CHAPTER-ONE

INTRODUCTION

1.1 Background of the Study

Nepal is a developing country in South Asia. It is landlocked bordering between the two most populate countries in the world; India in the East, South, and West, and China in the North. The development in industry and trade sector is quite slow and economy is still based on agriculture. Nepal is still backward in comparison to its neighboring countries due to several factors such as political instability, lack of financial resources, lack of required infrastructure, higher rate of illiterate etc

Economic development is considered as the basic requirement of every country to fulfill the aspiration of the people. Hence, there should be smooth development of the industries and the financial institutions, so that the country can acquire its required fund and capital from its own resources. Financial institutions like banks, finance companies, co-operative companies, Insurance companies etc. play significant role in the country's economy. Insurance companies play vital role in the economy among financial institutions. Since there is perfect competition in all the businesses in the world, the existence of organized financial market and capital market within the boundary of the nation is regarded as an essence for the economic development of a country. Each financial institution plays a key role in the financial and capital market through investing the collect resources within the recognized productive sectors and industries. Integrated and speedy economic development of the country is possible if competitive insurance services are available in every corner of the country. Since the insurance companies cover the risk factor and provide capital to the industries, businesses and trade; it plays definite and important role in the framework of the country's economy. According to nature, characteristics and objectives of the insurance companies, they are treated as

the category of financial intermediaries. Hence, they are capable to provide industrial finance, Government finance and so on. In the context of Nepalese insurance companies, they are providing various insurance services and charges premium under the insured risk.

To achieve the ultimate goal of every business organization, their accounting system should be maintained in proper manner. Systematic and proper accounting system shows the accurate financial condition of organization in each and every aspect and provides necessary information to all the stakeholders. Accounting system provides required financial information for the better utilization of the available resources so that the competitive advantages can be achieved by using various tools and techniques of accounting practice. It provides the cost information to the production manager and sales information to the sales manager so that the managers can make the proper decision and alternative for the future betterment of the business. Similarly the money lenders, investor, shareholders and customer can have the required information with the help of management accounting. Therefore, it can be said that the Management Accounting (MA) is useful, essential and beneficial to all the aspects of the management activities such as planning, decision making etc.

Due to the high rate of competition and risks involving in all the businesses at present, insurance business is also becoming more complex. The only reliable option is good management for the smooth running of insurance sectors that helps the organization to be protected from the unexpected happenings which may occur in the future. Systematic and well management is the secret for the success of every business organization in term of earning profit by providing goods and services to the customers. Management Accounting is the term used to describe the accounting methods, systems & techniques, which coupled with special knowledge and ability. It helps the manager to make better planning and take the right decision and controlling. As a result it maximizes the profit earning capability by minimizing the probability of risks and losses.

1.1.1 Introduction of Insurance

Insurance is a contract made by a company, society or by the state, to provide a guarantee of compensation for loss, damage, sickness, death etc. against the regular payments as premium. In other words it can be considered as any measure taken as a safeguard against loss, failure etc. It is the fact that the outcomes of most activities are uncertain. Likewise uncertainty remains in every nature/ type of business and even the human life. Therefore it is the fact that the risk is associated with it and there is no other option without transferring the risk through the initiating insurance services. It can be said that the insurance services are the primary step of success of the businesses to sustain and continuity.

Insurance is the precautionary measure that has been taken by any parties to compensate for the loss incurred due to undesirable events. It is an intangible service which helps to get rid from the painful sufferings caused by the uncertainties. Thus, the insurance provides a relief in the form of compensation packages in a period of desperate need.

Insurance businesses are broadly classified into two groups:

1. General Insurance

2. Life Insurance

There are various types of services offered by general insurance. The most important general services are as follows:

1. Vehicle Insurance

2. Marine Insurance

3. Fire Insurance

Life insurance companies focused on the life of individual. It is related to the health of individual or policy covering the unnatural death of an individual.

As there are several insurance companies in Nepal, competition is also severe. As a result, this industry is going through innovation in its services offerings,

for example services are ranged from theft insurance to mobile insurance. The market for all types of insurance services is tremendous. Similarly there is very good potential market of life insurance service where as very few number of player are in this segment. There are hardly five major players in this segment. Concept of life insurance is still unknown to majority of Nepalese. Many people are on the lack of awareness and the benefits of having the insurance services and still many people think that insurance is established for the rich people since they can afford to pay the premium, but it is more essential for those who are not financially secure.

1.1.2 Growth of Insurance Business in Nepal

Nepalese history of modern insurance business is not very long. Yet, before the insurance there existed the 'joint family' system and the 'Guthi' system that aimed at providing security like that of insurance business. These systems provided economic security in societies to some extent. But the securities provided by these systems were not sufficient response the needs of ever increasing demands of securities and protection made by the societies. After the establishment of Nepal Bank Ltd. in 1994 B.S., the banking service started to enter into the trade, business and other financial sectors. As a result, people started to become aware and the persons, who frequently visited India, got their life insurances done through Indian insurance companies. After sometime, by studying the feasibility of life insurance in Nepal, some of the Indian insurance' company's agents started to collect the premiums for life insurance from Nepalese people. Later, the Indian agents felt difficulties in collecting the premiums from Nepalese people (agent) and as a result, they started to hire the Nepalese agents to get the job done through them. This helped a lot to develop awareness about insurance business in Nepal.

Thus, the increasing awareness regarding the insurance in Nepalese people created the need for insurance business in Nepal. And for the first time on 8th Aswin, 2004 B.S. the Nepal Bank Limited established the first-insurance company of the country entitled "Nepal Transport and Insurance Company

Limited" (Nepal Mal Chalani Tatha Bima Company Ltd.). The total principal amount of this company was NRs. 500,000. Established under the company law of Nepal', its primary aim (objectives) was to provide protection against the possible risks of fire and theft in transportation and other businesses. But this insurance company could not provide the facilities for life insurance and many other types of insurances and, the services of this company were available only in some specific areas. As a result, still there was some ground left for the Indian insurance companies. Rubi General Insurance Company was one of the renowned Indian Insurance Companies of that time. Thus, a mentionable amount started to go out every year and there was even shortage of money for national development. That's why; the need for a national level Nepalese insurance was felt.

After the political change in 2007 (B.S.), many development programs started to operate and the modern equipments started to be used in trades and businesses since 2013 (B.S.) and as a result, many risks against the lives and properties arose. That's why, the need for a well managed and modem insurance company providing protection against such risks emerged.

It was necessary to regulate the Nepalese insurance business, so the Insurance Act 2025 was enacted on 9th Kartik 2025 B.S. for the first time. Under this Act, an insurance board of 6 members was formed which included one chairman and five members and the tenure of each of these members were of three years from the date of selection. Later as the insurance transactions increased, the insurance Act, 2025was amended for the first time and the insurance Act, 2049 was issued. Then, again in 2052 the Insurance Act 2049 with amended was applied for the first time and was issued on Poush 2052 B.S. It was again amended in 2058 (10th Magh) B.S. for the second time but its title remained the same, i.e. insurance Act, 2049. It has never been amended after that.

In the, section 3 of the Insurance Act, 2049, there is the provision of forming an insurance board to systematize, regulate, develop and control the insurance

business in Nepal. The board comprises of five members including the chairman. According to the Act, the Government of Nepal can designate or appoint anyone as the chairman who has especial knowledge in insurance business and who will be the chief administrative officer having the authority to execute the decisions made by the Board and to supervise and control it (the board). The tenure of the chairman will be of 4 years and there is the provision for reappointment.

The board constitute under section 2, sub-section (1) of the insurance Act, 2049 will have following members:

- Person designated or nominated or appointed by GON – Chairman
- Representative from ministry of law, justice & parliament an (one) Member
- Representative from ministry of finance (one) – Member
- Person nominated by GON from among those having especial specific knowledge in insurance business (one) – Member
- Person nominated by GON from among those having been ins (one) – Member (Thapa & Neupane, 2065: 426 to 429)

1.1.3 Role of Management Accounting (MA):

Management Accounting is the process of identifying, measuring, analyzing, interpreting and communicating information for searching the goals of the company. Managerial accounting is an integral part of the management process and managerial accountants are important strategic partners in the company's management team. (Hilton, 2002:5-6)

Management accounting is concerned with providing both financial and non-financial information that will help decision-makers to make good decisions. An understanding of accounting therefore requires an understanding of the decision-making process and an awareness of the users of accounting. (Drury,

2000:1)

Management Accounting is the term used to describe the accounting methods, systems and techniques, which coupled with special knowledge and ability, assist management in minimizing losses. It is essentially the application of management principles and technical know-how to the planer, development, execution and control of corporate plans. (Batty, 1982:1-2)

A business enterprise today operates in dynamic environment, which involves many new form of management problem. Due to the complex environment management has to carry out its basic functions of cost minimization and maximization of profit in an atmosphere of uncertainty. The old technique of management by inspection is no longer considered dependable in a situation in which the modern management has realized that even slight error on policy decision may mean either losing a lot of business opportunities or going out of competition. A second chance may not come or even if it does, it may be costly or risky. It therefore, constantly strives to reduce the risk of mistakes in decision-making by keeping abreast of such quantitative information, which would help analyze its administration action in order to reach judicious decisions. It is here that accounting is of importance. Management, therefore, constantly strives to reduce the risk of making mistakes by looking for and analyzing relevant information by means which it hopes to take judicious decision and direct the administration in a better manner. (Shrestha, 1997:1)

The whole idea of managerial accounting is to assist strategic managers to perform management functions more effectively by providing relevant economic information. Management is the process of planning, decision making and controlling. An organization is the common place, where different physical resources people and activities get managed by the system force. It is an integrative function directed towards achieving organizational goals it is the management, which plans, decides, implements, and has a control over different activities of the organization. (Bajracharya, Ojha, Goit & Sharma, 2004:4).

1.2 Statement of the Problem

The insurance companies have been operating well from their very beginning of the establishment. The expansion of insurance business is increasing which indicates the increasing number of insurance companies in Nepal. As a result Nepalese insurance companies are competing to transact insurance business with international insurance companies as well. This development has created major challenges for insurance companies in terms of providing services to their clients and maximizing market value of the company.

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 decision 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 insurance companies:

1. How far the Insurance Companies are using the Management Accounting Tools?
2. Which Management Accounting tools are mostly practiced in insurance companies?
3. What are the major difficulties in the application and implementation of Management Accounting tools?
4. In which areas of the Insurance Companies can Management Accounting tools be applied to improve the competitiveness?

1.3 Objective of the Study

The major objective of the study is to find out the Management accounting practices among Nepalese Insurance Companies. How the Nepalese Insurance

Company are Practicing various management accounting tools for their different purpose. More specifically following are the objectives of the study.

1. To study and analyze the present practice of Management Accounting tools used in the Insurance Companies of Nepal.
2. To identify the areas where Management Accounting tools can be applied to strengthen the insurance activities.
3. To identify the ways of overcoming difficulties in applying Management Accounting tools used in insurance Companies.

1.4 Significance of the Study

The research work was carried to study of the practice of Management Accounting tools used in Insurance Companies of Nepal. This study will be significant in the following points.

1. It will help to analyze the use of Management Accounting tools in Insurance Companies
2. It will explore problems and potentialities of the insurance business. It will be useful to all the stakeholders such as, investors, lenders, managers, policymakers, customers etc.
3. It will provide information on the application of the tools under different situations and encourages the use of Management Accounting tools in planning and decision making.
4. It will provide literature to the researcher who wants to carry on further research on this field.

1.5 Limitations of the Study

The study was not free from some of the limitations and constraints. The main limitations are as follows:-

1. This study focused on Management Accounting practice and didn't consider the economic aspects of the Insurance Companies.

2. The study focused on the insurance business. Thus, findings might not be applicable to other sectors.
3. The study concentrated on the practice of Management Accounting tools only.
4. The research was based on the primary as well as secondary data. The study will be done only in respect to the Insurance Companies located in Kathmandu valley

1.6 Organization of the Study

The study report has been divided into the following chapters which would make the study report systematic and easier to understand:

1. Introduction
2. Review of Literature
3. Research Methodology
4. Data Presentation and Analysis
5. Summary, Conclusion and Recommendation

The introduction chapter covered the background of the study, role of management accounting, statement of the problem, research objectives, significance of the study and Limitation of the study.

The second chapter focused on review of literature. It contained the conceptual framework and past research literature reviews which would show the previous research works that were done in the related field of Management Accounting.

The third chapter described the research methodology adopted for the study consisting of research methodology covering research design, sources of data collection procedure, population and sample research variables, research hypothesis and presentation procedure.

The fourth chapter dealt with presentation, analysis and interpretation of data. It consisted of testing of hypothesis, analysis of questionnaires, and analysis of open-end option and major findings of the research.

The last chapter covered summary, conclusion and recommendations.

