturing Company has common financial budgets i.e. cash budget, budgeted income statement and budgeted balance sheet.

1. Cash Budget

Cash budgeting focuses on cash inflows, cash outflows and related financing. Cash budgeting is an attractive way to plan and control the cash flows, assess cash needs and effectively uses of excess cash. Therefore, it is very important in all type enterprises. The cash budget is a forecast of expected cash receipts and payments for a future period. A cash budget shows the planned cash inflow, outflow and ending position by interim periods for a specific period.

So, a cash budget contains four sections that is the receipts section, the disbursement section, the cash excess or deficiency section and the financing section. The receipts section consists of beginning balance of cash added to whatever is expected in the way of cash receipts during the budget period. The

major sources of receipts and the sales. The disbursement section consists of cash payment that is planed for the budget period; these payments will include raw materials purchase, direct labour payments, manufacturing overhead cost, and so on. Other cash disbursements are income tax, capital equipment purchase, dividend payment, etc. The cash excess or deficiency section totals and the cash disbursement section totals. If deficiency exists; the company will need to arrange for borrowed funds from its bank. If an excess exists, funds borrowed in previous periods can be repaid or the idle funds can be placed in short-term investment. The financing section provides a detailed account of the borrowing and repayments projected to take place during the budget period. It also includes a detail of interest payment that will be due on money borrowed (Bajracharya, Ojha, Goet and Sharma, 2005: 381)

2. Budgeted Income Statement

Planned income statement is concerned with determining the total income of the planned period. It is to be prepaid under accrual basis rather that cash basis of other preceding budgets (Gyawali, Fago and Subedi, 2006:5.8)

3. Budgeted Balance Sheet

The balance sheet is the final document in the master budget and even in financial record keeping. It is concerned with forecasting total assets & properties, capital and liabilities of the company by time period. It shows the final or ending balances of all the account titles.

2.7.7 Zero-Base Budgeting

Under zero bases budgeting, the budget for virtually every activity in the organization is initially set to zero. To receive funding during the budgeting process, each activity must be justified in terms of its continued usefulness. The zero base budgeting approach forces management to rethink each phase of an organization's operations before allocating (Hilton, 1997:427).

Zero-base budgeting has received great attention recently as a new approach to the budget process. It is a method of budgeting in which manager are required to start from zero level every year and to justify all costs as if the programs involved were being initiated for the first time. By this, it means that no costs are viewed as being ongoing in nature: The manger must start at the ground level each year and present justification for all costs in the proposed budget, regardless of the type of cost involve. This is done in a series of "decision packages" in which manager rank all the activities in the department according to relative importance, going form essential to least importance. Presumably, this allows top management to evaluate each decision package independently and to pare back in those areas that appear less critical or that do not appear to be justified in terms of the cost involved. So, it is also known as priority based budget (Goet, Bhattarai and Gautam, 2005:14.1).

2.7.8 Activity Based Budgeting

To manage costs more effectively organizations that have implemented Activity based Costing (ABC) have also adopted Activity Based Budgeting (ABB). The aim of ABB is to authorize the supply of only those resources that are need to perform activities required to meet the budgeted production and sales volume. Where as ABC assigns resource expenses to activities and then uses activity costs drivers to assign activity costs to cost objects such as products, service or customers), ABB is the reverse of this process. Cost objects are the starting point. Their budgeted output determines the necessary activities which are then used to estimate the resources that are required for the budget period ABB involves the following stages:

1. Estimate the production and sales volume by individual products and customers.
2. Estimate the demand for organizational activities
3. Determine the resources that are required to perform organization activities.

4. Estimate for each resources the quantity that must be supplied to meet the demand.
5. Take action to adjust the capacity of resources to match the projected supply (Drury, 2000:568).

2.7.9 Flexible Budget

In contrast to the performance report based only on comparing the master budget to actual results, a more helpful benchmark for analysis is the flexible budget. A flexible budget (Sometimes called variable budget) is a budget that adjusts for changes in sales volume and other cost driver activities. The flexible budget is identical to the master budget in format, but managers may prepare it for many level of activity. For performance evaluation, the flexible budget would be prepared at the actual levels of activity achieved. In contrast, the master budget is kept fixed or static to serve as the primary benchmark for evaluating performance. It shows revenues and costs at only the originally planned levels of activity (Horngren, Sudern and Stratton, 1998:295).

A budget prepared at different level of activities is a flexible budget. Flexible budget will furnish the budgeted figures for any level of activity, which a company may actually attain. It reflects costs revenue and profit at the various level of budgeted activity. A flexible budget, as also called a variable, step budget, sliding-scale budget, expenses-formula budget, dynamic budget and expenses control budget. It is a budget which permits revision of estimates of operating cost and profit with charges in sales or production volume. This budget is prepared on the basis of time, demand of product, cost of product, availability of demand of product, cost of product, season and availability of factor of production. In static budget, it is prepared at a single level of activity, with prospect of modification in the light of the changed circumstance is fixed/static budget. Fixed budgets have lacks of flexibility; some degree of flexibility is required to adjust the activity with changed business environment which is not possible under the static budget. Uncertainty in the factor of level

of activity, impossibility of comparing actual with budget and complicated task of revising the original budget etc are defects found in fixed budgeting and these make imperative to avoid the rigidity regarding the level of activity and to introduce flexibility in the system of budgeting (Gyawali, Fago and Subedi, 2006:7.3).

The following methods are used for preparing a flexible budget:

1. Tabular Method

The budget prepared at different level of activities within the range of output. the factor to be taken into consideration for preparing the flexible budget under this method are summarized following

i. Determination of level of activity
ii. Estimation of cost and its behaviour for each level of activity
iii. Determination of units at the level of activities
iv. Preparation of flexible budget

2. Formula Format

This format provides a formula for such expenses account in each responsibility centre. The formula gives the fixed amount and the variable rate. This is more compact and generally more useful because the components of each expense are given. The formula format uses straight line relationships. It is a widely used for expressing expenses budget in actual practice. In this the total cost is computed by using equation of $y=a+bx$; where y is total cost; 'a' is fixed cost and X is given level of activity.

2.7.10 Capital Budgeting

Capital Budgeting pertains to fixed/long term assets which by definition refer to assets which are in operation, and yield a return, over a period of time, usually , exceeding one year. It, therefore, involves a current outlay or rises of outlays of cash resources in return for a anticipated flow of future benefits. In other words, the system of capital budgeting is employed to plan expenditure

which involve current outlays but are likely to produce benefits over a period of time longer than one year. These benefits may be either in the form of increased revenues or reduced costs. Capital expenditure planning, therefore, includes addition, disposition, modification, and replacement of fixed assets. From the proceeding discussion may be deduced the following basic features of capital budgeting (i) Potentially large anticipated benefits; (ii) A relatively high degree of risk; and (iii) A relatively long time period between the initial outlay and the anticipated returns. The term capital budgeting is used interchangeably which with capital expenditure decision, capital expenditure management, long-term investment decision, management of fixed assets; and so on (Khan and Jain, 2000: 17.1).

The term capital budgeting is used to describe those actions relating to the planning and financing of capital outlays. Capital budgeting decisions are a key factor in the long-run profitability of a firm. There are at least two reasons why this is true. First, funds available for investment are usually limited but investment opportunities may be almost limitless. Therefore, the manager must somehow spread his limited investment funds among many computing opportunities, and do so in a way that will provide the greatest possible return to his firm. And second, most investment opportunities are long-term in nature. Once a firm has made a decision to invest in a particular project, it may become locked into that decision for many years into the future even if it later turns out to be less profitable than another would have been. Because of these factors, capital budgeting decisions are made only after a through evaluation of the relative merits of every known alternative (Garrison, 1976:456).

2.7.11 Estimating the Project's Cash Flows

Cash flow generally indicates a cash outflow and a cash inflow. The key point in investment analysis is to focus exclusively on the difference in expected future cash flows that result from implementing a project. All cash flows are treated as the same whether they arise from operations, purchase or sale of equipment or investment in or recovery of working capital. The opportunity

cost and the flowing in or out of the organization and not to the source of the cash. Estimation of the cash flows in an investment projects should cover following process.

1. Calculation of Net Cash Outlay (NCO)
2. Calculation of Annual Depreciation
3. Calculation of Annual Cash Flow After Fax (CFAI)
4. Calculation of Cash Flow in Final Year.

2.7.12 Techniques of Capital Budgeting

After estimation of cash flow, the project must be evaluated by various techniques which is classified into two groups /methods i.e. Traditional or Non-discounted methods and discounted cash flow or time Adjusted methods.

1. Traditional or Non-Discounted Methods

This is the traditional methods and conceptually less satisfactory because they ignore two basic financial principles i.e. the time value of money and total benefits. The following two techniques are applied under this method.

a) Payback Periods (PBP)

The number of years required for the proposal cumulative cash flows to be equal to its cash outflow is known as payback period. It can also be define that the year required to cover its cost by it income. The project which provides its return in the smallest period of time is considered as the highest ranking project. Calculation of payback period is different in following two conditions.

i) Even Cash Flow

$$\text{Payback Period (PBP)}\ X \frac{\text{Net Cash outlay}}{\text{Annual CFAT}}$$

ii) Uneven Cash Flow

$$\text{Pay Back Period (PBP)}$$

$$X \text{Minimum Required Period}\ \Gamma \frac{\text{Amount Require to Recover Investment}}{\text{Next Year's CFAT}}$$

Decision

- Accept if PBP < Maximum acceptable PBP
- Reject if PBP> Maximum acceptable PBP
- Independent projects: lower payback period than standard payback
- Period should be accepted.