CHAPTER-TWO

REVIEW OF LITERATURE

2.1 Meaning & Definition of Management Accounting

Management Accounting is the presentation of accounting information to formulate policies to be adopted by the management and assist its day-to-day activities. It helps the management to perform all its functions including planning, organizing, staffing, directing and control. It presents to management the accounting information in the form of processed data which it collects form financial accounting. (Paul, 1994:1)

Managerial Accounting is concerned with providing information to managers, which is to those who are inside of an organization and who are charged with directing and controlling its operations. Managerial Accounting can be contrasted with Financial Accounting, which is concerned with providing information to stakeholders, creditors, and others who are outside of an organization. (Garrison, 1976:1)

The role of managerial accounting now is very different from that of decade of ago. In the past it operates in a strictly staff capacity but now it serves as internal source of business consultants. In many organizations, managerial accountants take on leadership roles in their teams and are sought out for the valuable information they provide. Therefore, the goal of learning managerial accounting is not to be an accountant, rather it aims to produce confident entrepreneurs and capable. (Bajracharya, Ojha, Goit &Sharma, 2004:4)

Management accounting performs broad functions from collecting data to interpret the data for management. The various information (Capacity available, current capacity utilization, cost structure, past results etc) and external information (competitors' position, socio-political movements, market characteristics, globalization etc) are needed to procure and store. Management

accounting is a system which collects, stores, retrieves, modifies, analyzes, interprets and provides concise information/data covering entire field of business for the management. Thus management accounting helps management in planning, controlling and decision making.

2.2 Functions of Management Accounting

There are so many functions of management accounting which satisfy the various need and the curiosity of management for taking correct business decisions. The major functions of Management Accounting are as follows:

- **Collection of Data**

Management accounting information system (MAIS) provides and stores data relating to the internal operation of a company and the external environment. Internal data includes the capacity available, current utilization of capacity, cost structure, past results of operation etc. Data relating to external market are competitor's position, socio-political movement market characteristics and globalization.

- **Identification and Modification of the Relevant Data**

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

- **Analysis and Interpretation of Data**

Managerial accounting is concerned more with records past achievement, maintenance of values, fixation of responsibilities and basis for assessing future developments; it is more concerned with the analysis and interpretation of data, which will opened up new directions for its use by management.

- **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.

- **Facilitating Management Control**

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

- **Use of Qualitative Information**

Management 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.

- **Satisfaction of Informational Needs**

Managerial accounting has a system of processing data in a way that yields concise information converting the entire activities of business for the top management.

2.3 Objectives of Managerial Accounting

The main objectives of Management accounting are to provide relevant information to top-level management to make strategic plans and decisions.

- **Providing Information for Planning and Decision Making**

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

- **Budgeting**

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

- **Assisting in Daily Operation**

Directing and controlling day-to-day operation require a variety of data about the process of providing a good or service. Therefore, management accounting helps in directing and controlling day-to-day operation by using management accounting tools and providing the necessary information.

- **Controlling**

The management team needs data about the cost of proving goods or services in order to set fees and prices. Management compares actual cost incurred with those specified in the budget (by analyzing and comparing actual performance with budget). 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.

- **Motivating Managers and Employees**

A key purpose of management accounting is to motivate managers and other employees to direct their efforts toward achieving the organization's goals. It motivates managers to achieve the organization's goals by communicating the plans, providing a measurement of how well the plan was achieved, and prompting an explanation of deviation from the plan. Another way to motivate employees to assist in achieving the organization's goals is through empowerment. Employee empowerment is the concept o f encouraging and authorizing workers to take the initiative to improve operations, product quality and customers service and to reduce costs.

- **Measuring the Performance of Managers and sub-units Within the Organization**

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

large corporations compensate their executive, in part, on the basis of the profit achieved by the sub-units they manage.

- **Assessing the Organization's Competitive Position**

A crucial role of management accounting is to continually assess how an organization business out of competition, with an eye toward continuously improving.

- **Monitoring**

This allows the firm to evaluate its financial and internal performance, customer satisfaction.

2.4 Insurance Companies in Nepal

Since 2004 B.S. many insurance companies have been established in Nepal. A brief introduction of these insurance companies has been presented here. According to registered companies up to end of 2066 (BS) about 25 companies are in operation.

- **Nepal Insurance Company Limited**
  - ❖ Became organized institution on 8th Aswin 2004.
  - ❖ Date of registration: 2004/06/08.
  - ❖ Insurance Businesses: Non -life Insurance
- **The Oriental Insurance Company Limited**
  - ❖ Became organized institution on: 1956 A.D.
  - ❖ Date of registration: 2024/05/30.
  - ❖ Insurance businesses: Non-life Insurance
- **Rastriya Beema Sansthan**
  - ❖ Became organized institution on: 2024/09/01.
  - ❖ Date of registration: 2024/09/01.
  - ❖ Insurance Businesses: Life and Non-life

- **National Insurance Company Limited**
  - ❖ Became organized institution: 2030/09/17.
  - ❖ Date of registration: 2030/09/17.
  - ❖ Insurance business: Non-life
- **National Life and General Insurance Company Limited**
  - ❖ Became organized institution on: 2043/02/19.
  - ❖ Date of registration: 2044/09/24.
  - ❖ Insurance Business: Life
- **Himalayan General Insurance Company Limited**
  - ❖ Became organized institution: 2045/08/08.
  - ❖ Date of registration: 2050/04/06.
  - ❖ Insurance Businesses: Non life
- **United Insurance Company (Nepal) Limited**
  - ❖ Became organized institution on: 2049/03/15.
  - ❖ Date of registration as: 2050/07/06.
  - ❖ Insurance businesses: Non-life
- **Premier Insurance Company (Nepal) Limited**
  - ❖ Became organized institution: 2048/11/01.
  - ❖ Date of registration: 2051/01/08.
  - ❖ Insurance business: Non-life
- **Everest Insurance Company Limited**
  - ❖ Became organized institution on: 2048/08/18.
  - ❖ Date of registration: 2051/02/17.
  - ❖ Insurance businesses: Non-life
- **Neco Insurance Company Limited**
  - ❖ Became organized institution on: 2051/09/01.
  - ❖ Date of registration: 2053/02/17.
  - ❖ Insurance businesses: Non-life

- **Sagarmatha Insurance Company Limited**
  - ❖ Became organized institution on: 2051/10/17
  - ❖ Date of registration: 2053/03/12
  - ❖ Insurance businesses: Non-life
- **Alliance Insurance Company Limited**
  - ❖ Became organized institution on: 2052/03/18.
  - ❖ Date of registration: 2053/04/01.
  - ❖ Insurance businesses: Non-life
- **Nepal Life Insurance Company Limited**
  - ❖ Started insurance business in Nepal, since 2058/01/21
  - ❖ Insurance businesses: Life Insurance
- **Life insurance corporation (Nepal) Limited**
  - ❖ Became organized institution on: 2057/09/11.
  - ❖ Insurance businesses: Life Insurance.
- **American Life Insurance Company Limited (ALICO)**
  - ❖ Started insurance business in Nepal, since 2058 B.S.
  - ❖ Insurance businesses: Life.
- **N.B. Insurance Company Limited**
  - ❖ Started insurance business in Nepal, since 2057/10/19.
  - ❖ Insurance businesses: Life.
- **Prudential Insurance Company Limited**
  - ❖ Became organized institution on: 2057/08/15.
  - ❖ Started insurance business in Nepal, since 2059/03/06.
  - ❖ Insurance businesses: Non-life
- **Shikhar Insurance Company Limited**
  - ❖ Started insurance business in Nepal, since 2061/07/26.
  - ❖ Insurance businesses: Non-life.

- **Lumbini General Insurance Company**
  - ❖ Started insurance business in Nepal, since 2062/04/02 B.S.
  - ❖ Insurance business: Non-life.
- **NLG Insurance Company**
  - ❖ Started insurance business in Nepal, 2062 Baishakh.
  - ❖ Insurance business: Non-life.
- **Siddhartha Insurance Co. Ltd.**
  - ❖ Started insurance business in Nepal, since 2063/01 /01.
  - ❖ Insurance business: Non-life.
- **Asian Life Insurance Co. Ltd.**
- **Gurash Life Insurance Co. Ltd.**
- **Surya Life Insurance Co. Ltd.**
- **Prime Life Insurance Co. Ltd.**

Therefore here we see out of 25 insurance companies 15 are running non-life insurance business, 9 are running life insurance business and only one Rastriya Beema Sasthatn is providing both life and non-life insurance services.

2.5 Management Accounting Tools

Management accounting is such accounting technique, which help to discharge functions like planning, organizing, staffing, directing and controlling properly and efficiently. (Paul, 1994:5)

2.5.1 Methods of Segregating Mixed Costs in Fixed cost and Variable cost

- **High-low Point Methods (two-point method):** As the name suggested, this method considers two levels of activities to segregate the cost. It considers the output at different level, i.e. high and low point is compared with the amount of expenses incurred at these different periods. (Jain & Narang 1992:2.226)

$$\text{Variable Cost per Unit} = \frac{High\ Cost - Low\ Cost}{High\ Unit - Low\ Unit}$$

- **Least Square Method:** Least square method follows regression equation to segregate mixed costs into fixed and variable. (Khan and Jain 1999: 157).

  Form of linear regression equation:

  $Y = a + b\,X$

  Where,

  Y = Predicted value of selected X value

  a = Y-intercept

  b = Slope of the line

  X = independent variable

$$\text{Slope of the regression line (b)} = \frac{n(\sum XY) - (\sum X)(\sum Y)}{n(\sum X^2) - (\sum X)^2}$$

$$\textit{Y-axis intercept, (a)} = \frac{\sum Y}{n} - b\,\frac{\sum X}{n}$$

- **Analytical Method:** This method also known as "degree of variability" technique because the genesis of this method lies in measuring the extent of variability of costs on careful analysis of each item to determine how far the cost varies with volume.

  Variable overhead = Budgeted mixed overhead × Degree of variability (*Brown & Howord, 1969:249)*

2.5.2 Cost Allocation and Apportionment

There are three popular methods of allocating the cost of service department. They are as follows:

- **Direct Allocation Method**

The direct allocation method (Direct Method) is the most widely used method of allocating support department costs. The benefit of the direct method is its simplicity. There is no need to predict the usage of support department services by other departments.

- **Step-down Allocation Method**

Some organizations use the step-down allocation method, which allows for partial recognition of the services rendered by support departments to other support departments. This method requires the support departments to be ranked in the order then the step-down allocation is preceded. Different sequences result in different allocation of support department that renders the highest percentage of its total services to other support departments.

- **Reciprocal Allocation Method**

The reciprocal allocation method allocates costs by explicitly including the mutual services provided among all support departments.

2.5.3 Product/Service Costing Method

Two popular methods for product costing are variable costing (direct/marginal costing) and absorption costing, they are not the system of costing like process, operation, batch or job costing rather they are the tools or techniques of product costing (Khan & Jain . 1993:345)

- **Variable or Direct Costing**

Variable costing more accurately perceived as direct costing as it applies only the variable production cost to the product. Under this costing method fixed manufacturing overhead is regarded as an unexpired cost to be held as inventory and charged against sales later as a part of cost of goods sold. (Horngren, 1991:539)

- **Absorption Costing**

Absorption costing is that method of inventory costing, in which all variable manufacturing costs and all fixed costs are included as inventorial costs. Absorption costing is also known as conventional costing or full costing. Contrast to variable costing, absorption costing assumes fixed along with

variable cost constitutes to the product cost. It absorbs all cost necessary to production. It considers fixed manufacturing overhead as part of production cost. (Horngren, 1991:539).

2.5.4 Cost-Volume-Profit Analysis (CVP Analysis)

CVP analysis is a management accounting tool to show relationship between the ingredients of profit planning. Profit planning is the functions of the selling price of unit sold. The entire gamut of profit planning is associated with CVP interrelationship. A widely used technique to study CVP relationship is breakeven analysis. Break even analysis is concerned with the study of revenues and cost in relation to sales at which the firms revenues and total costs will be exactly equal (or net income is zero). Thus, breakeven point may be defined as a point at which the firm's total revenues are exactly equal to total costs yielding zero incomes. The (No profit no loss" point is a breakeven point or point at which losses cease and profit margin begin. (Khan and Jain, 1996:994)

2.5.5 Budgeting for Planning and Controlling

A budget is a detailed plan expressed in quantitative terms that specifies how resources will be acquired and used during a specific period f time. The producers used to develop budget constitute a budgeting system (Hilton, 2003:404).

Budgeting is concerned with the implementation of the long-term plan for the year ahead. Budgets are clear indications of what is expected to be achieved during the budget period whereas long-term plans represent the broad directions that top management intend to follow (Drury, 2000:549). Therefore, a budget is a numerical plan of action, which generally covers the area of revenues and expenditures. A budget may be formulated for an organization as a whole or for its sub-units. Budgets, basically, are forecasted financial statements formal expressions of managerial plan. They are targets that

encompass all phases of operations including sales, production, purchasing and manpower and financing.

2.5.5.1. Process of Budgeting

The main objective of a business firm is to make on excess of revenue over expenses so as to maximize profits. But it is not the matter of chance where as it depends on properly overall management of the organization. One business organization can achieve its objectives of minimizing costs and maximizing profits only when budgeting is followed properly and planned accordingly. A systematic budgeting should follow the following procedures:

1. Evaluation of the business environment.
2. Settings objectives
3. Setting specific goals
4. Identify potential strategies:
   - Market penetration
   - Market development
   - Product development
5. Communicating the planning guidelines
6. Developing the long-term and short-term plans
7. Implementation of the budget
8. Periodic performance reporting and controlling

2.5.5.2. The Master Budget (A Network of Inter-Relationship)

A complete set of financial plan for a business firm is often called the master budget. The master budget consists of many functional budgets including a sales budget, a production budget, a purchase budget, an expenses budget, an expenses budget, equipment budget, and a cash budget. Once all these budgeted are completed the master for the entire firm is budget for the entire firm is prepared. When all the budgets are prepared, the budgeted profit and loss account (Income Statement) and budget balance sheet provides the overall picture of the planned performance for the budget period. The type of budget or

profit plans depends upon the nature of the business entity. The master budget is net-working consisting of many separate budgets that are independent. A master budget normally covers three areas; operational sector budget, cash budget and financial statements.

2.5.5.3. Operating Budget

Operating budget relates to the physical activities or operations of a firm such as sales, production, purchase, debtors collection and creditors payment schedule. In specific term, an operating budget has the following components:

a. Sales Budget

A sales budget is a detailed schedule of expected sales for the coming period. It is usually expressed in both amount and units. Once the sales budget has been set, a decision can be drawn on the level of production that will be needed to support sales and production budget can be set. The sales budget is constructed by multiplying the expected sales on units by the sales price.

The sales budget is the starting point of preparing the master budget. The sales budget is constructed by multiplying the expected sales in units by the sales price (Garrison, 1976:253)

b. Production Budget

After the sales budget has been prepared, the production requirements for the forthcoming budget period can be determined and organized. Sufficient manufactured goods will have to be available to meet sales needs and for the desired ending inventory. A portion of these goods will exist in the form of beginning inventory. The remainder will have to be produced. Thus, production needs can be determined by adding the budgeted sales units by the desired ending inventory and deducting the beginning inventory from the total. The production is an estimation of the quantity of goods to be manufactured during the further coming budget period. In developing a production budget, the first step is to formulate policies relating to inventory level. The next step is to determine total quantity of each product required to be manufactured during the

budget period. Third step is to schedule this production to during the periods. Production budget is the initial step in budgeting manufacturing operations.

Planned Production Units

= Planned Sales Units + Desired Ending Inventory–Beginning Inventory of Finished Goods

c. Direct Material Budget

After production needs have been computed, a direct material budget should be prepared to show the materials that will be required in the production process. Sufficient raw material should be available to meet production needs and to provide for the desired ending raw materials inventory. However, some quantity of material requirement will already exist in the form of beginning raw materials inventory. The remainder will have to be purchased from a supplier. This budget specifies the planned quantities of each material by time, by product, and by responsibility.

Planned Material Consumption

= Planned Production Units × Standard Raw Material Usage per Unit of Output

d. Raw Material Purchase Budget

Direct materials are essential for production and must be purchased for each period on sufficient quantities to meet production needs and to confirm to the company's ending inventory policies. The material budget specifies the quantities and timing each raw material needed. Therefore, plan for raw material purchase and the estimated cost for each raw material should be made along with the required delivery dates.

Planned Purchase Units

= Planned Material Consumption + Desired Ending Inventory of Raw Materials – Beginning Inventory of Raw Material

e. Direct Labor Cost Budget

The direct labor budget is needed to develop from the production budget. Direct labor requirement must be fixed so that the company will know whether sufficient labor time is available to meet production needs. By knowing in advance, the company can then develop a plan to adjust the labor force as the situation may require. Direct labor requirement can be known by multiplying products to be produced in each period by the number of direct labor hours required to produce a single unit output. Different types of labor may be involved. If so, then the computation should be made of the type of labor needed. If so, then the computation can be made by multiplying the direct labor cost by direct labor hours to obtain the budgeted total labor cost.

Budgeted Direct Labor Cost

= Direct Labor Hours Required (DLH) ×Direct Labor Cost per DLH

Where,

DHL = Planned Production ×Standard Time required per unit of Output

f. Manufacturing Overhead Budget

Manufacturing overhead is the portion of the total production cost, which is not directly identifiable with specific product or job. Manufacturing overheads include many dissimilar expenses. Therefore, they cause problem is allocation of these costs to products. There are two distinct types of responsibility centers in most of the manufacturing companies, production and service. Responsibilities for the operation of each department should be classified separately in the chart of accounts used by the cost accounting department. Finally, the expenses of each department should be planned and controlled separately.

The manufacturing overhead budget provides a schedule of all costs of production other than direct material and direct labor. These costs should be broken by cost behavior as variable and fixed for budgeting purpose and a

predetermined overhead rate should be developed. This rate will be used to apply manufacturing overheads to the product throughout the period.

g. Selling and Distribution Expenses Budget

The selling and distribution budget contains a listing of anticipated expenses for budget period that will be incurred in areas other than manufacturing. Selling and distribution expenses include all cost related to selling distribution and delivery of products to customers. In many companies, these costs are in significant percentage of the total expenses. Careful planning of such expenses affects the profit potential of the firm.

h. Administrative Expenses Budget

Administrative expenses budget includes those expenses other than manufacturing and selling and distribution. They are incurred in the responsibility centers that provide supervision and service to all function of the enterprises, rather than in the performance of any one function. Because large portion of administrative expenses are fixed rather than variable, the notion persists that they cannot be controlled. Aside from certain top managers' salaries, most administrative expenses are determined by management decision.

i. Cost of Goods Sold Budget

The cost of goods sold budget clearly distinguishes the total cost of goods manufactured and cost of goods sold from the value of inventory. Indeed, it reveals how much cost should be carried to the next budget that facilitates to prepare income statement and the balance sheet.

- **Cash Budget**

Every company can't operate without cash, whether large or small. At the end, the business firm should have enough money to pay for various obligations otherwise it will have to go out of business. A cash budget is developed after the operational budgets and capital expenditure outlays have been accomplished. A cash budget shows the planned cash inflows, outflows and ending position by interim periods for a specific time span. Most of the

companies should develop both long-term and short-term plans about their cash flows. The short-term cash budget is included in the annual profit plan. A cash budget basically includes two parts:

i) The planned cash receipts, and

ii) The planned cash disbursement

Planning for cash inflows and outflows gives the planned beginning and ending cash position for the budget period. Planning for cash inflows and outflows will include

a) The need for financing-probable cash deficits

b) The need for investment planning to put excess cash into profitable use.

The primary purposes of cash budget are as follows:

- Providing managers with advance notice of the resources at their deposable and the result they are expected to achieve.
- Providing targets useful in evaluating departmental performance.
- Providing warning of potential cash shortages by time period.
- Establishing the need for financing and the availability of idle cash for investment

2.5.5.4. Budgeted Financial Statement

The final step in master budgeting is the development of budgeted or pro-forma financial statements for the period. These statements reflect the result that will be achieved if the estimates and assumptions used for all previous budgets usually occur. Such statements allow the management to determine if the predicted results are acceptable for the period. If the predicted results are not acceptable, the management has the opportunity to change and adjust items before beginning period.

a. Budget Income Statement

Budgeted income statement is one of the key schedules in the master budget. It is the document that tells how profitable operations are anticipated to be in the

forthcoming period. After it has been prepared, it stands as a bench work against which subsequent company performance can be measured.

b. Budgeted Balance sheet

Beginning with the current balance sheet and adjusting it or the data contained in the other budgets, budgeted balance sheet can be developed. The balance sheet is the financial positional final document in the master budget and even in financial account titles. So, it can be said that a loss of the remainder balances of all assets, liabilities and equities, has been portrayed in the balance sheet.

2.5.5.5. Zero Base Budgeting

Under zero-base budgetary (ZBB) every budget is constructed on the premise that every activity in the budget must be justified. It starts with the basic premise that the budget for the next year is zero and the every expenditure, old and new, must be justified on the basis of its costs and benefits. The discipline of zero base budgeting takes a different approach in fact a reverse approach to this problem of justifying everything.

Zero bases budgeting though is not really new concept, only the review of the departmental costs. Managers' are in ad-vocation since long time in depth review of departmental cost. This review should be done annually, zero base budgeting lays down where as critics of zero based budgeting says it should done every five years or so. The only difference is the frequency of review of departmental cost. (Garrision, 1985: 317)

2.5.5.6. Activity Based Budgeting (ABB)

Activity-based budgeting focuses on the activities to produce and sell products and services. It separates indirect costs into separate homogeneous activity cost pools. Management uses the causes and effects criterion to identify the cost drivers for each of these indirect cost pools. To manage cost more effectively, organization that have implemented activity based costing (ABC) has also adopted ABB. The aim of ABB is to authorize the supply of only those

resources that were needed to perform activities required to meet the budgeted production and sales volume.

The four key steps in Activity-Based Budgeting are:

1. Determination of the budgeted costs of performing each unit of activity at each activity area
2. Determination of the demand for each individual activity based on the budgeted production
3. Computation of the costs of performing each activity
4. Describing that budget as the cost of the performing various activities.

2.5.6. Management Control Systems and Responsibility Accounting

2.5.6.1. Management Control System

Management consists of the basic functions of planning decision-making and control. Control is the function of the management that ensures the proper implementation of plans and policies to achieve the organizational objectives. Management control system focuses on motivating managers for the sake of enhancing total profitability of the organization. Control involves the process of establishing results and performance targets, measuring performance and providing rewards or punishment based on employees' ability to achieve the performance target. A management control system is logical integration of techniques to gather and use information to make planning and control decisions, to motivate employee behavior and to evaluate performance. The main purposes of management control systems are as follows:

- To clearly communicate the organizational goals
- To ensure that manager and employees understand the specific actions required of them to achieve organizational goals
- To communicate result of actions to the organization, and
- To ensure that the management control system adjusts to changes in the environment

2.5.6.2. Responsibility Accounting

Responsibilities accounting is a system dividing an organization into smaller units each which is to be assigned particular responsibilities. These units may be set up in the term of division, segments, departments, branches, product lines etc. Each department comprises individual who are responsible for particular tasks or managerial functions. The managers of the departments should ensure that the people in their departments are doing well to achieve the well.

Responsibility accounting refers to the performance of people and departments in order to ensure the achievement of the goals set by the top management.

In today's dynamic, multifaceted and complex environment, it is almost impossible to control a big organization centrally. Responsibility accounting is a process of decentralization under which the authority and the responsibility are delegated to the respective responsibility centre. It is concept of dividing an organization into submits so that a manager of the unit could be made accountable for the given job.

Responsibility accounting collects and reports planned and actual information about the inputs and outputs of responsibility centers.

Process of Responsibility Accounting

- Identifying the responsibilities centers
- Delegation of authority and responsibility or decentralization
- Controllability of the objects
- Establishing performance evaluation criteria

2.5.7. Standard Costing: Direct Material and Direct Labor Cost

A standard cost is predetermined cost, which is calculated from management's standards of efficient operation and the necessary expenditure. It may be used as a basis for price fixing and for cost control through variable analysis. A standard cost is a measure of acceptable performance, established by

management as a guide to certain economic decisions. Standard cost for a given job is the predetermined cost to complete the job as per specifications. 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 Process

Standard costing is a management control. Controlling is the process of comparing actual results with the planned objectives and determining where judgment should be made. The management control process encompasses the given steps;

1. Setting standards
2. Actual Performance Measurement
3. Variance Analysis
4. Computing Variance for Each Reason:
5. Point out the Reason of Variances
6. Corrective Action

2.5.8. Flexible Budgeting and Overhead Cost Control

A flexible overhead budget is defined as a detailed plan for controlling overhead costs that is valid in the firm’s relevant range of activity. (Hilton, 1997:526)

Since, some of the factory overhead cost elements remain constant pet activity and others remain constant per period, we can simply prepare the flexible cost statement by summarizing all factory overhead costs in a general equation:

$Y = FC + UVC \times LA$

Where,

Y = Total factory overhead cost

FC = Fixed cost per period

UVC = Unit variable cost

LA = Level of activity

2.5.9. Decision Regarding Alternatives in Business Operation

A common aim of human being is to make their life comfortable and happy. As a means of achieving this aim people adopt different professions. A politician is motivated to work hard in the hope of getting power, which makes his/her life exciting and pleasant. An investor lies up his/her cash in hand in risky assets in the hope of getting higher returns in future. As the profit of a business firm is maximized, the lives of the investors (stakeholders) become more comfortable and happier.