Mutually exclusive projects: lower payback period should be accepted.

b) Accounting Rate of Return

The accounting rate of return is also called the average rate of return. Accounting rate of return indicating to the profitability of the projects instead of net cash flows considers profitability rather than liquidity. According to this method, the projects with higher rate of return are considered better projects than the lower rate of return. It is computed by average the income after tax over the life of a project and then dividing the average annual cash flow by the initial investment outlay.

$$\text{Average Rate of Return X} \frac{\text{Average Net Income After Tax}}{\text{Average Invstment}}$$

Decision:

Accept if ARR > Minimum acceptable rate of return

Reject if ARR < Minimum acceptable rate of return

Independent projects. Higher average rate of return than standard average rate of return should be accepted.

Mutually exclusive projects: Higher average rate of return should be accept.

2. Discounted Cash Flow or Time Adjusted Methods

The discounted cash flow methods are theoretically superior to the traditional methods. Their superiority to the traditional methods. Their superiority is the

use of time value of money. Before evaluation any project under this method the future cash flow must be converted into present value. Under this method, following techniques are used to evaluate the projects.

a) Net Present Value (NPV)

The Net present value (NPV) method is a DCF approach to capital budgeting that discounts all expected future cash flows to the present using a minimum desired rate of return. To apply the NPV method to a proposed investment project, a manager first determines some minimum desire rate of return. The rate depends on the risk of a proposed project. The higher the risk the higher the minimum desired rate of return. The minimum rate is based on the cost of capital what the firm pays to acquire rat of return, hurdle rate, or discount rate. Managers then determine the present values of all expected cash flows from the project, using this minimum desired rate. If the sum of the present values of the cash flows is positive, the project is desirable. If the sum is negative, it is undesirable. Why? A positive NPV means that accepting the projects will increase the value project's cash inflow exceeds the present value of its cash outflows (if by some chance, the NPV is exactly zero, a decision maker would be indifferent between accepting and rejecting the project). When choosing among several investments, the one with the greatest net present value is the most desirable (Horngren, Sundern and Stratton, 1998:415).

NPV = Total Present Value of Annual Cash Flow - NCO

b) Internal Rate of Return (IRR)

The internal rate of return (IRR) is an alternative technique for use in making capital investment decisions that also takes into account the time value of money. The internal rate of return represents the true interest rate earned on and investment over the course of its economic life. This measure is sometimes renewed to as the discounted rate of return. The internal rate return is the interest rate K that when used to discount all cash flows resulting from an

investment, will equate the present value of the cash outlays, In other words, it is the discount rate that will cause the net present value of an investment to be zero.

Alternatively, the internal rate of return can be described as the maximum cost of capital that can be applied to finance a project without causing harm to the shareholders (Drury, 2000: 462-463).

The IRR is computing two method i.e. trial and error method of interpolation which formula is following under.

2.7.13 Analysis of Risk and Uncertainty under Capital Budgeting

Risk is only condition a decision maker may force uncertainty and risk describing the condition most financial manager face. Probability and statistics proved useful methods for describing such situations can be described as certainty. If more than one outcome is possible but the probabilities of these states of nature are unknown, decisions are made under conditions of uncertainty. Different decision rules are followed in each decision situation. Decision making under risk is different from decision making that considers the degree of risk or uncertainty. Capital budgeting analysis that incorporates consideration of risk may do so either traditional techniques or statistical techniques. They are described of follows.

1. Traditional Techniques

Under these techniques, Risk adjusted discount rate, certainty equivalent coefficient and sensitivity analysis are doing for analysis of risk.

a) Risk Adjusted Discount Rate

The Risk Adjusted Discount rate (RAD) approach is one of the simplest and most widely used methods for incorporating risk into the capital budgeting decision. Generally, under this method the risky ness of the project depends

upon the discount rate. If the discount rate is high, that project is considered as a highly risky project and if the discount rate is low that project is considered as a lower risky project.

A risk premium rate may be added to risk free discount rate to find out the present value of future return from risky investment proposal.

Decision Rule:

i. NPV should be positive by using the risk adjusted rates for acceptance of proposal
ii. IRR should be greater than the risk adjusted rate of return for acceptance of proposal.

b) Certainty Equivalent Co-efficient

The certainty equivalent approach is an alternative to the risk adjusted rate method to incorporate risk in evaluating investment projects. Under the risk adjusted discount rate method; the risk of the project is taken into consideration by adjusting expected cash flows and not the discount rate. These methods eliminate the problem arising out of the inclusion of risk premium in the discounting process (Khan and Jain, 1993:157).

Decision Rule

Higher the certainty equivalent co-efficient denotes lower the certainty equivalent co-efficient denotes higher risk. The NPV of risk less cash flows should be positive and IRR of risk less cash flows should be greater than risk free rate of return.

c) Sensitivity Analysis

Sensitivity analysis provides information as to how responsive the estimated project cash flows the discount rate and the project life are to estimation errors. An analysis on these lines is important as the future is always uncertain and

there will always be estimation errors. Sensitivity analysis takes care of estimation errors by using a numbers of possible outcomes in evaluating a project. The method adopted under sensitivity analysis is to evaluate a project using a number of estimated cash flows to provide to the decision maker an insight into variability of the outcomes. The sensitivity analysis provides different cash flow estimates under these assumptions.

The best (i.e. the most optimistic)
The normal (i.e. the most likely/moderate)
The worst (i.e. the most pessimistic)

The large in the difference between the pessimistic and optimistic cash flow is considered as riskier is projects depend upon the attitude of decision maker towards the risk.

2. Statistical Techniques

Under this technique, assignments of probabilities, standard deviation, co-efficient of variation and decision tree are doing for analysis of Risk.

a) Assignment of Probabilities

The concept of probability for incorporating risk in evaluating capital budgeting proposal. The Probability distribution of each flows overtime provides information about the expected value of return and the dispersion or the probability distribution of possible returns. On the basis of the information on accept-reject decision can be taken. The application of this theory is analyzing risk in capital budgeting depends upon the behavior of the cash flows, from the point of view of behavioral cash being (a) Independent of (b) dependent. The assumption that cash flows are independent over time signifies that future cash flows are not affected by the cash flows in the proceeding or following year.

Decision Rule:

i. NPV must be positive to accept the project.
ii. IRR must be greater than cost of capital to accept projects.

b) Standard Deviation

Standard deviation that measures of the tightness, or variability of a set of outcomes. Standard deviation is defined as square roots of the mean of the square deviation where is the difference between an outcomes and the expected value of all outcomes.

Greater the standard deviation is said the higher degree of risk and lower the standard deviation is said the lower degree of risk. The project, which has higher degree of standard deviation, is not generally accepted and vice-versa (Gyawali, Fago and Subedi, 2006:12.35-12.36).

c) Co- efficient of Variance

Co- efficient of variance (C.V.) standardized measure of the risk per unit of return, Calculated as the standard deviation divided by the expected return.

Higher the co-efficient of variation is considered as the higher degree of risk and lower the co-efficient of variation is considered as the lowest degree of risk (Weston, 1996:190)

d) Decision Tree

The decision tree (DT) approach is another useful alternative for evaluating risky investment proposals. The outstanding feature of this method is that it takes into account the impact of all probabilistic estimates of Potential outcomes. In other words, every possible outcome is weighted in probabilistic terms and then evaluated. The DT approach is especially useful for situations in which decisions at one point of time also affect the decisions of the firm at some later date. Another useful application of the DT approach is for projects

which require decisions to be made in sequential parts (Gyawali, Fago and Subedi, 2006: 12.84).

A decision tree is a pictorial representation in tree from which indicates the magnitude, probability and inter relationship of an possible outcomes. The format of the exercise of the investment decision has an appearance of a tree with branches and, therefore, this method is referred to is the decision-tree method. A decision tree shows the sequential cash flows and the NPV of the proposed project under different circumstances (Bajracharya, Ojha, Goet and Sharma, 2005: 828).

2.7.14 Standard Costing

Standard costing is a system before starting the production and then comparing this with the actual cost of the job after completing the production. The difference between the predetermined or standard costs and the actual costs is termed 'the variance.' Standard costing is the process of the preparation and use of standard cost, their comparison with actual costs and the analysis of variance to their causes and points of incidence. A standard cost is measure of acceptable performance, established by management as a guide to certain economic decisions (Bajracharya, Ojha, Goet and Sharma, 2005:545)

Standard cost is a predetermined cost, which is calculated from management's standards of efficient operations and the relevant necessary expenditure. It may be used as a basis of price fixing and for cost control through variable analysis. Standard is a predetermine set of objectives based on usual, normal ideal of technical parameters. A standard is always futuristic. 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 (CIMA).