Decision- making is more of an art and less of science. Not only is the world growing more complex and uncertain at a faster pace, but the old accelerate as well. Accounting information can improve, but cannot be perfect, a management understanding of the consequences of various resources allocation decisions. To the extent that accounting information can reduce the management uncertainty about the economic facts, outcomes, And relationship involved in various courses of action, such information is valuable for decision making purpose and is necessary for conducting business.(Bajracharya, Ojha, Goit and Sharma, 2005, 618-619)

2.5.9.1. Process of Decision Making

Decision making is the art of selecting the best alternative from among the various alternatives available to solve the problems. In case of business, the best alternative is one, which is likely to provide maximum profits and involve a minimum cost without violating the social responsibilities. This process involves the following stages:

1. Define the problem
2. Identify the available alternatives
3. Collect relevant information
4. Make differential revenue/cost analysis

5. Consider the opportunity costs
6. Quantitative factors
7. Management report

2.5.9.2. Decision Regarding Alternative Choice

- **Drop or Continue the Product line**

When a firm is divided into multiple sales outlet, product lines, divisions, departments, it may have to evaluate their individual performances to decide whether or not to continue operations of segments or whether or not to continue operations of each of these segments or whether to add a new segment. The decision criterion would be the segment margin. The segment margin equals the segments contribution margin less fixed costs is directly traceable to that segment.

- **Decision to Accept a Special Order/Offer**

A special order is one that has been offered for a bulk volume at a reduced price. Opportunity to consider order for a quantity of its regular product at especial price, usually less than that charged to regular costumers, 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. (Bajracharya, Ojha, Goit and Sharma: 2005, 633)

- **Decision to Make or Buy**

Buying or out sourcing is the process of obtaining goods from the outside suppliers instead of producing the same goods or providing the same services within the organization. Decisions on whether to produce components or provide services within the organization or to acquire them from outside suppliers are called make or buy decision. Many organizations buy some of their activities such as purchase of special components. Outsourcing is

considered only when it will give financial advantages over making things within the company with no inferior quality.

- **Replacement of Assets Decision**

One of the most important decisions relating to business is whether or not to replace the existing equipment by new and more sophisticated equipment. Generally, the economic advantages offered by such an investment is the realization of operating cost savings, which are translated into increased profits. These cost saving involve a number of future years, and this temporal dimension adds an additional completion to the capital expenditure decision.

A decision regarding the replacement of assets is long-term capital investment decision required the use of discounted cash flow techniques. This is a problem that has been known to cause difficulty, but the correct approach is to apply relevant cost principles. As the past or sunk costs are irrelevant for decision-making the book value of old assets does not matter in assets replacement decision.

- **Decision to Further Process Joint Products**

A decision is to be made by the management whether to sell joint output at the split off point or to process them further. The decision criterion should be to choose the alternatives, which will maximize total contribution of the various joint products to the common processing costs. As the common processing cost before the split-off point are sunk costs that have already been incurred to create the joint products, they are irrelevant and will not be considered in the decision making process. The only relevant cost will be the additional processing costs. A related short-term decision involves selecting an alternative processing plan for joint products when the proposition of the output from the processing cost can be varied.

- **Decision of Leasing or Buying**

Leasing is a contract between an owner (Lessor) and a hirer (Lessee) for the hiring of specific assets. In exchange of the lease rentals, the lessee obtains

possession and use of the assets, while the lessor retains legal ownership. The lessee has to right to acquire exercise right over the period of the contract.

2.5.10. Pricing Decision of Product/Services

The pricing decisions arise in virtually all types of organizations. Manufactures set prices for the products they manufactures; merchandising companies set prices for their goods, service firms set price for such services as insurance policies, train ticket, theme park admission and bank loans. Also non-profit organization often set prices: for example government's unit price vehicle registrations, park user fees, and utility services. The optimal approach to pricing often depends upon situations. Pricing a mature product or service, which a firm has been selling for a long time, may be quite different from pricing a new product or service. Public utilities and TV cable companies face political considerations in pricing their products or services, since a government commission often must approve their prices.

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

2.5.10.1. Cost-Plus Pricing

The approach in cost-plus pricing is to compute cost and then to add predetermined mark-up to arrive at a target price. The cost-plus pricing formula established a starting point in setting prices. Then, the price setter must weight market conditions. Thus, effective price setting requires a constant interplay of market considerations and cost awareness. The cost-plus pricing sets the price of a product or service at an amount to its standard manufacturing cost plus a

'normal' markup. This markup is intended to cover marketing and administrative costs and net profit before taxes.

Selling price per unit = cost per unit of the cost base + markup or selling price per unit= cost per unit of the cost base + (cost per unit of the cost base x markup %)

Where,

$$\text{Mark Up} = \frac{Cost\ Uncovered\ by\ the\ Cost\ Base + Desire\ profit}{Cost\ per\ Unit\ \ of\ Cost\ Base \times Normal\ Volum} \times 100$$

Desired profit = Total invested capital × required return on investment

The methods of cost plus pricing of special products are;

- Variable cost pricing
- Full cost pricing
- Target cost pricing

Cost has different meanings for different purposes. Cost per unit can be seen in many facts. Cost may stand for:-

- ❖ Variable manufacturing cost
- ❖ Total manufacturing cost
- ❖ Total variable cost
- ❖ Total cost

2.5.10.2. Variable cost pricing

The variable data exactly provides information that the manager need when taking certain decisions, such as whether to accept a special order and bidding for quotations.

Under variable cost pricing method, the price of the product is determined by adding mark up to the variable costs. The condition under which a price is based on variable cost is appropriate are as follows:

- When idle capacity exists
- When operating distress conditions, and
- When faced with sharp competition on particular order under a competitive bidding system

2.5.10.3. Full Cost Pricing

In the long run, the price must cover all costs and a normal profit margin. Basing the cost plus formula on only the variable costs could encourage the managers to set too low price in order to boost the sales. If the prices are set, too close to variable manufacturing cost, the firm will fail to cover its fixes costs. Ultimately, such practice could result in the failure of the business.

2.5.10.4. Time and Material Pricing

Another cost based approach to pricing is called time and material pricing. Under this approach, the company determines one charge for the labor used on a job and another charge for the material. The labor typically includes the direct cost of the employees' time and a charge to cover various overhead costs. The material charge generally includes the direct cost of the direct cost of the material handling and storage. Time and material pricing is used widely by construction companies, printers and repair-shop accounting firms.

2.5.10.5. Pricing for Competitive Bidding and Special Orders

In a competitive bidding situation, two or more companies submit scaled bids (prices) for product, service or project to a potential buyer. The buyer selects one of the companies for the job on the basis of the bid price for the design specifications for the job. Competitive bidding complicates a manager's pricing problems, because how the manger is in direct competition with one or more competitors. If all of the companies submit bid offers for doughtily equivalent product or service, the bid price becomes the sole criterion for selecting the contractor. The higher the price of the bid, the greater will be the profit on the job, if the firm, gets contract. However, a higher price also lowers the profitability of obtaining the contract to perform the job. Thus there is a trade-

off between bidding high, to make a good profit, and bidding low to land the contract. (Bajracharya, Ojha, Goit and Sharma, 2005:723).

2.5.10.6. Strategic Pricing for New Product

Pricing a new product is a challenging decision problem. The newer the concept of product, the more difficult the pricing decision is. Pricing the new product is harder than pricing a mature product because of the magnitude of the uncertainties involved. New products entail many uncertainties. In addition to the production and demand uncertainties, new product poses another sort of challenge. There are two widely differing strategies that a manufacturer of a new product can adopt. The general, pricing technique for a new product can be:

1. Skimming Pricing
2. Penetration Pricing

2.5.10.7. Target Cost Pricing

A target is the estimated price for product or service that potential customer will be willing to pay. This estimate is based on an underwriting of customers perceived value for a product and competitors' response. A target operating income per unit is the operating income that a company wants to earn on each unit of a product sold. The target pricing leads to target cost. A target cost per unit is the estimated long-run cost per unit a product that when sold at the target price enables the company to achieve the target operation income per unit. Subtracting the target operating income per unit from the target price derives the target cost per unit.

Developing target prices and target cost requires the following:-

1. Develop a product that satisfy the needs of potential customer
2. Choose a target price based in customers' perceived value for the product and price competition charge and a target operating.
3. Set the target income per unit based on return on investment (ROI)

4. Desire a target cost per unit by subtracting the target operating income from the target price
5. Perform value engineering to achieve target cost

2.5.10.8. Pricing under Activity Based Costing

A traditional product costing system, in which all overheads is assigned on the basis of a single unit level activity like direct labor hours, fails to capture the cost implications of product diversity. Since the pricing decisions often are based on accounting product costs, decision maker should be aware that distortion could result in overpricing high-volume and relatively simple products, while low-volume and complex products are understand. The competitive implications of such strategic pricing errors can be unsuccessful. An activity based costing (ABC) system does measure the extent to which each product line drives cost in the key production-support activities. An activity based costing system can be particularly helpful as product design engineers try to achieve products' target cost. ABC enables designers to break down the production cost improvement in particular activities to bring a new product's projected cost in line with its target cost.

2.5.10.9. Transfer Pricing

A transfer price is the price charged on subunit of an organization for products or services supplied to mother subunit of the same organization. The transfer price creates revenue for selling sub units 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.

Decentralization: The first essence in transfer pricing

Decentralization refers to the downward delegation of the decision-making authority to subunit managers. A decentralized organization is composed of operational unit led by manage, who have some autonomy in decision-making

the degree to which a company is decentralized depends on top management philosophy and the unit managers' ability to perform independently.

2.5.11. Long-term Investment Decisions

A capital investment decision, also known as a capital budgeting decision, is related to the concerned organizations' long term bulk expenditures. It involves the process of planning future net cash flows over the life of the project and of selecting the best course of action that yields positive net present values. A capital investment (or capital budgeting) should have the following characteristics:

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

Capital budgeting process involves the following three, major stages:

- Estimating the projects net cash flows
- Measurement of benefit of the investment
- Evaluation of risks associated with the investment

2.5.11.1. Estimating the Project's Cash Flows

Cash flow generally indicates a cash flow 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 arise from purchase or sale of equipment or investment in or recovery of working capital. The opportunity cost and time value of money are tied to the cash flowing in or out of the organization and no to the source of the cash.

Estimation of the net cash flows in an investment project should cover:

- The initial investment (Start-up) costs
- The cash flows over the running life of the project
- Terminal cash flows at the end of the project

2.5.11.2. Relevant Information for Investment Decision

Investment analysis decisions require information relating to initial investment costs, terminal cash flows, annual revenues, annual operating costs (expenses) and tax rate. All these cash flows should be the incremental due to the project in consideration. The cash flows, which do not affect the present cash flows in terms of out lays or benefits, are irrelevant.

- Sunk costs are irrelevant
- Don't forget cannibalization effects
- Don't forget the incidental effects
- Take care of the overhead costs
- Don't count interest expenses twice
- Take cash flows not net income
- Only the differential cash flows are relevant
- Depreciation expenses is relevant
- Working capital is relevant
- Cash flows is replacement cases

2.5.11.3. Long-term Investment Evaluation Technique

More projects may be at the threshold of the business firm. A screening process has to be followed to find out the profitability of such proposals.

For this purpose, numerous methods of measuring the economic value of an investment can be found. The methods of appraising capital expenditure proposal can be classified into two broad categories:

1. Traditional methods
2. Time adjusted methods

Later are, more popularly known as discounted cash flow techniques as they take time factor into account. The first category includes:

1. Payable period method (PBP)
2. Average rate of return (ARR)

The second category includes:

a. Net present value (NPV)
b. Internal rate of return
c. Profitability index (PI)

1. Pay Back Period Method:

The payback period method is the traditional method of capital budgeting. It's the simplest and perhaps the most widely employed quantitative method for appraising capital expenditure decisions. This method answers the questions: how many years will it take for the cash benefit to pay the original cost of an investment, normally, disregarding salvage value? Cash benefits represent CFAT, ignoring interest payment. Thus, PBP measures the numbers of years required CFAT to pay back the original outlay required in an investment proposal.

$$\text{Payback Period (PBP)} = \frac{Investment}{Constant\ Annual\ Cashflow}$$

One of the most commonly used methods of capital budgeting is the payback technique. This method posed the question, "how long will it take to recover the investment?" The payback period method requires a bench mark above which an investment proposal can be rejected and below which it is accepted. Managers simply state the acceptable limit to the payback period: however this bench mark payback period is objective. The project having the shortest PBP may be assigned rank one, and the project with the longest pay back would be ranked the last. The terms "mutually exclusive" refers to proposals out of which one can be accepted with exclusion of others.