2.7.15 Standard Costing Process

Standard costing is a management accounting tool for management control. Controlling is the process of comparing actual results with the planned objectives and determining where adjustment should be made. The management control process encompasses the following steps (Bajracharya, Ojha, Goet and Sharma, 2005: 495- 501).

Setting Standards

1. Actual performance measurement
2. Variance analysis
3. Computer variances for each reasons
4. Point out the reasons of variances
5. Corrective Action.

2.7.16 Variance Analysis

A variance is the difference between standard cost and actual cost. There are a number of causes which leads to a difference between the actual and standard costs. All the causes are weighted and the amount connected with each is as certained and described in a way to indicate the causes leading to the variance. For example the variance caused by a change in price of materials will be described as materials price variance. A variance which increases profit is called favorable and the variance which reduces profit is unfavorable or adverse. The variance may be broadly classified as under (Gyawali, Fago& Subedi, 2006: 6.2-6.3).

1. Direct Material Variances

Direct material variances are related with the variance in cost of actual material with cost of standard materials. This variance is created due to change into rate of materials or change into consumption units of materials. Material consumption unit variance is created due to change into the ratio of two or

more than two materials and change into output of final product. The material variance can be shown on the following figure.

2) Direct Labor Variances

Direct Labor variances are related with the variance in the cost of actual labor with cost of standard labor. This variance is creating due to change into rate of labor or change into consumption time of labor. Due to cost on time of labor the cost of labor also is high. Labor efficiency variance is concerned with the variance of labor mix and labor yield variance. Labor variance can be shown the following figure as below.

2.7.17 Budgeting Control and Standard Costing

Budgeting and standards both provides the basic for comparison with the actual results. So, both these management accounting technique can applied for performance reporting and maintaining the reward punishment system. There are some difference between Budgeting control and standard costing as follows:

1. Budgeting control deals with the operating of a department or the business or a whole in terms of revenue and expenditure. Standard costing is used in manufacturing or producing of product or in rendering a service.
2. Budgeting control seeks to keep in focus the total amount involved and total activity to be carried on. Standard costing provides control to be exercised in the cost of production.
3. Budgetary control is a projection of financial accounts while a standard costing is a projection of cost accounts.
4. Budgetary control is generally applicable to all business organization while standard costing can be usefully applied in manufacturing concerns.

5. Budgets prepared under budgeting control system are for specific periods and are based on totals of amount while in standard costing; the standard costs are worked out generally per unit of production.
6. Budgeting control is an effective tool in the control of all types of expenses while standard costing is a very effective tool for controlling elements of costs (like direct material, direct labour etc.)
7. Budgeting control is an effective tool to plant and exercise control over capital expenditure, finance, and cash forecast etc. Where standard costing can offer no help.

2.8 Management Accounting Control System

Management consists of the basic functions of planning, decision making and control. Control is the function of management that ensures the proper implementation of plans and policies to achieve the organizational objective. Management functions are just means to maximize profit in terms of current value. Management control system focus on motivating managers for the sake of enhancing total profitability of the organization. One of the different control mechanisms practiced is management accounting control system. A well - designed management control system aids and coordinates the process of making decision and motivated individual throughout the organization to act in accordance with the decision. It a also facilities forecasting revenue and cost-deriver levels, budgeting and measuring evaluating performance (Horngren, Sundern and Stratton, 2002:134).

Components of Management Control System are:

i. Planning Process
ii. The responsibility Accounting System

2.8.1 Responsibility Accounting

Responsibility - accounting system are designed to faster goal congruence among the managers in decentralized organizations. Each submits in a

organization. Each submit in a organization is designate as a cost center, revenue center, profit center, or investment center. The Managerial accountant prepares a performance report for each responsibility center. These reports show the performance of the responsibility center and its manager for a specified time period. To use Responsibility Accounting effectively, the emphasis must be on information rather than blame. The intent should be to provide managers with information rather than blame. The intent should be to provide managers with information to help them better manage their subunits.

Responsibility accounting system can bring about desired behavior, such as reducing the number of rush order in a manufacturing company. Segmented income statements often are included in a responsibilities accounting system, to show the performance of the organization and its various segments. To be most effective, such reports should distinguish between the performance of segments & segment mangers. Customer profitability analysis is an increasingly used tool, which helps managers to better understand which customers are providing the greatest profit (Hilton, 1997:601).

Responsibility accounting represents a method of measuring the performance of various divisions of an organization. It focuses on the value of decentralization, which is more essential in case of a large-scale organizations responsibility accounting system becomes more urgent. Major contribution of responsibility accounting in an organization are for decentralization, performance Evaluation motivation, transfer pricing, and drop or continue decision (Bajracharya, Ojha, Goet and Sharma, 2005: 480).

2.8.2 Process of Responsibility Accounting

Responsibility accounting encompasses the following steps: (Bajracharya, Ojha, Goet and Sharma, 2005: 461-463)

i. Identifying the responsibility center
ii. Delegation of authority and responsibility or decentralization

iii. Controllability of the object
iv. Establishing performance evaluation criteria.

2.9 Decision Making

Decision making is concerned with the future. It involves a choice between alternatives; it is one of the important but difficult tasks of management. It is the process of evaluating two or more alternatives leading to a final choice. Decision making is closely involved with planning for the future and is directed towards a specific objective or goal. In business, when evaluation alternative course of action, managers should select the alternative that provides the highest incremental benefit to the company. In some instance, all alternatives result in incremental losses, and the managers must choose the one that causes the smallest incremental loss. While making decisions in business, managers should be economically rational. Long-term profit maximization is the core of business decisions. Therefore, financial feasibility is the prime determinant in selecting the best alternative. The course of action, which maximizes profits by increasing revenues or minimizing costs, is considered as the most economic one. Opportunity costs, which are the benefit foregone in the next best alternative, must be counted in the alternative, must be counted in the alternative to be undertaken. And also other non-quantitative factors must be taken into account before the management takes the final action or decision.

2.9.1 Process of Decision Making

1. The following are the steps involved in the process of rational decision making.
2. Recognize and define the problems
3. Identify appropriate possible solutions to the problems
4. Evaluate selective alternatives
5. Select the best alternatives
6. Implement the selected alternative
7. Evaluation and follow up

2.9.2 Types of Decisions

1. Drop or Continue Decision

When a firm or company is divided into many departments, divisions, sections, branches and product lines to produce and sell various types of product, it is not necessary for earning profit by each product line, division, department, and branch. Incase of loss or low profit from one or more, management should taken decision whether to drop or continue product line in the future. While taking drop or continue product line decision, it is very important to consider various points i.e. alternative utilization of idle capacity like machine, labour, land etc.: continuity of constant cost/fixed cost, department or traceable fixed cost, opportunity cost, government rules and regulation regarding drooping product, union activity, Effect on other product lines, Responses of material suppliers and regular customer etc.

2. Special Order Decision

A special order is one that has been offered for a bulk volume at a reduced price. Opportunity consider an order for a quantity of its regular product at a special price, usually less than that charged to regular customer, frequently arises for a management. When there is idle capacity, such an offer may be attractive. The basis of decision Making should be the difference that it will make in the overall profit of the company, Essentially, if there is idle capacity, the special order is advantageous if the price amounts exceed out of pocket costs and the opportunity costs. The purposes of a short-run price reduction may be increasing market share, loss leaders and disposing of inventories.

3. Lease or Purchase Decision

A Business firm needs various types of assets and properties like plant and machinery, land and buildings, departmental stores, etc. for many years. The firms can obtain these assets and properties either by purchasing on cash or paying lease rent over years without buying them. Leasing is the arrangement used to obtain assets without buying from outright. Therefore, lease is the

agreement or document which transfer right of the owner (i.e. lesser) to the tenant (called lessee) in the exchange of the rent to be paid over the years to the lesser. The document includes the rights and duties of lesser and lessee relating to the use of the property. It transfers the procession of property. It transfers the procession of property to the tenant for specific property. When the lease period is over, lease period can be renewed, or procession of the property can be return back to the lesser. But a firm can purchase assets and properties on cash borrowing from outsource, issuing shares, debentures, or using equity of shareholders. In case of outright purchase, the purchaser obtains both ownership and possession from the seller in return from a certain sum paid (Gyawali, Fago and Subedi, 2006:8.79)

4. Quotation Process

A business firm needs various types of small assets for daily operations. The small assets are stationery items such as paper, pen, stamps, punjing machine, file, clip, whiteboard, plastics, pin, boxes etc. The firms can obtain these assets by quotation process. So, quotation process is also say for small financial activities.

5. Tender Process

A business firm needs various types of assets, properties like plant machinery, land, building, department stores etc. for many years and construction work can be doing. That time the firm can be doing that activity by tender process. So, Tender process is also say for great financial activities which is fixed by law.

2.10 Managerial Use of Financial Statement Analysis

Before discussing about financial analysis it is necessary to know about the financial statement and report which is issued by company annually, periodically to its stakeholders. This gives a complete account of financial health of the company. The financial statement and report generally consists following terms.

- The Income Statement

- The Statement of Retained Earnings
- The Balance Sheet
- The Statement of Cash Flows

The income statement contains two broad categories of items: Revenue and expenses. The “revenues” may be through of as the level of accomplishment attained by the company, while the “expenses” represent the effort expended to attain the level of accomplishment. More specifically, revenues represent the actual or expected inflow of assets, the settlement of liabilities, or both, from a company's primary business activity, while expenses represent the utilization or consumption of assets or incurring of liabilities or both, to produce the revenue inflow.