Obviously, projects with a shorter payback period will be selected.

Rationale of Payback

The payback period is important to a company experiencing liquidity problems. A long payback period usually means a low rate of return. Payback is a

measure of risk because the longer it takes to get the invested money back; the greater the risk that the invested money may not be recouped.

Limitation of payback period

- PBP has two very serious errors. The first is that it tells nothing about the profitability of the investment. It ignores the size of cash flow after the payback period.
- The second serious error of the payback method is that it ignores the timing of the expected future cash flows and so ignores the time value of money. This can lead to poor decisions.

2. Accounting Rate of Return

The accounting rate of return (ARR) method of evaluating a proposed capital expenditure is also known as the average rate of return method. It is based upon accounting information rather than a cash flow. There is no unanimous regarding the definition of the rate of return. There are number of alternative method for calculating the ARR.

$$\text{Accounting Rate of Return (ARR)} = \frac{Average\ Annual\ Expected\ Income}{Average\ Investment}$$

With the help of ARR, the financial decision maker can decide whether to accept or reject an investment proposal. According to the ARR, as an accept reject criterion, the actual ARR will be compared with a predetermined or a minimum required rate of return or cut-off rate. A project will qualify to be accepted if the actual ARR is higher than the minimum desired ARR. Otherwise; it is liable to be rejected.

3. Net Present Value (NPV)

Net present valued method is discounted cash flow approach to capital budgeting that discounts all expected future cash flows to the present using a

minimal desired rate of return. To apply the net present value (NPV) method to an investment proposal a manager first determines some minimum desired rate of return. The minimum rate is called the required rate of return, hurdle rate discount rate or cost of capital. Then all expected cash flows from the project are discounted to the present using this minimum desired rate. If the sum of present values of the cash flow is zero or positive, the project is desirable and is negative, it is undesirable. When choosing from among several investments, the one with the largest net present value is the most desirable.

This method require the determination of three items for a project

1. Initial cash flow
2. Future net cash flow
3. Minimum required rate of return

Net present value method requires that all cash flows associated with new investment proposal be discounted at a predetermined weighted average cost of capital. The decision rule of a project under NPV is to accept the project if the NPV is positive and reject if it is negative.

4. Discounted Payback Period

A major limitation of payback is that it does not take the time value money into account. However, this limitation can be overcome through the use of a discounted payback. The NPV criterion leads to an acceptance of a project as long as its NPV is at least zero. If a project complies with this requirement then it does pay back within the discounted payback criterion period. Thus the discounted pay back is not more than shortened version of NPV. Instead of calculating the project's NPV over the whole of its life, the NPV is effectively calculated up to some specified cut-off point.

5. Internal Rate of Return (IRR)

IRR technique is also known as yield on investment marginal efficiency, of capital, marginal productivity of capital, marginal efficiency of capital rate of return, time adjusted rate return and so on. Like the present value method, this

method also considers the time value of money by discounting the cash streams. The basis of the discount factor, however, is different in both. In the case of the present value method, the discount rate, usually the cost of capital and it determinates are, external to the proposal under considerations. The IRR on the hand is based on facts, which are internal to the proposals. In other words, while arriving at the required rate of return for finding out the present values, the cash inflows as well as outflows are not considered but IRR depends entirely on the initial outlay and the cash proceeds of the projects, which are being evaluated for acceptance or rejection. The internal rate of return (IRR) is the discount rate that equals the aggregate present value of CFAT with the aggregate present value of cash outflows required for a new investment. The project will be accepted only if IRR exceeds the cost capital (k). The IRR of a project is the rate of discount, which produces zero NPV.

The IRR decision rule is that only if project with an IRR greater than or equal to some predetermined cut-off rate should be accepted. If the projects are independent, NPV is positive and IRR of the projects greater than the cut-off rate, all projects maybe accepted depending on the availability, all projects with a negative NPV and smaller than cut-off rate, IRR are rejected. But in case of mutually exclusive projects, where a project must be accepted and only one can be accepted, only the project with the highest NPV and IRR is desirable.

6. Profitability Index (PI)

The profitability index (PI) benefit cost ratio is a time adjusted capital budgeting technique. It is similar to the NPV approach. The PI approach measures the present value of return per rupee invested. While the NPV is based on the difference between the present value of future cash inflows and present value of cash outflow (outlays). PI may be defined as a ratio, which is obtained by dividing the present value of cash inflows by the present value of cash outflows.

$$\text{Profitability Index (PI)} = \frac{Total\ \text{Pr}esent\ Value\ of\ Cash\ Inflow(TPV)}{\text{Pr}esent\ Value\ of\ Cash\ Outflow(NCO)}$$

If PI value exceeds one, the proposal is worth accepting. When PI is equals to ones, the firm is in different to the projects. When the profitability index is equal to or less than one, the net present value is greater than, equal to or less than zero respectively. In other words, NPV will positive when the PI is greater than one; and will be negative when the PI is less than one. Thus, the NPV and profitability index approaches give the same results regarding in investment proposals.

2.5.11.4 Capital Budgeting Under Risk and Uncertainty

A capital budgeting decision is based on the benefits derived from the project. The benefits are measured, are in terms of cash flows. The estimation of future returns is done on the basis of various assumptions. The actual return in terms of cash inflows depends on a variety of factors such as price, sale volume and effectiveness of the advertising campaign, competition, cost of raw materials, manufacturing costs and so on. Each of these in turn depends on other variables like the state of the economy, the rate of return, inflation etc. The accuracy of the estimates of the future returns and the reliability of the investment decision would largely depend upon the precision with which these factors are forecasted. Whatsoever technique is followed for forecasting, precisely actual returns can never tally to the estimation. As a result, actual results vary from the estimation. This variation is technically referred to as a risk. The terms risk with an investment can therefore be defined as the variability in the actual return emanating from a project in future over its working life in relation to the estimated return as forecast at the time of initial capital budgeting decision.

Risk exits when the decision-maker is in a position to assign probabilities to various outcomes. Uncertainty exists when the decision maker has no historical data from which to develop a probability distribution and must make intelligent guesses in order to develop a subjective probability distribution.

The capital budgeting decision for starting a new product will take more uncertain returns than the one involving the expansion of an existing one. Further, the estimates of returns from cost reduction type of capital budgeting

will be subject to a lower degree of risk, than the revenue expanding capital budgeting project.

Measurement of Risk:

- Sensitivity Analysis
- Risk adjusted discount rate
- Certainty equivalent co-efficient
- Probability distribution approach
- Standard deviation
- Co-efficient of variation
- Normal probability distribution
- Decision tree approach.

2.5.12 Managerial use of Financial Statement Analysis

Before discussing about financial analysis it is necessary to discuss about financial statement and report. A report is issued annually by a corporation to its stakeholders. It discloses basic financial statement as well as managements' option of past year's operation's and the firm's prospectus. The income statement, the balance sheet, the statement of retained earnings and the statement of cash flows are four basic financial statements.

a) The income statement

b) The balance sheet

c) The statement of retained earnings

d) The statement of cash flows:

The above statement and report are required for different purpose but according to statement, it is necessary for analysis the statement and to report to know the positive and negative or strength and weakness of business. So, the financial analysis indicates the analysis of financial statement and report to know the financial reality and work performance of business. In short the financial analysis tries to analyze the following question:

- Is the firm in paying condition for current liabilities?
- Which sources invest for long term financial investment in firms? Or what is the capital structure of the firm?
- Does the firm utilize its assets fully effectively?
- Is the earning of its funds enough?
- Do the investors realize the profit the firm?
- Do they want to purchase the share of the firm?

2.5.12.1 The Statement of Cash Flows

Preparing a statement of cash flows is simple. It is intended to show all the cash inflows and outflows of a firm during a period. However, as the cash flow statement must combine cash flows that are recognized in the balance sheet (for example, change in account, receivable) and the income statement (for example, the sales revenue). It is sometimes complicated to prepare. Preparation of this statement is further complicated by difference between the time cash flows occur and when they are recognized as revenues or expenses. The accrual process (income statement recognition) is subject to management judgment, assumptions and various estimates that affect both time series and cross-sectional analysis.

Use of Cash Flow Statement

1. The main objective of a statement of cash flows is to convey information about the cash receipts and cash payments of a firm during the accounting period. Though the same information comes from through the cash book already prepared the course of posting in ledger some information in a different manner operations and capital expenditures.
2. Cash flow statement can also be used for stockholder too. They can see whether cash provided by operations, comfortably covers the dividend payment. Cash flows from normal should continue to increase. The company should be able to invest its future by making capital expenditures to modernize it productive facilities.

3. Cash flow statement can also be used for creditors. They might be interested to know whether the firms would be able to pay its due obligations from the cash obtained from the operating activities. Creditors see the cash flow liquidity position in this regard.

Preparation of a Cash Flow Statement

The cash flow statement should report cash flows during the period classified by operating, investing and financing activities. Cash flows, however, exclude movement between items that constitute cash or cash equivalents because these components are part of the cash management of an enterprises rather than part of its operating, investing and financing activities. Cash management includes the investment excess cash in cash equivalents.

1. Operating Activities: Cash flows from operating activities are primarily derived from the principal revenue producing activities of the enterprise. Therefore they generally result from the transactions and other events that enter into the determination of net profit or loss.

Examples of cash flows from operating activities are;

- Cash receipts from the sake of goods and the rendering of services
- Cash receipts from royalties, foes, commission are other revenue
- Cash payments to suppliers for goods and services
- Cash payment to employees
- Cash receipts and cash payment of an insurance enterprise for the premiums and claims, annuities and other policy benefits
- Cash payment or refunds of income taxes unless they can *be* specifically identified with financing and investing activities
- Cash receipts and payments from contracts held for dealing or trading purposes, etc.

2. Investing Activities: The separate disclosure of cash flows arising from investing activities is important because the cash flows represent the extent to

which expenditure has been made for resources intended to generate future income and cash flows.

Examples of cash flows arising from investing activities are;

- Cash payments to acquire property, plant and equipment, and other long-term assets. These payments include those relating to capitalized development costs and self-constructed properly plant and equipment.
- Cash receipts from sale of property, plant and equipment, intangibles and other long-term assets.

3. Financing Activities: The separate disclosure of cash flows arising from financing activities is important because it is used in predicting claims on future cash flows by providers of capital to the enterprise. Examples of cash flows arising from financing activities are;

- Cash proceeds from issuing shares or other equity instruments
- Cash payments to owner to acquire or redeem the enterprise's shares
- Cash proceeds from issuing debentures, loans, notes, bonds, mortgages and other short or long-term borrowings.
- Cash repayments of amounts borrowed and
- Cash payments by a lessee for the reduction of the outstanding liability relating to finance lease.

2.5.12.2 Ratio Analysis

Ratio analysis is the numerical relationship between any two variables of financial statements, which should serve some meaningful purpose. Ratios are expressions of logical relationship between items in the financial statements of a single period. Analysis can compute many ratios from the same set of financial statements. Ratio analysis shows a relationship between two items on the same financial statement or between two items on different financial statement. The only limiting factor in choosing ratios is the requirement that the items used to construct a ratio have a logical relationship to one another.

1. Liquidity Analysis: Short-term lender 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 generate through the operating cycle of firm. The concept of liquidity relies on the classification of assets and liabilities into `current' and 'noncurrent' categories. The traditional definition of current assets and liabilities is based on a maturity period of less than one year or (if longer) the operating cycle of the company.

- Cash and cash equivalents
- Merchandise securities
- Account receivables
- Inventories
- Prepaid expenses

And the three categories of current liabilities are:

- Short term debt
- Accounts payable
- Accrued liability

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

A more conservative measure of liquidity, the quick ratio is defined as;

$$\text{Quick Ratio} = \frac{Cash+Marketable\ Securities+Account\ Receivable}{Current\ Liabilities}$$

Similarly,

$$\text{Cash Ratio} = \frac{Cash+Marketable\ Securities}{Current\ Liabilities}$$

The use of the current (or quick) ratio implicitly assumes that the current assets will eventually be converted into cash. Realistically, however it is not anticipated that firms will actually liquidated that firms will actually liquidate

their current assets to pay down their current liabilities. Certain level of inventories and receivables, as well as payables and loans are always needed to maintain operations. If all the current assets and liabilities are liquidated then in effect the firm has ceased operation. Later, it is assumed that the process of generating inventories, collecting receivables and so on is ongoing. These ratios therefore measure the "margin of safety" provided by the cash resources relating to obligations.

2. Length of Cash Cycle: The firms purchases or manufactures inventory, requiring an outlay of cash and/or the creation of trade payable debt. Sale of inventory generates receivables that when collected, are used to satisfy the payables and the cycle is began again. The ability to repeat this cycle on a continuous basis depends on the firm's short term cash generating ability and liquidity.

$$\text{Inventory Turnover} = \frac{Cost\ of\ Good\ Sold\ (COGS)}{Average\ Inventry}$$

$$\text{Average No of Days in Inventory Turnover} = \frac{365}{Inventory\ Turnover}$$

$$\text{Receivable Turnover} = \frac{Sales}{Average\ Receivable}$$

3. Long-term Solvency Analysis: The analysis of a firm's structure is essential to evaluate its long-term risk and return prospects leveraged from accrue excess return to their shareholders so long as the rate of return on investments financed by debt is greater than the cost of debt. However, the benefits of financial leverage bring additional risk in the firm of fixed costs that adversely affect profitability if demand declines

Moreover, the priority of interest and debt claims can have a severe negative impact on a firm when adversity strikes. The inability to meet these obligations can lead to default and possible to bankruptcy.

a. Debt Ratios: A firm's financing is obtained from debt and equity the greater the proportion of debt in relations to the equity, the greater is the risk to the firm as a whole. Two important factors should be noted: 1) the relative debt levels themselves and 2) the trend overtime in the proportion of debt to equity.

Debt ratios are expressed either as,

$$\text{Debt to Total Capital} = \frac{Total\ Debt\ (Long\ Term + Short\ Term)}{Total\ Capital\ (Debt + Capital)}$$

Alternatively,

$$\text{Debt to Equity Ratio} = \frac{Total\ Debt}{Total\ Equity}$$

$$\text{Interest Coverage Ratio} = \frac{Earning\ Before\ Interest\ \&\ Tax\ (EBIT)}{Total\ Interest\ Expenses}$$

$$\text{Financial Leverage} = \frac{EBIT}{EBT}$$

4. Assets Management Ratios: To carry out one's operations, one needs to invest in both short-term (investing and account receivable) and long term (property, plant and equipment) assets. Activity ratios describe the relationship between the firm's level of operations (usually defined as sales) and the assets needed to sustain the activity.

a. Operating Assets Management:

1. Inventory turnover ratio: This provides an indicator of the efficiency of firm's inventory management. A higher ratio is an indicator that the inventory does not decay in a warehouse or in the selves but rather 'turnover' rapidly as it moves quickly from the time of acquisition to that sales.

Inventory Turnover Ratio = $\frac{Cost\ of\ Goods\ Sold}{Agerage\ Inventory}$

b. Long Term Assets Management: An effective utilization is reflected by how many sales are generated by the assets employed. This reflects the level of sales maintained or generated by investments in a productive capacity analysis of these ratios must consider changes in its level over time that can be a function of a number of subtle factors.

Fixed Asset Turnover = $\frac{Sales}{Average\ Fixed\ Asset}$

Total Asset Turnover = $\frac{Sales}{Average\ Asset}$

Capital Employed Turnover = $\frac{Sales}{Permanent\ Asset}$

5. Profitability Analysis: Profitability is an important measure of company's operating success. Relationship in the income statement that indicates a company's ability to recovers costs and expenses. Relationship of income to various balance sheet measures that indicate company's relative ability to earn incomes from assets employed. The first measure is the profit margin and the second one is the return on investment. The stock holders' primary concern is the profitability measure of the firm. Lenders also desire a minimum return on the borrowers' investment to be on the safe side.

b. Profitability in Relation to Sale

Net Profit Margin = $\frac{\text{Net Profit}}{\text{Net Sales}} \times 100$

Gross Profit Margin = $\frac{\text{Gross Profit}}{\text{Net Sales}} \times 100$

Operating Cash flow Margin = $\frac{\text{Cash from Operating Activities}}{\text{Net Sales}} \times 100$

c. Profitability in Relation to Investments:

Return on Investment (ROI) = $\frac{Net\ Income + Interest}{Average\ Total\ Asset} \times 100$

Return on Common Stockholder =

$$\frac{Net\ Income - \text{Preferred Sotck Dividend}}{Agerage\ Common\ Equity} \times 100$$

d. Profitability in Relation to Common Stockholder

Earnings Per Share: Earnings per share are derived by dividing the profit of a company by the total number of shares outstanding.

Earnings per Share = $\frac{Earning\ After\ tax - Preference\ Dividend}{No\ of\ Ordinary\ Share}$

The net earning is the amount, which is completely free from any obligation and the company, can plough it back into the company, and pay to the ordinary share holders as dividend or a combination of both. This amount is known as the earnings available for ordinary shareholders.

Dividend per Share: The dividend per share is the dividend declared on a single ordinary share for the year.

Dividend per Share =

$$\frac{Ordinary\ Dividends\ Paid\ to\ Ordinary\ Shareholder}{No\ of\ Ordinary\ Share}$$

Price Earning (P/E) ratio: It is the market price of shares expressed as a multiple of earnings per share.

$$\text{Price Earnings Ratio} = \frac{Price\ per\ Ordinary\ Share}{Earning\ Per\ Share}$$

Dividend Yield: The dividend yield is the dividend per share divided by the market price per common stock expressed in percentage.

$$\text{Dividend Yield} = \frac{Gross\ Dividend\ Per\ Share}{Earning\ Per\ Ordinary\ Share} \times 100$$

Dividend payout ratio: Dividend payout ratio measures the proportion of earnings per share which are paid out as dividends.

$$\text{Dividend Pay out Ratio} = = \frac{Net\ Dividend\ Per\ Share}{Net\ Earning\ Per\ Share} \times 100$$

Dividend worth per share: Net worth per share is the value of net tangible assets attributable to one ordinary share, which is the shareholders' equity divided by the number of ordinary shares.

Net Worth per Share

$$= \frac{Ordinary\ Share\ Capital + Reserve - Intangible\ Asset}{No.of\ Ordinary\ Share\ Outstanding\ in\ Balance\ Sheet}$$

Cash flow per share: Cash flow per share is a useful indicator of a company's general ability to leverage itself, to pay dividends, to concert accounting earnings into cash and to enjoy financial flexibility.

Cash Flow Per Share

$$= \frac{Cash\ Folw\ From\ Operation\ After\ Cost}{No\ of\ Ordinary\ Share\ Outstanding\ in\ Balance\ Sheet}$$

In financial Statement Analysis, it should be remembered that standards for comparison vary by Industry, and financial Analyst must be carried out with full knowledge of specific industry characteristics. Analyst must be sure that their comparisons are valid especially when the comparisons arc of items for different periods or different companies.

A single important event; such as the unexpected placing a production the market by a competitor, may affect the interpretation of the financial statement. Also the general business conditions and the possible seasonal nature of business must be taken into considerations, since these factors could have an impact on financial statements.

2.6 Review of the Previous Studies

Only few researches were made in the area of management accounting practice in Nepalese context. However, many other researchers were made in the area of profit planning and control in Nepalese context. As profit planning and control covers some of the aspects of management accounting. Some relevant researches, which have submitted on Management Accounting Practices in the context of Nepal, were selected for review.

2.6.1 Mr. Sagar Sharma

Mr. Sharma has conducted a research work on "Management Accounting Practices in listed companies of Nepal." He has focused his study to examine and study the practice of management accounting tools in the listed companies of Nepal. Mr. Sharma's research is based on primary data. Stratified random sampling with proportionate allocation of parentage is followed to draw the sample. In his study, he has pointed out various findings and recommendations, which are as follows:

- Different types of management accounting tools, which are thought in the colleges are not found applied by listed companies of Nepal

- Management accounting is to managers in overall managerial activities by providing information and helping in planning, controlling and decision-making.
- Nepalese listed companies are in infant stage in practicing of management accounting tools such as capital budgeting, annual budgeting, cash flow statement, ratio analysis, zero based budgeting; activity based costing, target costing and value engineering.
- As Nepal is proceeding towards globalization and has get the membership of WTO, companies are commended to apply management accounting tool to fit with the global environment.

2.6.2 Mr. Krishna Bahadur Karki

He has conducted a research entitled "Management accounting practice in joint venture banks of Nepal". He has focused his study to examine and study the practice of management accounting tools in joint venture banks of Nepal. Mr. Karki's research is based on primary data. In his study he has pointed out various findings and recommendation. Of them some remarkable findings are:

- Capital budgeting, cash flow statement, ratio analysis and annual budget are widely practiced in Nepalese joint venture banks.
- Profitability Index and Net Present Value are mostly practiced while purchasing fixed assets, and making long-term investment decision.
- The main difficulties of not practicing MA in Nepalese joint venture banks are lack of information, lack of cognizance about the tools and lack of expertise.
- To overcome those difficulties, he has recommended that, the managers of different banks and knowledgeous academicians should jointly bring the tools and techniques into light through different media.

2.6.3 Mr. Narayan Prasad Acharya

He conducted a research entitled "Management Accounting Practice in Nepalese Public Enterprise". He has focused his study to study and examine the

contemporary practice of management accounting in Nepalese Public Enterprises. Mr. Acharya's research is based on primary data collected on the basis of stratified sampling technique. In his study 38

Nepalese public enterprise, Industries, and financial Institutions including RBB and NBL, are included.

He has pointed out various findings and recommendation in his study. Of them, some remarkable findings are:

- Traditional approaches of concerned, authorities are becoming a prime barrier for proper application of management accounting tools in Nepalese public enterprises.
- Role of government on pricing decision is significant.
- Practicing process of management accounting tools in manufacturing and service enterprises are slightly different and major MA related decision are not depending upon the MA tools and techniques.

2.6.4 Mr. Lila Raj Baral

He has conducted a research entitled "Management Accounting Practice in Nepalese Commercial Banks". He has focused his study to study and examine the contemporary practice of management accounting in Nepalese Commercial Banks. Mr. Baral's research is based on primary data. In his study, 17 Nepalese Commercial Banks are included. He has pointed out various findings and recommendation in his study. Of them, some remarkable findings are:

- New management accounting techniques like Zero-based budgeting and Activity Based Costing are recommended to use instead of traditional techniques.
- It is recommended that banks should create an atmosphere of interaction between the academician and the banks. The banks can be benefited from academicians' knowledge about new tools and techniques of management accounting.

- Management Accounting Information System (MAIS) should be maintained properly for the better application of management accounting tools.

2.7 Research Framework

The research framework is the basis or foundation upon which the study is established. It is with in the framework of this theory that the entire study proceeds. It reflects the variable or characteristics selected for inclusion in the investigation. This research work has based on the following variable:

Variables:

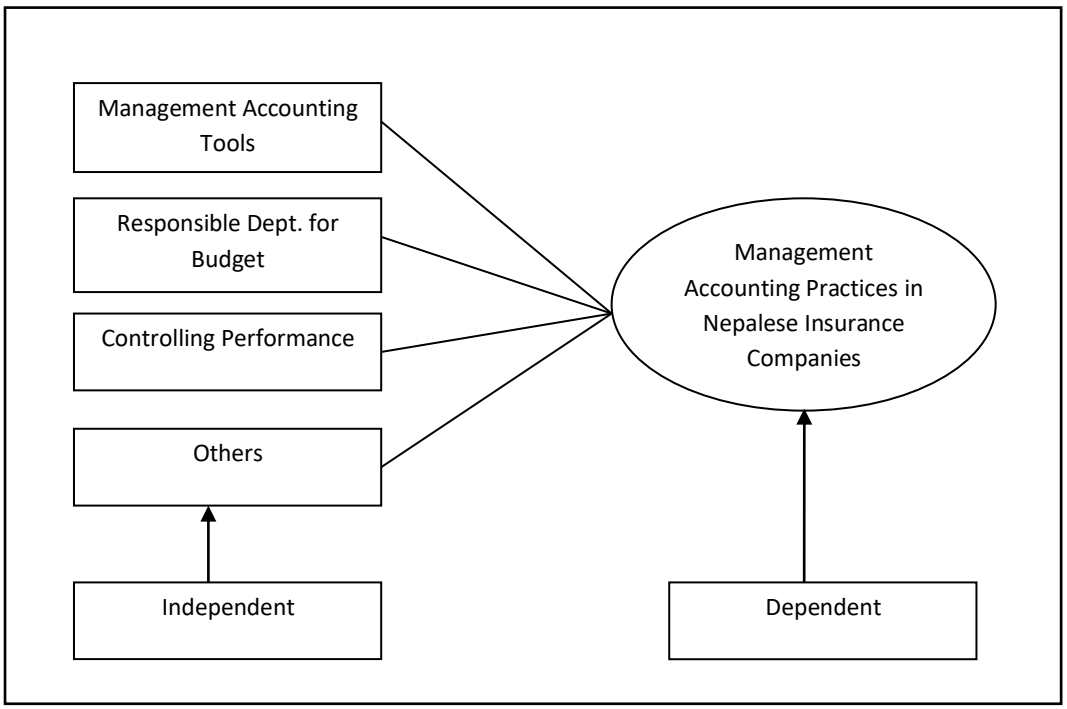
- Management Accounting Tools
  - ⇨ Cost Volume Profit Analysis
  - ⇨ Capital Budgeting
  - ⇨ Standard Costing
  - ⇨ Responsibility Accounting
  - ⇨ Ratio Analysis
  - ⇨ Cash Flow Analysis
  - ⇨ Zero Base Budgeting
  - ⇨ Flexible Budget
- Responsible Department for Budget
  - ⇨ Finance Department
  - ⇨ Planning Department
  - ⇨ Budget Committee
  - ⇨ Outside Export
  - ⇨ Other (CEO & Head Office)