The statement of retained earning shows how the net incomes of the period were appropriated or distributed. The statement shows the change in retained earnings between the beginning and the end of a period. Retained earning is that portion of the firm's earning that has been saved rather than paid out as dividend. The objective of a balance sheet or statement of financial position is to provide, as of a specific point in time, information concerning the assets owned by the company and the equity interest (of both the creditors and owners) in those assets. The proper recognition, valuation, and classification of company assets and equities are intended to aid the users of financial statement in assessing the solvency, liquidity, and financial flexibility of the company. The fundamental relationship reported in a balance sheet is expressed by the classic accounting equation (Bajracharya, Ojha, Goet and Sharma, 2005: 1012).

Assets = Liabilities + Owner's Equity

2.11 Cash Flow Statement

Cash is the life blood of any business organization. Without cash no business activities can be taken place. In recent years, the statement of cash flow has

come to be viewed as a part of fall set of financial statement. Cash flow statement provides relevant information about the cash receipts and cash payment of an enterprise during a period. Information about enterprises cash flows is useful in assessing its liquidity, financial flexibility, profitability and risk. Cash flow information is widely used by investors, analysis, creditors, managers and others. It shows how the accrual accounting information is converted into cash-based information and arranges the information so that investors, analysis, creditors, managers and other can better understand the cash efforts of companies operating, investing and financing activities. The primary purposes of a statement of cash flow is to provide information about the cash receipts and cash payments of the company and how they related to the company's operating, investing and financing activities. The cash flow statement helps to assets the solvency of a business and to evaluate its ability to generate positive cash flows in future periods, pay dividends and finance growth. In Nepal, Nepal Company Act 2053 also made mandatory to present cash flows statement along with balance sheet and income statement. So, each and every company should prepare it as integral parts of its financial statement for each period for which financial statement are presented.

2.11.1 Objectives of Cash Flow Statement

Cash flow statement is an important tool which provides information to its users about the ability of the company to generate cash and its utilization. The main objectives of cash flow statement are listed at below.

1. To help the financial manager to explain the situation of cash
2. To make easy to prepare cash budget for the specific period for future reference.
3. To help know the causes of changes in the cash position on two dates.
4. To help to evaluate the financial position of an organization.
5. To help to know the cash position so that it can make plans and policies regarding decision making activities for short term and long term financing.

2.11.2 Preparation of Cash Flow Statement

A specific procedure should be followed while preparation of cash flow statement should report cash flows during the period classified by operating, investing and financing activities. So the first process is preparing the statement of cash flows is to calculate the cash flow from operating activities using either the direct or indirect method. The second process is to analyses the information for changes resulting from investing and financing activities. The third process is to arrange the information gathered in process first and second into proper format for the statement of cash flow.

Now, the detail process of cash flow statement is described as follows:

1. Determination of Cash Flows from Operating Activities (Direct Method)

The Direct method of cash flow converts its income statement from accrual basis to the cash basis. Operating activities involve producing and delivering goods and providing services. Cash how from operating activities includes receipt from customers for sales of goods and services (collection from debtors). Cash outflows from operating activities include payments to purchase of materials and for services, payment to employees for services and payment and to government for taxes and duties. Indirect Method: Indirect Method is that type of method which calculates the cash flow from operating activities by considering the non-cash items. The non-cash expenses are added on net profit and non-cash income is deducted on net profit and changes in working capital are also considered.

2. Determination of Cash Flows from Investing Activities

Investing activities involve making and collecting loans and acquiring and disposing of fixed assets. Cash inflows from investing activities are receipts from sale of shares, debenture or outflow under investing activities are purchase of share and debenture of other enterprises, purchase of fixed assets etc.

3. Determination of Cash Flows from Financing Activities

Financing activities involve obtaining resources from owner and providing them with a return of their investment, borrowing money and repaying amounts borrowed. It also includes incoming of cash by issue of share and debenture, issue of long term loan, payment of dividend, repayment of principal with interest etc.

2.12 Techniques of Financial Statements Analysis

Stakeholders of a business firm perform server types of analyses on a company's financial statement. All of there analysis rely on comparisons or relationships of data that enhance the utility or practical value of accounting information.

2.12.1 Common-Size Statements

The analysis of common size statements is also called vertical analysis. Common size statements express all items in the statement as a percentage of a selected item (the base) in the statement. Analyses also use vertical analysis of a single financial statement, such as an income 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. Financial statements that show only percentages and no absolute amounts are common-size statements. All percentage figures in a common-size balance sheet are percentages of total assets while all the items in a common-size income statement are percentage of net sales. The use of common-size statements facilities the vertical analysis of a company's financial statements (Bajracharya, Ojha, Goet and Sharma, 2005: 1014-1015).

2.12.2 Horizontal Trend Percent Analysis

Horizontal analysis is the analysis of financial statement over a series of years. Comparative financial statements present the same company's financial

statement for one or two successive periods in side-by-side columns. The calculation of changes in absolute amount or percentage change in the statement amount or percentage change in the statement items or total is horizontal analysis. This analysis detects changes in a company's performance and highlights the trends. Trend percentages are similar to horizontal analysis except in that comparisons are made to a selected base year or period. Trend percentages are useful for companying financial statements over several years because they disclose changes and trends occurring thought time (Bajracharya, Ojha, Goet and Sharma, 2005: 1016).

2.12.3 Ratio Analysis

An analysis of financial statement with the help of ratio may be termed as ratio analysis. It is a mathematical relationship between two related items express in quantitative form. When this definition of ratio is explained with reference to the items shows in financial statement, then it is called accounting ratio. So, the ratio is the measurement of quantitative relationship between two or more items of financial statements connected with each others. The quantitative relationship may be expressed in terms of proportion, in rate, in time, in percentage or coefficient. There are different types of ratios analysis which is listed under.

1. Liquidity Analysis

It measures the adequacy of a firm's cash resources to meet its near term cash obligations. Short-term lenders such as suppliers and creditors use liquidity analysis to assess the risk level and ability of a firm to meet its current obligations. Satisfying these obligations requires the use of the cash resources available as of the balance sheet date and the cash to be generated through the operating cycle of the firm. Under liquidity analysis, therefore calculate the current ratio and quick ratio.

2. Long Term Debt and Solvency Analysis

It examines the firm's capital structure in terms of the mix its financing sources and the ability of the firm to satisfy its long-term debt and investment obligations. This analysis contains the debt equity ratio and debt to total capital ratio.

3. Activity Analysis

To carryout one's operations, a firm needs to invest in both short-term (inventory and accounts receivable) and long-term (property, plan and equipment) assets. Activity analysis describes the relationship between the firm's level of operations (usually defined as sales) and the assets needed to sustain the activity. This analysis contains the investor turnover, daily sales outstanding, fixed assets turnover, total assets turnover and capital employed turnover ratios.

4. Profitability Analysis

Profitability is an indicator of efficiency of the business organization. Profitability ratio measures the management overall efficiency as show by the return generated from sales and investment. Higher the profitability ratio shows the efficiency of the management. Profitability in relation to sales as well as investment. So, profitability analysis consists some ratio i.e., Net Profit Margin, Gross Profit Margin, Operating Cash Flow Margin, Return on Assets (ROI) and Return on Common Stockholders Equity.

2.13 Review of the Previous Research

K.C. (2006), had conducted a research on the topic *"Management Accounting Tools in Public Enterprise"* an unpublished master level thesis submitted to Shanker Dev Campus Faculty of Management, T.U. He had focused his study to examine the practice of Management Accounting Tools in public enterprises. K.C.'s research was based on only primary sources of data. In his research, he had pointed out various objectives & findings.

Some remarkable objectives were as follows:

- To study and examine the present practice of management accounting tools in public enterprises in Nepal.
- To identify the areas where management accounting tools can be applied to Strengthen the public enterprises.
- To identify difficulties in applying management accounting tools in Nepalese public enterprises.
- To make recommendations to overcome the difficulties in applying management accounting tools in Nepalese public enterprises.

Some major findings were as follow:

- Different types of management accounting tools, which are tough in the colleges, are not found applied by public enterprises.
- Management Accounting is help to mangers to formulate organizational strategies as well as policy. PE's as practicing Management Accounting tools such as Capital Budgeting, Annual Budgeting, Cash Flows and Ratio Analysis. And not practicing Management Accounting Tools such as Zero Base Budgeting, Activity Based Budgeting, Activity Based Costing, Target Costing and Value engineering.
- In PE's hiring outside experts for carrying out different activities are almost nil because of high cost.
- PE's are with the concept that Management Accounting is similar to financial Accounting tools.

Karki (2006), had conducted a research study of *"Management accounting practice in Joint Venture Banks of Nepal"* an unpublished master level thesis submitted to Shanker Dev Campus Faculty of Management, T.U. He had focused his study to examine the practice of Management Accounting tools in Joint Venture Banks of Nepal. Karki's research study was based on only primary sources of data collection. In his research, he had pointed out various objectives & Findings.

Some remarkable objectives were as follows:

- To study and analyses the present practice of management accounting tools in the Joint Venture Banks of Nepal.
- To identify the areas where management accounting tools can be applied to strengthen the banks in commercial activities.
- To make recommendations to overcome the difficulties in applying management accounting tools in Joint Venture Banks.

Some major findings were as follow.

- Different types of Management Accounting tools, which are tough in the colleagues are not found applied by the Joint Venture Banks.
- Management accounting help to managers to formulate organizational strategies as well policy for decision making.
- In NJVBs, practice of hiring outside expert almost nil. Thus it can be concluded that NJVB's are in infant stage in practicing of Management Accounting tools. Now, here in the bank cannot find Management Accounting experts.
- In NJVBs practicing the Management Accounting tools such as Capital Budgeting, Annual Budget, Ratio Analysis and Cash Flow. And not practicing Management Accounting tools such as Zero Base Budgeting, Activity Based Costing, Target Costing value engineering.
- They are with concept that TIA is similar to financial accounting.
- Lack of information and cognizance about Management Accounting tools are the main factors causing problem in the application of such tools.

Acharya (2006), had conducted research study on topic *"Management Accounting Practice in Nepalese Public Enterprises"* an unpublished master level thesis submitted to Shanker Dev Campus Faculty of Management, T.U. He had focused his study to examine the practices of Management Accounting tools in NPE's. Acharya's research study was based on only primary sources of data collection.

In his research, he had pointed out various objectives & findings. Some remarkable objectives were as follows:

- To study and examine the extent of practice of Management Accounting tools and techniques made in Nepalese PEs.
- To identify the business sector, where Management Accounting tools can be applied to strengthen the PEs.
- To identify the major difficulties for applying the Management Accounting tools in Nepalese companies.
- To make recommendation to overcome the difficulties in applying Management Accounting tools and techniques in Nepalese PEs and other business companies.

Some major findings were as follow:

- Different types of Management Accounting tools, while are tough in the colleges are not found applied by the NPE's. So, it shows gap between the theory and practice. Managerial Accounting is a new discipline and still in developing stage in the context of modern business organization.
- In NPE's not practicing Management Accounting tools such as Standard Costing, Cost Segregation and allocation activity based costing. The use of overall Master Budgets was very low. Activity Based Budgeting and Zero Base Budgeting were not proper practicing to prepare the budget. The pricing Strategy was completely based on cost of production and government's decision.
- The traditional inventory valuation technique FIFO was widely practiced.
- NPE's overall performances are fully measure by profit & loss account.
- In NPE's past trend was most used technique to forecast the future cost and revenue.
- Government's policy was affecting to more than half of NPE's for making the account related decisions.

- Role of Management Accounting tools and technique were found negligible for making Management Accounting related decision.

Shrestha (2008), had conducted a research on the topic *"Management Accounting Practices in the Public Trade Companies of Nepal"* an unpublished master level thesis submitted to Shanker Dev Campus Faculty of Management, T.U. He had focused his study to examine the practice of Management Accounting tools in Public Trade Companies in Nepal. Shrestha's research was based on only primary sources of data. In this thesis he had pointed out various objectives and findings. Some remarkable objectives were as follows:

- To find out the Management Accounting tools and techniques in PTCs in Nepal.
- To identify the process of planning, controlling and decision making process of PTCs in Nepal.
- To identify the management policy towards the Management Accounting tools and techniques.
- To identify the major difficulties in using Management Accounting tools and techniques in PTC's in Nepal.
- To make suggestions to overcome the difficulties in practicing Management Accounting tools and techniques in PTCs in Nepal.

Some major findings were as follows:

- Management Accounting is help to managers to formulate organizational strategies as well as policy. PE's as practicing Management Accounting tools such as Capital Budgeting, Annual Budgeting, Cash Flows and Ratio Analysis.
- Management Accounting is help to managers to formulate organizational strategies as well policy for decision making.
- Lack of information and cognizance about Management Accounting tools are the main factors causing problem in the application of such tools.

- Nepalese Public Trade Companies were prepared budget by committee, planning department and chief of finance division mostly. It is also recommended to take outside experts service for budget prepared.
- Nepalese Public Trade Companies should practice not only full cost pricing and transfer costing pricing but also activity base cost pricing and variable cost pricing.
- Nepalese Public Trade Companies should use not only profit and loss account but also use/practice Standard Costing, Budgetary Control, Ratio Analysis, Cash Flow Analysis and Activity Based Costing for evaluation of overall performance of companies at the end of the accounting year.

Dallakoti (2008) had conducted a research on the topic *"A Study on Management Accounting Practices in Civil Aviation Authority of Nepal"* an unpublished master level thesis submitted to Shanker Dev Campus Faculty of Management, T.U. He had focused his study to examine the Management Accounting tools practiced in CAAN. Dallakoti's research was based on primary and secondary data collection. In his research, he had pointed out various objectives and findings.

Some of remarkable objectives were as follows:

- To study and examine the Management Accounting tools practiced in CAAN.
- To identify the difficulties in applying Management Accounting tools in CAAN.
- To identify the Management Accounting tools not in use.
- To recommend the areas where Management Accounting tools can be applied to strengthen the organization.
- To make recommendation to over come the difficulties in applying Management Accounting tools in CAAN.

Some major findings were as follows:

- CAAN was facing challenges in collection of the overdue/outstanding revenues from airlines and other clients. A substantial proportion of due was with Nepal Airlines Corporation, NECON air and COSMIC air etc.
- It is the ground reality that the transportation service through out the nation is quite difficult due to its geographical structure. So that in most part of the country the only assess of transportation is possible through air services. The construction of aerodromes and its regular operation is very much expensive than others. Even in huge loss, CAAN was operating large numbers of airports for its public responsibilities as a service provider but due to that government was not providing any subsidies to CAAN.
- In some cases, the aerodromes were constructed, on the interest of political leaders and parties even the future perspective is very poor. Such airports were made on grants or loan from different sectors and transferred all the responsibilities to CAAN.
- Civil Aviation Academy was functioning as a sole institution to train manpower required for CAAN in various disciplines like air traffic services, rescue and fire fighting services, radio maintenance, aviation safety, computer etc.
- There was no such faculty on the academy to provide trainings concentrating managerial and accounting disciplines. For these trainings, huge amount was paying to outside training centers.

Thebe (2009), had conducted a research on the topic *"The Balance Scorecard: Measuring Total Business unit Performance (A Comparative Study of Commercial Banks)"* an unpublished master level thesis submitted to Shanker Dev Campus Faculty of Management, T.U. The main objective of her study is comparison of Nepal Investment Bank Limited and Kumari Bank Limited by using balance scorecard a tool of strategic management accounting.

The specific objectives of this study are as follows:

- To assess the total business performance of each company from financial, customer, internal business process and learning and growth perspectives.
- To compare the two companies on the basis of above four perspectives and identify the one company stronger than others on various factors.
- To determine the relationship between financial indicators with non financial indicators.

Some major findings were as follow:

- With the help of rank correlation, it h as found that the weight given by both banks on financial, customer, internal business process and learning and growth perspectives are highly associated.
- After the test of cause effect model, out nine objects, five objects developed by KBL have zero correlation while only one object with NIBL has zero correlation.
- Among four perspectives three perspectives favour NIBL. It shows the better performance of NIBL through BSC approach.

Shrestha (2009), had conducted a research on the topic *"Management Accounting Practices in The Public Financial Sector in Nepal"* an unpublished master level thesis submitted to Shanker Dev Campus Faculty of Management, T.U. The main objective of her study the state of practices of Management Accounting Tools in financial sectors in Nepal. Shrestha's research was based on only primary collection. In his research, he had pointed out various objectives and findings.

Some of remarkable objectives were as follows:

- To evaluate the process of planning controlling and decision making process of Public Financial Sector in Nepal.
- To identify the major difficulties for practicing the Management Accounting tools in Public financial Sectors Nepal.

- To make suggestion and recommendation to overcome the difficulties in Public Financial Sector in Nepal.

Some major findings were as follow:

- The types of budget practiced in PES's of Nepal were operational budget, Cash Budget, Master Budget and Program Budget. Almost PFS's of Nepal practiced operational budget while some prepared master budget. Cash budget and Program Budget were Practiced too and most of PES's of Nepal practiced operational budget only for carryout operational activities.
- Reasons for not practicing Management Accounting Tools were lack of expertise, high cost/quite expensive, no information about the tools and governmental policy.
- The past budget estimate of historical expenses were the basis used for preparation of budget. Zero base budgeting was not practiced because of government policy and unwilling of the management

2.14 Research Gap

There is gap between the present research and previous research. Previous research works was conducted on management accounting practice in joint venture commercial banks, public financial sector, public limited companies and commercial banks by just taking few samples out of total population. But this research work has been done by taking all 26 commercial banks which are listed in Nepal stock exchange Ltd. By July 3, 2010, with all population samples, research work could get actual results. This research examines the present practice of management accounting tools in commercial banks of Nepal and disclose the reason about the management accounting tools which were not practiced for planning, controlling and decision making process.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Research Design

As per the nature of the study, survey research design has been followed with descriptive and analytical approach.

3.2 Sources of Data

The data were collected from the primary sources. Primary data were collected through questionnaire, interview and group discussion.