- Evaluating Risk While Capital Investment
  - ⇨ Sensitivity Analysis
  - ⇨ Increase Rate of Return
  - ⇨ Higher Rate of Return
  - ⇨ Future Cash flow
- Measuring and Controlling Overall Performance
  - ⇨ Profit or Loss Made by the Company
  - ⇨ Budgetary Measures and Control
  - ⇨ Standard Costing
  - ⇨ Cash Flow Analysis
- Cost Segregation Technique
  - ⇨ High- low Point Method
  - ⇨ Regression Analysis
  - ⇨ Graphical Presentation Method
  - ⇨ Average Method
  - ⇨ Other (Guideline Provided by Beema Samitee)
- Types of Budget
  - ⇨ Overall Master Budget
  - ⇨ Cash Budget Only
  - ⇨ Operational Budget
- Covered Period of Budget
  - ⇨ 1 Year or Less
  - ⇨ Less than 5 Years
  - ⇨ More than Five Year

- Basis of Preparing Budget
  - ⇨ Previous Budget
  - ⇨ Past Actual Budget
  - ⇨ Zero-base
  - ⇨ Activity Base
- Long Term Investment Decision
  - ⇨ Pay back Period
  - ⇨ Discounted Payback Period
  - ⇨ Average Rate of Return
  - ⇨ Net Present Value
  - ⇨ Profitability Index
  - ⇨ Internal Rate of Return
- Factor Affecting Decision Making
  - ⇨ Management Accounting Tools
  - ⇨ Decision of Top Level
  - ⇨ Objectives of Organization
  - ⇨ Other (Company Policy, Unions Interference)

Figure No. 2.1

Schematic Diagram of the Research Framework



Others: All above variable which is mention in research framework but not included with independent variable in above figure.

I have selected management accounting practices in Nepalese Insurance Company as the dependent variable and all the above mention variables are independent for research work. The above independent variables having effects on management accounting practice. From the above arguments, we can theorize that there would be some correlation between management accounting practices and each of above independent variables.

2.8 Research Gap

Most of the previous researches were conducted on accounting on profit planning and control covered only budgeting practices in different companies. Some previous researches prepared by Mr. Sagar Sharma, Mr. Krishna Bahadur Karki, Mr. Narayan Prasad Acharya and Mr. Lila Raj Baral were related to Management accounting practice. Out of them, Mr. Sharma's research was concerned with the practice of management accounting tools and

techniques in listed companies only. Likewise, Mr. Acharya's research also deals with the practice of management accounting tools and techniques in Nepalese Public enterprises. In this research only two public commercial banks; Nepal Bank Limited and Rastriya Banijya Bank were included. Similarly, Mr. Baral's research dealt with the practice of management accounting tools and technique in Nepalese Commercial Banks.

Apart from this research, it is specifically related with the application of management accounting tools and techniques in Nepalese Insurance Companies. This research study is different from previous researches, because this study further tries to explain, what is present practice of management accounting tools in Nepalese Insurance Company? what is the effectiveness of management accounting practices in Insurance Company? Have they any further improvement in order to strength management accounting practices of Nepalese Insurance Companies? This research also has based on the analysis of various types of management accounting variable from primary & secondary data. This research is based on the appropriate analysis of management accounting and statistical tools as well as testing of hypothesis of different management accounting variable for fulfillment of research objectives. It has also disclosed the reason for not practiced some of the management accounting tools and techniques by the Nepalese Insurance Companies. From all above mention points of view this research is quit superior from previous researches.

CHAPTER-THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a way to systematically solve the problems. In other words Research methodology refers to the various sequential steps (along with rationale of each such steps) to be adopted by researcher in studying a problem with research projects are not meaningful, unless they are in sequential order, which will be determined by the particular problem at hand. This chapter deals with sampling techniques, data collection methods, data analysis tools, research instruments etc. To achieve the stated objectives the following methodology has been used

3.2 Research Design

A research design is specification of methods and procedures for acquiring the information needed. It is the overall operational pattern of framework of the project that stipulates what information is to be collected, from which sources, by what procedure. It ensures that information obtained is relevant to the research questions and that it is collected by objective and economical procedures. As per the nature of study, survey research design had been followed with descriptive and analytical approach.

3.3 Source of Data

Data were mainly collected from primary sources. Primary data are collected through questionnaire, interview and discussion. Secondary data have also been used as per the requirement.

3.4 Population and Sampling

All the insurance companies of Nepal have been considered as the total population. Till this date there are 25 insurance companies in Nepal in existence. To make the research more reliable, 21 insurance companies has been considered for sample population. Out of the total 25 insurance companies nine insurance companies are running completely different types of life insurance business, one of them is running both non-life and life insurance business and rest fifteen are running different kind of non-life insurance business.

3.5 Data Collection Procedure

The study is mainly based on primary sources of data, information collected by developing a structured question and distributing it to the manager and financial controller of insurance companies. Altogether fifteen questions were included for study. Thirteen questions of them were 'tick mark' and two were open-end questions. To get reliable information, needed discussion had also held with managers and financial controllers.

3.6 Data Processing Procedure

Data collected information from questionnaires was in raw form. The data are tabulated into various tables according to the subject's requirement. Processing of data has. Simple arithmetic percentage tool is used for analysis. Statistical tool like chi-square (χ^2) is used to test the hypothesis. Major findings are based on the analysis and the interpretation of data.

3.7 Data Analysis

Data analysis means to study the tabulated material in order to determine inherent facts of meaning. It involves breaking down the existing complex factor into simpler parts and putting them together in new arrangement for interpretation. Larger divisions of material should be broken down in to smaller units and rearranged in new combinations to discover new facts and relationship.

Data analyzing is to change it form an unprocessed from to an understandable presentation. So the analysis of data consists of organizing, tabulating, performing statistical analysis and drawing inferences. Hence data have been processed, organized, tabulated and presented in suitable form. SPSS program was used for analysis of raw data which is collected from questionnaires. Appropriate financial, accounting and statistical tools and techniques have been applied.

A percentage is the number of hundredth parts one number is of another. This is the simplest statistical device used in the interpretation of phenomenon. Percentages are recorded to one decimal place. In some case to grasp the relationships, whole percentages are shown.

Arithmetic mean also called 'the mean' or 'average' 'arithmetic average' is the most popular and widely used measure of central tendency. Simple arithmetic mean is the ratio of the sum of all observations to the number of observations.

Circle diagram is a diagram in the form of a circle whose area represents the total value. The circle diagram dividing into different sectors by radial lines such that, the area of each of the sector representing the component value of total value is said to be the pie-diagram.

3.8 Hypothesis

A hypothesis is defined as tentative theory of supposition provisionally adopted to explain certain facts and to guide in the investigation of others. However, in statistics, hypothesis means a statement about the values of one or more parameter of the population. It means the presumption or quantitative statement of the population parameter which may be true or false. In order to make proper decision about the quantitative statement of the population, testing of hypothesis technique was used. Note that the testing of hypothesis was carried out by using sample information.

Steps in Testing of Hypothesis:

Testing of hypothesis includes the following steps in order to make precise decision about the value which has to be tested

Null Hypothesis (H_0): It is the hypothesis of no difference. For instance, if we want to test whether the population mean 'μ' has some specified value 'μ_0'. Then the null hypothesis is set as follows:

$$H_0: \mu = \mu_0$$

Alternative Hypothesis (H_1): It is a hypothesis complementary to null hypothesis and set in such a manner that the rejection of null hypothesis implies the acceptance of the alternative hypothesis. Again depending upon the nature of the problem it is set as follows:

$$H_1: \mu \neq \mu_0$$

$$H_1: \mu > \mu_0$$

$$H_1: \mu < \mu_0$$

Deciding Proper Test Statistic: After setting proper hypothesis then select suitable test statistic which depends upon appropriate sampling distribution. In general the test statistic is defined as

$$T = \frac{Different}{SE\ of\ Statistic}$$

Level of Significance: Next step is to the level of significance α. It is the maximum probability of committing type I error. Generally, in practice, the values of α. are fixed at 5% and 1%.

Critical Region: The forth step in testing of hypothesis is to establish a decision rule. In this regard the entire sample space is divided in to two subset one corresponding to acceptance region and another corresponding to rejection region. The value which separates those regions is called critical value (C).

Decision: The last step in text of statistical hypothesis is to make decision about the null hypothesis. For this, a representative sample is selected. Based on the observed information, calculate the value of appropriate test statistic (T). Compare this calculated test with the critical value (C). Reject H_0 if calculated test statistic (T) is greater than critical value and accept otherwise.

Hypothesis has been posed related to use of various Management Accounting tools in Nepalese insurance companies to make research specific and objective. Hypothesis means presumption or qualitative statement of the population parameters which may or may not be true. Therefore, to make the right decision about the qualitative statement of population, testing of hypothesis technique is used. Only six of management accounting tools: Net Present Value, Internal Rate of Return, Payback Period, Discounted Payback Period, Cost Volume Profit analysis and Flexible Budgeting has been taken for hypothesis testing.

Hypothesis 1:

Null hypothesis (Ho):- There is no significant relationship between the use of Net Present Value (NPV) and Internal Rate of Return (IRR) techniques as Management Accounting tools. (i.e. practicing of Net Present Value technique and Internal Rate of Return techniques are independent).

Alternative hypothesis (H1):- There is significant relationship between the use of Net Present Value (NPV) and Internal Rate of Return (IRR) techniques as Management Accounting tools. (i.e. practicing of Net present value technique and Internal Rate of Return techniques are dependent).

Hypothesis 2:

Null hypothesis (Ho):- There is no significant relationship between the use of Break Even Analysis (BEP) and Flexible Budgeting techniques as Management Accounting tools. (i.e. practicing of Cost Volume Profit analysis technique and Flexible Budgeting technique are independent).

Alternative hypothesis (H1):- There is significant relationship between the use of Break Even Analysis (BEP) and Flexible Budgeting techniques as Management Accounting tools. (i.e. practicing of Cost Volume Profit analysis technique and Flexible Budgeting technique are dependent).

CHAPTER-FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The main objective of this study is to examine the present practice of management accounting tools and techniques in Nepalese insurance companies. The other objectives are to identify the future perspectives of management accounting tools application and to scrutinize the major difficulties in the application of management accounting tools in Nepalese insurance companies.

To achieve the specific objectives of the research study this chapter included the data presentation, analysis.

The study is based on the primary source of information. The data were collected from the insurance companies by developing the structured questionnaire. The sampling represents 84% of the population. Fourteen tick marks and two open-end questions were included in the questionnaire. To find out the correct and reliable data, necessary information was collected from authentic persons through discussion and opinion survey.

The raw data were properly processed, tabulated and analyzed. Necessary tables have been developed based on subject matter of questions. The data were tabulated in different tables according to the subject in order. Simple percentage tools were applied to analyze and interpret the findings.

The statistical tool chi-square χ^2 was used to test the hypothesis related to the management accounting. Two different hypotheses were tested. The major findings of the research were based on the analysis and interpretation of data, which were expressed at the end of the chapter, accordingly. The information collected through open end question was arranged in this chapter in a descriptive way.