3.3 Population and Samples

Nepalese Commercial banks were considered as the total population, Covering Twenty six commercial banks.

3.4 Data Processing Procedure

This section consisted presentation, interpretation of available data and test of hypothesis. The data collected from questionnaire were in the form of raw. They were converted into table form according to questionnaire's objective. Simple arithmetical percentage tools were used for analysis and interpretation of data.

3.5 Statistical Tools Used

Statistical tool like chi-square (2) was use for the test of hypothesis for major findings.

This study tests the following hypothesis:

Hypothesis 1:

Null Hypothesis Ho: There is no significant relationship between the use of pay back period and net present value (Use of pay back period and net present value are independent).

Alternative Hypothesis H1: There is significant relationship between the use of pay back period and net present value (Use of Pay back period and net present value are dependent).

Hypothesis 2:

Null Hypothesis Ho: There is no significant relationship between the use of cost volume profit analysis and cash flow analysis (Use of cost volume profit analysis and cash flow analysis are independent).

Alternative Hypothesis H1: There is significant relationship between the use of cost volume profit analysis and cash flow analysis (Use of cost volume profit analysis and cash flow analysis are dependent).

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This is a survey type research. The main objective of this research was to study and examine the present practice of management accounting tools and techniques in Commercial Banks of Nepal. The Sub-objective were to identify the management accounting tools and techniques can be applied in Commercial Banks of Nepal and identify the major difficulties in application of management accounting tools in CB'S of Nepal. So, to achieve these objectives of the research, this chapter included the presentation, analysis and interpretation of data. To meet these objectives, all the CB'S of Nepal (i.e. twenty six commercial banks) were taken as target population. Fifteen tick marks and open end questions as well as discussion were included in the questionnaire to find out correct reliable data and information.

The raw data were properly processed, tabulated and analyses because primary data collected as well as survey were done. The data were tabulated into 15 tables. The major findings of the research were based on the analyses and interpretation of data which were included at the end of this chapter.

4.2 Percentage Analysis of Management Accounting Tools Practiced in Commercial Banks of Nepal

Table 4.1

Scenario of Management Accounting Tools Practiced in Selected Commercial Banks Commercial Banks of Nepal

S.N.	Management Accounting Tools	Number of Respondents	Number of practitioners	Percentage %
1	Cost Segregation into Fixed and Variable	26	6	23
2	Cost-Volume-Profit Analysis	26	14	53
3	Responsibility Accounting	26	10	38
4	Capital Budgeting	26	22	85
5	Ratio Analysis	26	26	100
6	Cash Flow Analysis	26	26	100
7	Zero Base Budgeting	26	8	31
8	Flexible Budgeting	26	8	31
9	Activity Based Budgeting	26	4	15
10	Master Budgeting	26	18	69

Source: Field Survey

The above table 4.1 shows the practice of Management Accounting tools in commercial banks of Nepal. The Management Accounting tools practiced were Cost Segregation into Fixed and Variable, Cost-Volume-Profit Analysis, Responsibility Accounting, Capital budgeting, Ratio analysis, Cash Flow Statement, Zero Based Budgeting, Flexible Budgeting, Activity Based Budgeting and Master Budgeting.

Management Accounting tools are needed to be applied to provide information for planning, controlling, and decision making process. All CB'S of Nepal used Ratio Analysis and Cash Flow Analysis. Like that Cost Segregation into fixed and variable, Cost-Volume-Profit Analysis, Responsibility Accounting, and Capital Budgeting were practiced by 23%, 53%, 38%, and 85% respectively. Like that 31% of banks were practicing Zero Based Budgeting and Flexible Budgeting. Similarly Activity Based Budgeting and Master Budgeting were used by 15% and 69% Commercial Banks of Nepal.

Therefore it was found that Ratio Analysis and Cash flow statement were practiced by almost all the sample banks. Cost-Volume-Profit analysis, Capital Budgeting and Master Budgeting Techniques were used by more than 50% Banks and remaining tools were used by less than 50% sample banks.

Table 4.2

Number of Nepalese Commercial Banks Practicing One or More Management Accounting Tools

No. of Management Accounting Tools (X)	Practitioner Commercial Banks		FX
	Number(F)	%	
1	0	-	-
2	0	-	-
3	4	15.38	12
4	10	38.46	40
5	4	15.38	20
6	8	30.77	48
7	0	-	-
8	0	-	-
9	0	-	-
	N=26		FX=120

Source: Field Survey

The average number of MA tools used in each commercial bank ($\bar{X}$) =120/26=4.6 i.e. 5.

The above table 4.2 represents the number of Nepalese commercial banks practicing 3 or more management accounting tools. It revealed that in average 5 Management Accounting tools were used in commercial bank. It is also showed that about 54% commercial banks used less than average number of Management Accounting tools. The reasons given for not practicing of some Management Accounting tools were that these tools are practiced only in manufacturing business houses other than service industry.

Table 4.3

Reasons for Not Practicing Management Accounting Tools in CB'S of Nepal

S. N.	Tools	No. of Respondents	No. of Practitioner	Percentage
1	Lack of Expertise	26	-	-
2	High cost	26	-	-
3	No information about the tools	26	-	-
4	Others	26	26	100

Source: Field Survey

The above table 4.3 shows reasons for not practicing Management Accounting Tools in CB of Nepal. All CB's mentioned that some MA tools could not be used in bank since they are applicable only in manufacturing concern and not applicable in service sector.

Table 4.4

Budget Preparation System in CB'S of Nepal

S.N.	Budget Prepared By	No of Respondents	No of Practitioner	Percentage %
1	Finance Department	26	20	77
2	Planning Department	26	8	30.77
3	Budget Committee	26	10	38.46
4	Outside Experts	26	-	-
5	Others	26	-	-

Source: Field Survey

The above table 4.4 shows that budget preparation system practiced in CB'S of Nepal. It is clear that 77% banks practiced budget preparation by finance department. Only 38.46% CB'S of Nepal prepared budget by budget committee and 30.77% commercial banks' planning department also involve in preparation of budget. None of CB'S of Nepal practiced preparation of budget by outside experts and others. Finance department and budget committee were mostly used in the preparation of budget.

Table 4.5

Types of Budget Practice in Commercial Banks of Nepal

S.N.	Types of Budget	No. of Respondents	No. of Practitioner	Percentage %
1	Cash Budget	26	11	42.31%
2	Operational Budget	26	23	88.46%
3	Master Budget	26	18	69.23%
4	Others	26	-	-

Source: Field Survey

The above table 4.5 shows the types of budget prepared in CB'S of Nepal. It is clear that cash budget practiced by 42.31%, operational budget practiced by 88.46% and master budget used by 69.23% commercial banks. Therefore, from above table it is clear that operational budget and master budget were mostly practiced by commercial banks of Nepal.

Table 4.6

Number of Commercial Banks using One or More Types of Budget

Types of Budget Preparing method (X)	Commercial banks		FX
	No. (f)	%	
1	9	34.60	9
2	6	23.07	12
3	11	42.31	33
	N=26		fx X 52

Source: Field Survey

Average Number of Budget Preparation Techniques for Commercial Bank $(\bar{X}) X \frac{52}{26} X 2$

The table 4.6 reveals that in average 2 techniques were applied in each commercial bank. It also shows that 34.6% commercial banks using only one budgetary system. 23.07% banks practiced 2 types of budgetary system and 42.3% commercial banks using exactly 3 types of budgetary system.

Table 4.7

Time Period Covered by Budget in Nepalese Commercial Banks

S.N.	Budget Period	No. of Respondent	No. of Practitioner	Percentage
1	Short term budget(1 year or less)	26	26	100
2	Medium term budget(3 years)	26	8	31
3	Long term budget(5 years or more)	26	-	-
4	Others	26	-	-

The above table 4.7 shows the type of budget practiced in CB'S of Nepal. It is obvious that 100% banks practiced short term budget (i.e. 1 year or less). 31% of CB'S of Nepal also practiced medium term budget (3 years). None of CB'S Nepal practiced long-term budget (5year or more).

Table 4.8

Base for Budget Preparation in CB'S of Nepal

S.N.	Base Tools	No. of Respondents	No. of Practitioner	%
1	Past budget estimates	26	8	31
2	Based on past actual expenses/ historical expenses	26	24	92
3	Zero base budgeting	26	10	38
4	Activity based budgeting	26	4	15
5	Others	26	-	-

The above table 4.8 shows the base for budget preparation in CB's of Nepal. In total 31% banks practiced past budget estimates. 92% bank used past actual expense. Zero base budgeting and actual based budgeting were used by 38% and 15% CB's of Nepal. Above table revealed that past actual expenses were base for budget preparation.

Table 4.9

Capital Budgeting or Long-Term Investment Decision Practiced in CB's of Nepal

S.N.	Tools	No. of Respondent	No. of Practitioner	%
1	Payback period	26	6	23
2	Average Rate of Return	26	10	38
3	Net present value	26	8	31
4	Internal rate of return	26	10	38
5	Profitability Index	26	8	31
6	Modified internal rate of return	26	-	-
7	others	26	-	-

Source: Field Survey

The above table 4.9 shows the capital or long term investment decision in CB's of Nepal. The table revealed that 23% banks used payback period. Average rate of return were used by 38% banks. While 31% banks practiced net present value (NPV) and profitability index tools. None of CB's of Nepal practiced modified internal rate of return.

Therefore, from the above table it was clear that payback period, average rate of return, net present value, internal rate of return and profitability index mostly practiced tools of capital budgeting.

Table 4.10

Basis for Alternative Decision Practiced in CB's of Nepal

S.N.	Base	No. of Respondent	No. of practitioner	%
1	Quotation process	26	26	100
2	Special order decision	26	10	38
3	Tender process	26	8	31
4	Lease or Purchase decision	26	4	15
5	Others	26	-	0

Source: Field Survey

The above table 4.10 shows the alternative decision making practiced in CB's of Nepal. It is clear that 100% CB's of Nepal practiced quotation process, special order decision was practiced by 38%, and tender process and lease or purchase decision was used by 31% and 15% CB's of Nepal.

From above table it is clear that quotation process was used by all CB's of Nepal and special order decision, tender process and lease or purchase decision were practiced by less than 50% banks.

Table 4.11

Practice of Pricing Service in CB's of Nepal

S.N.	Pricing Technique	No. of Respondent	No. of Practitioner	%
1	Full cost pricing	26	14	54
2	Variable cost base pricing	26	-	-
3	Target return on investment	26	12	46
4	Activity Based cost pricing	26	-	-
5	others	26	-	-

Source: Field Survey

The above table 4.11 shows the service pricing technique practiced in CB's of Nepal. It is clear that 54% CB's of Nepal practiced full cost pricing and 46% CB's practiced target return on investment pricing method. None bank practiced variable cost based and activity based cost pricing method. Therefore, full cost pricing and target return on investment pricing methods were practiced by majority of the CB's of Nepal.

Table 4.12

Method of Segregation Mixed Cost into Fixed and Variable in CB's of Nepal

S.N.	Tools	No. of Respondent	No. of Practitioner	%
1	High-Low point method	26	-	-
2	Regression method	26	-	-
3	Average method	26	14	54
4	Analysis method	26	-	-
5	Others	26	-	-

The above table 4.12 shows the method of segregating mixed cost into fixed and variable in CB's of Nepal. Out of sampled banks, only 54% practiced average method and remaining 46% sampled banks did not practice any segregation method.

Table 4.13

Cost and Revenue Estimation Practice in CB's of Nepal

S.N.	Cost and Revenue estimation technique	No. of Respondent	No. of practitioner	%
1	Past Trend analysis	26	24	92
2	Zero Base budgeting	26	-	-
3	Market Survey	26	4	15
4	Judgmental Analysis	26	10	38
5	Others	26	-	-

Source: Field Survey

The above table 4.13 shows the practice of cost and revenue estimation in CB's of Nepal. From above table, it was revealed that 92% CB's of Nepal practiced past trend analysis. 15% banks used market survey method. Judgmental analysis was practiced by 38.46%.Zero base budgeting was not practiced by any commercial banks. Therefore, past trend analysis and market survey were the major tools to estimate revenue and cost of CB's of Nepal.

Table 4.14

Risk Adjustment Practice Used While Evaluating Capital Investment in CB's of Nepal

S.N.	Tools	No. of Respondent	No. of Practitioner	%
1	Sensitivity analysis	26	6	23.07
2	Required rate of return	26	10	38.46
3	Short payback period	26	2	7.69
4	Higher IRR	26	8	30.76
5	Estimated for cash flow	26	14	53.84
6	others	26	-	-

Source: Field Survey

The above table 4.14 shows risk adjustment practice used while evaluating capital investment in CB's in Nepal. It shows that 23.07% of commercial banks used sensitivity analysis while 38.46% of them used required rate of return technique. Similarly, 30.76% and 53.84% of them also used higher IRR and estimated for cash flow technique respectively. 7.69% also used short payback period.

Table 4.15

Tools used for Evaluation of Overall Performance at the end of the Accounting year in CB's of Nepal

S.N.	Tools	No. of Respondent	No. of practitioner	%
1	P/L made by company	26	23	88.46
2	Budgetary control	26	13	50
3	Standard costing	26	-	-
4	Ratio Analysis	26	18	69
5	Cash flow analysis	26	15	57.69
6	Others	26	-	-

Source: Field Survey

The above table 4.15 shows that the tools used for evaluation of overall performance at the end of accounting year in CB's of Nepal. It is clear that 88.46% banks practiced profit and loss accounting tools. 69% banks practiced ratio analysis while cash flow analysis was used by 57.69%. But standard costing was not practiced by any banks and budgetary control practiced exactly by 50% commercial banks. Therefore, profit and loss criteria and ratio analysis were mostly practiced and used in CB's of Nepal than other tools.

Table 4.16

The main factor that affect the Decision Making Process in CB's of Nepal

S.N.	Main Factors	No. of Respondent	No. of Practitioner	%
1	Management accounting technique	26	8	31
2	Government policy	26	26	100
3	Objective of the bank	26	16	62
4	Discretion of management	26	10	38
5	others	26	-	-

Source: Field Survey

The above table 4.16 shows the main factors that affect the decision making process in CB's of Nepal. The table shows that 100% banks' decisions were affected by government policy. Management accounting tools and discretion of management affect 38% CB's of Nepal respectively. 62% banks decision were affected by objective of bank. Therefore, decision was mostly affected by government policy.

4.5 Hypothesis Test

Hypothesis -1

Null Hypothesis Ho: There is no significant relationship between the use of payback period and net present value (Use of payback period and net present value are independent).

Alternative Hypothesis, H 1: There is significant relationship between the use of payback period and net present value (Use of payback period and Net present value are dependent).

Solution:

2×2 contingency Table

Practicing Capital budgeting tools

Capital budgeting tools	Yes	No	Row Total
Payback period	6 - a	20 - b	26(a+b) r_1
Net present value	8 - c	18 - d	26(c+d) r_2
Column total	14(a+c) c_1	38(b+d) c_2	N=52

Calculation of 2

O	$E\ X \frac{RT \mid CT}{N}$	(O-E)	$(O\text{-}E)^2$	$\frac{(O\ ZE)^2}{E}$
6	$\frac{26 \mid 14}{52} X7$	-1	1	0.143
20	$\frac{26 \mid 38}{52} X19$	1	1	0.053
8	$\frac{26 \mid 14}{52} X19$	1	1	0.143
18	$\frac{26 \mid 38}{52} X19$	-1	1	0.053
				$\frac{(O\ ZE)^2}{E} X0.391$

Test statistics under H_0 is

$$\Re^2\ X\ \frac{(O\ ZE)^2}{E} X0.391$$

Where,

$\Re^2$ = Chi-square test

O = Observed Frequency

E = Expected Frequency

The Calculated value of $\Re^2$ = 0391

Level of Significance ((ℑ) X5%)

Where,

d.f = degree of foredoom

Tabulated value of $\Re^2$ at 5% level of significance for 1 d.f. is 3.841

Result

Since the calculated value of $\Re^2$ = 0.391 is less then tabulated value of $\Re^2$ at 5% level of Significance for 1 d.f. is 3.841. The null Hypotheses H_0 is accepted

and hence the alternative hypothesis H_1 is rejected it means that use of payback period and net present value are independent.

Hypothesis: 2

Null hypothesis H_0: There is no significant relationship between the use of cost volume profit analysis and cash flow analysis (use of cost volume profit analysis and cash flow analysis are independent).

Alternative hypothesis H_1: There is significant relationship between the use of cost volume profit analysis and cash flow analysis (use of cost volume profit analysis and cash flow analysis are dependent)

Solution:

2x2 Contingency Table

Practicing MA Tools

MA Tools	Yes	No	Row Total
Cost volume profit analysis	14 a	12 b	26 (a+b)
Cash flow analysis	26 c	0 d	26 (c+d)
Column Total	40 (a+c)	12 (b+c)	52 N

Since a cell frequency is less then 5, we should apply Yates correction for calculating $\Re^2$ for the add 0.5 to cell frequency which is less then 5 and adjust the remaining frequency by fixing row total and Column total. Thus, adjusted 2x2 contingency table is presented in the following table.

MA Tools	Yes	No	Row Total
Cost volume profit analysis	14.5 a	11.5 b	26 (a+b)
Cash flow analysis	25.5 c	0.5 d	26 (c+d)
Column Total	40 (a+c)	12 (b+c)	52 N

Calculation of $\Re^2$

O	**E X $\frac{RT \mid CT}{N}$**	**(O-E)**	**$(O\text{-}E)^2$**	**$\frac{(O\,ZE)^2}{E}$**
14.5	$\frac{26 \mid 40}{52}$ X20	-5.5	30.25	1.513
11.5	$\frac{26 \mid 12}{52}$ X6	5.5	30.25	5.041
25.5	$\frac{26 \mid 14}{52}$ X19	5.5	30.25	1.513
0.5	$\frac{26 \mid 38}{52}$ X19	-5.5	30.25	5.041
				$\frac{(O\,ZE)^2}{E}$ X13.107

Test statistics under H_0 is

$$\Re^2 \text{ X } \frac{(O\,ZE)^2}{E} \text{X13.107}$$

Where,

$\Re^2$ = Chi-square test

O = Observed Frequency

E = Expected Frequency

d.f.= (r-1) (c-1) = (2-1) (2-1) =1

The Calculated value of $\Re^2$ = 13.107

Level of Significance ((ℑ) X5%)

Where,

d.f = degree of foredoom

Tabulated value of $\Re^2$ at 5% level of significance for 1 d.f. is 3.841

Result

Since the calculated value of $\Re^2$ = 13.107 is higher than tabulated value of $\Re^2$ at 5% level of Significance for 1 d.f. is 3.841. The null Hypotheses H_0 is

rejected and hence the alternative hypothesis H_1 is accepted it means that use of cost volume profit analysis and cash flow analysis are dependent.

4.4 Major Findings

On the basis of the above comprehensive analysis of data and information, the following findings are identified:-

1. While analyzing the application of management accounting tools practiced in Nepalese commercial banks for planning, controlling and decision making, it was found that ratio analysis, cash flow analysis and capital budgeting were widely practiced representing 100%, 100% and 85% respectively. Similarly, cost-volume-profit analysis, responsibility accounting and cost segregation into fixed and variable tools were practiced representing 53%, 38% and 23% respectively. Zero base budgeting and flexible budgeting were practiced by 31% each and Activity Based Budgeting and Master Budgeting were used by 15% and 69% of the sampled Commercial Banks.
2. In average five management accounting tools were practiced in Nepalese commercial banks. Out of total sample number of commercial banks, 31% commercial banks did not meet the average number of tools used, while 69% commercial banks practiced more than average number of management accounting tools.
3. The reasons for not practicing Management Accounting tools, as pointed by the sampled Commercial Banks that some Management Accounting tools are not applicable in service industry.
4. In the case of budget preparation system in CB'S of Nepal, it was found that 77% commercial banks' budget was prepared by finance department and budget committee prepared budget of 23% commercial banks'. But outside experts and planning department were not taking for budget preparation.
5. Types of budget practiced in CB's of Nepal were cash budget, operational budget and master budget. Almost 69% CB's of Nepal practiced

operational budget while 62% practiced master budget and cash budget was practiced by 23% CB'S of Nepal.

6. Regarding types of budget practice in CB's of Nepal, it was found that 100% CB's of Nepal prepare short term budget. It was also found that medium term budget was prepared just by 31% and long term budget was not practiced by any bank.
7. The cost and revenue estimation was used by 92% of CB's of Nepal on the basis of past trend analysis. 31% and 38% banks also used judgmental analysis and zero base budgeting.
8. With regard to capital budgeting techniques practiced by Nepalese commercial banks, it was revealed that nearly 38% of commercial banks are using average rate of return method and internal rate of return method respectively. Similarly, 23% of them using payback period also. Net present value and profitability index are applied by 31% respectively. Similarly, 34.62% commercial banks did not use any technique of capital budgeting.
9. For decision making, quotation process used by all commercial banks of Nepal. Similarly, special order decision, tender process and lease or purchase decision were also applied by 38%, 31% and 15% commercial banks respectively.
10. For the process of pricing service, 54% CB'S of Nepal used full cost pricing and 46% CB'S of Nepal used target return on investment method. Variable cost base pricing and ABC costing method was not used by any commercial banks.
11. To segregate mixed cost into fixed and variable, just 54% CB'S of Nepal used average method and remaining 46% did not use any method of segregating mixed cost into fixed and variable.
12. While analyzing cost and revenue estimation techniques practiced by commercial banks, it was found that past trend analysis technique was widely used representing nearly 92% CB'S of Nepal. Similarly, 15% and 38.46% of them practice market survey and judgmental analysis to

estimate their cost and revenue but zero base budgeting was not used by any CB'S.

13. To adjust risk while evaluating capital investment 53.84% of them use estimated for cash flow technique. Sensitivity analysis, required rate of return and higher IRR were practiced by 23.07%, 3 8.46% and 30.76% respectively. Similarly, short payback period was used by just 7.69% CB'S of Nepal.
14. To measure and control the overall performance of the banks at the end of accounting year, 88.46% CB'S used profit or loss made by the banks. Budgetary control, ratio analysis and cash flow analysis were practiced by 50%, 69% and 57.69% CB'S of Nepal. It can be seen in table that standard costing was not used by any commercial bank of Nepal to evaluate overall performance.
15. While analyzing the factors affecting decision making procedures of the commercial banks of Nepal, it was found that government policy affect decision of 100% CB'S of Nepal. Similarly, management accounting technique, objectives of bank and discretion of management also affect the decision of 31%, 62% and 38% CB'S of Nepal.
16. The nature of the business of banks was taken as major difficult for the application of managerial accounting tools & technique by almost all CB'S of Nepal.
17. The hypothesis test 1 revealed that CB'S of Nepal were independent in use of payback period and net present value. It means that there is no significance relationship between the use of payback period and net present value. The hypothesis 2 found that CB'S of Nepal were dependent in use of cost-volume-profit analysis and cash flow analysis. It means that there is significance relationship between the use of cost-volume-profit analysis and cash flow analysis.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Management is always concerned with planning, organizing, directing and controlling for goal achievement by using limited resources in dynamic environment. Dynamic environment creates uncertain and risk which have opportunity as well as threats for organization. Accounting is the process recording, classifying, analyzing identifying and interpretation of business transaction in financial or monetary term. The main purpose of accounting is to ascertain the result and financial position of business activities of particular period. Thus, Management Accounting is the study of managerial aspects of accounting. The accounting system which assists management in carrying out its function more effectively may be term as management accounting.

In Nepal, new commercial banks are emerging which are also performing well except few banks. For mobilizing resources, banks play vital role to keep economy in proper functioning and active level. Banks provide available resources to needed sector. It functions as an intermediary between the surplus and deficit sector of an economy.

There are various Management Accounting tools and technique which can be applied for various types of companies; such tools are cost classification and estimation, cost allocation, profit measurement and recognition, cost volume profit analysis, standard costing, pricing decision, cash flow statement, ratio analysis and long term investment decision.

The main objectives of this research study were to find out the present practices of management accounting tools & techniques in commercial banks of Nepal. Other objectives was to find out the reasons for not practicing the Management

Accounting tools and techniques and difficulties faced in the application of Management Accounting tools in commercial banks of Nepal.

As per the nature of study, survey type research is designed. Surveys of 26 commercial banks of Nepal were made through questionnaires were distributed as well as discussions were made to get information and data. Information was tabulated, analyzed and integrated as per the requirement of the study. Simple percentage tools have been applied to analyze and integrate of findings. The statistical chi-square was used to test the hypothesis related test.

5.2 Conclusion

This research study shows that different types of management accounting tools and techniques were not applied in commercial banks of Nepal. The management accounting tools used were cost segregation, cost volume profit analysis, annual budgeting, responsibility accounting, capital budgeting, activity base budgeting. But these tools were not fully practiced by commercial banks of Nepal. Cash flow analysis and ratio analysis were practiced by all banks. The non-practicing tool was standard costing.

For evaluation of performance of banks, they mostly take reference P/L a/c and for cost and revenue estimation, past trend analysis is used by majority of them.

From the hypothesis test, it was clear that use of net present value and payback period is independent but use of cost volume profit analysis and cash flow statement is dependent.

5.3 Recommendations

Management accounting is a new accounting discipline. It is still in a developing stage in the context of Nepalese banking system. This research study showed the present practice of Management Accounting tools and technique in commercial banks of Nepal. If any organization follow properly

Management Accounting tools and techniques for managerial adjustment in the utilization of limited resources, that would definitely show better performance. So, the following recommendations can be made based in findings of this research study.

1. Management should use Management Accounting tools and techniques for planning, controlling and decision making process. For planning process the tools like cost classification & estimation, cost allocation, profit measurement, recognition and budgeting for planning are recommended. For controlling process the tools like responsibility accounting, flexible budgeting and budgetary control are recommended. For decision making process the tools like capital budgeting, environment analysis, resources analysis, cash flow statement analysis and pricing analysis can be used. To implement these courses of action, management should establish separate Management Accounting Department.
2. Majority of commercial banks of Nepal practiced only general management accounting tools like cash flow statement analysis, ratio analysis and annual budgeting but modern Management Accounting tools were not practiced. To overcome from the competitiveness of commercial banks and carryout managerial activities effectively and efficiently, the use of management accounting tools & techniques are essential.
3. In cost segregation into fixed and variable, just average method was widely used by few banks. It is recommended to use other method such as high-low point method, analysis method as well least square method.
4. In Nepalese commercial banks, budget was prepared by finance department, planning department and budget committee. It is also recommended to take outside experts' service for budget preparation which helps to make superior budget.
5. Nepalese commercial banks are practicing mostly short term budget and few is also practicing medium term budget. So it is suggested to use medium term and long term budget also to achieve long term objectives.

6. Commercial banks of Nepal, mostly prepared budget on the basis of historical actual data. Judgmental analysis, zero base budgeting and activity based budgeting were practiced by very few banks. So, the commercial banks need to practice these tools for cost revenue estimation for future.
7. While purchasing fixed assets or making long term investment decision, Nepalese commercial banks should use net present value, internal rate of return and discounted payback period.

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