4.2 Percentage Analysis of Management Accounting Tools

4.2.1 Management Accounting Tools Practiced in Nepalese Insurance Companies

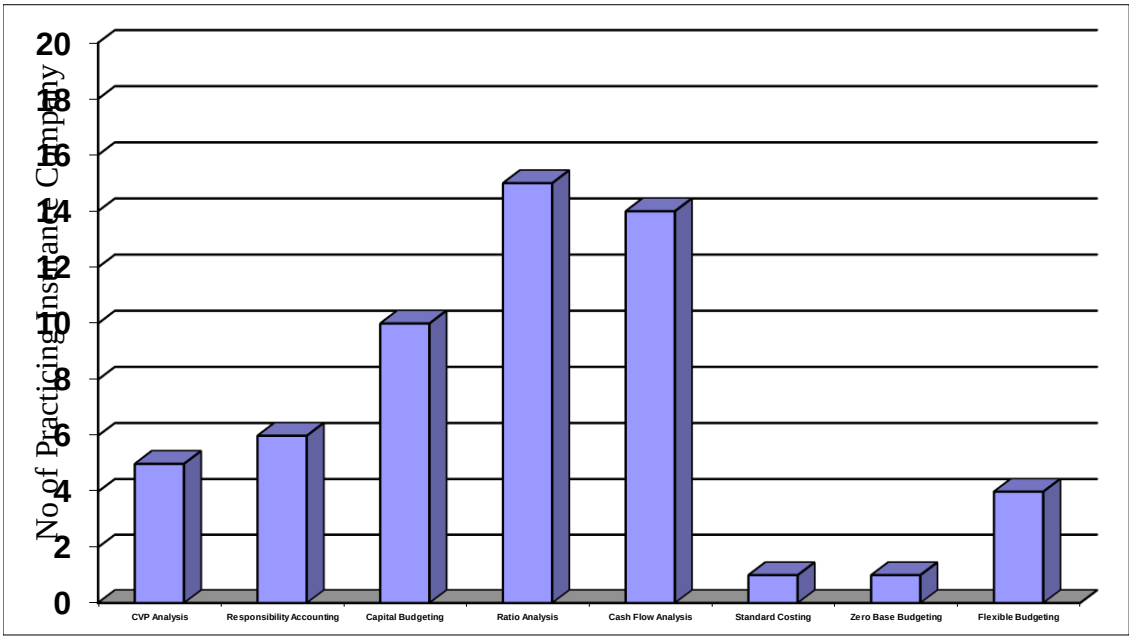
Table No 4.1
Management Accounting Tools Practiced in Nepalese Insurance Companies

S. N.	Management Accounting Tools	No of Population	No of Sample	No of Practicing Insurance Company	Percentage (%)
1	Cost-Volume Profit Analysis	25	21	5	23.81
2	Responsibility Accounting	25	21	6	28.57
3	Capital Budgeting	25	21	10	47.62
4	Ratio Analysis	25	21	15	71.43
5	Cash Flow Analysis	25	21	14	66.67
6	Standard Costing	25	21	1	4.76
7	Zero Base Budgeting	25	21	1	4.76
8	Flexible Budgeting	25	21	4	19.05

Source: Appendix-II

Figure No 4.1

Management Accounting Tools Practiced in Nepalese Insurance Companies.



Source: Table No. 4.1

The above Table 4.1 and figure 4.1 demonstrate management accounting tools practiced in insurance companies of Nepal. It is revealed that, 71.43 percent of Nepalese insurance companies used ratio analysis. Cash flow analysis was practiced 66.67% of them and Capital Budgeting technique was practiced by 47.62. Similarly, 28.57 percent of them used responsibility accounting and 23.81 percent used Cost-volume-profit analysis. The insurance company practicing flexible budgeting represented 19.05 percent and only 4.76 percent of them used standard costing and zero base budgeting.

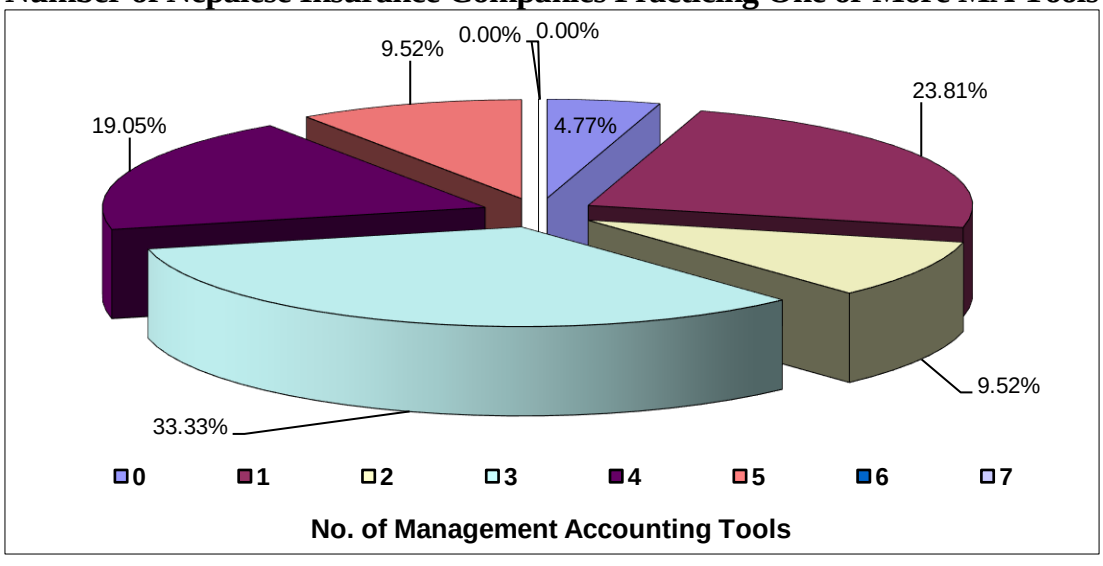
4.2.2 Number of Nepalese Insurance Companies Practicing One or More MA Tools

Table No 4.2
Number of Nepalese Insurance Companies Practicing One or More MA Tools

Number of Management Accounting Tools (x)	Practitioner Insurance Companies		FX
	Number (F)	%	
0	1	4.77	0
1	5	23.81	5
2	2	9.52	4
3	7	33.33	21
4	4	19.05	16
5	2	9.52	10
6	0	0	0
7	0	0	0
Total	N=21		∑FX=56

Source: Appendix-II

Figure No 4.2
Number of Nepalese Insurance Companies Practicing One or More MA Tools



Source: Table No. 4.2

Therefore, the average number of MA tools used in each insurance company

$$\bar{X} = \frac{\sum FX}{N} = \frac{56}{21} = 2.67, \text{ i. e. } 3$$

The above table 4.2 and fig. 4.2 represent the number of Nepalese insurance companies practicing one or more management accounting tools. It revealed that in average 3 management accounting tools were used in an insurance company. It is also revealed that 38.10 % of insurance companies use less than average number of management accounting tools. Altogether 3 tools were used by 33.33% insurance companies and 28.57% other insurance companies use more than the average no. of management accounting tools. The main reasons given for not practicing of these tools contained that, majority of the respondents opined that management accounting is related to manufacturing and trading business rather than service industry like insurance. Some other respondents opined that these tools are not practiced in Nepalese insurance companies due to lack of knowledge or no information about the tools , lack of experienced human resources and high cost/quite expensive.

4.2.3 The Department for Budget Preparation in Nepalese Insurance Companies

Table No 4.3

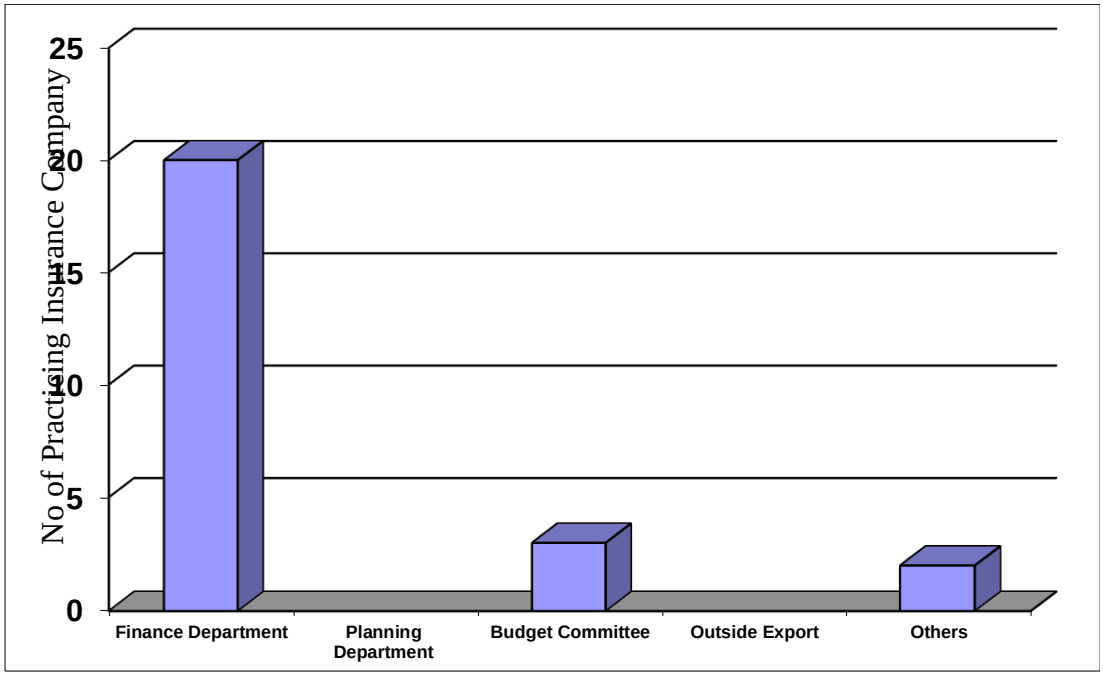
The Department for Budget Preparation in Nepalese Insurance Companies

S. N.	Budget Preparing Department	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	Finance Department	25	21	20	95.24
2	Planning Department	25	21	-	-
3	Budget Committee	25	21	3	14.29
4	Outside Export	25	21	-	-
5	Others	25	21	2	9.52

(Sources: Appendix-III)

Figure No 4.3

The Department for Budget Preparation in Nepalese Insurance Companies



Source: Table No. 4.3

*Other includes: Chief Executive officer and head office

The above table and figure present the budget preparing system practiced in Nepalese Insurance Companies. It is seen that 95.24 percent insurance companies of Nepal prepare their budget through finance department, 14.29 percent prepare their budget through budget committee, and only 9.52 percent of them prepared their budget jointly by the head office and chief officer of the company. It is also seen in the table that no insurance companies made the budget through their planning department and no insurance company hires outside experts to prepare their budget.

4.2.4 Types of Budget Practiced in Nepalese Insurance Companies

Table No 4.4

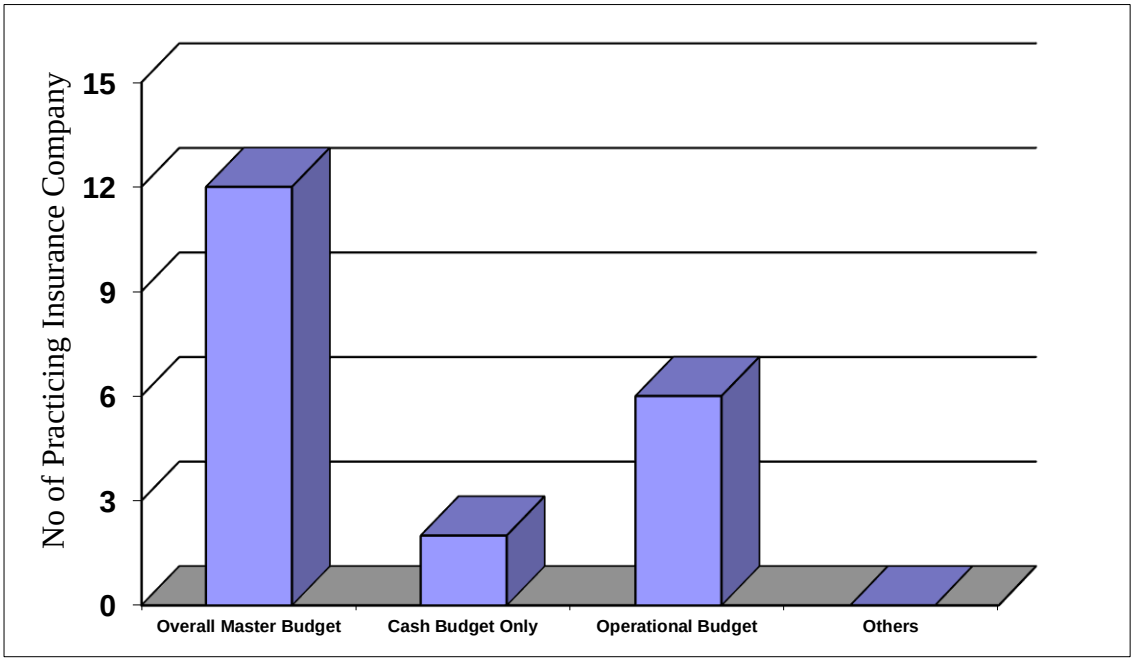
Types of Budget Practiced in Nepalese Insurance Companies

S. No.	Types of Budget	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	Overall Master Budget	25	21	12	57.14
2	Cash Budget Only	25	21	2	9.52
3	Operational Budget	25	21	6	28.57
4	Others	25	21	0	0

(Source: Appendix –IV)

Figure No 4.4

Types of Budget Practiced in Nepalese Insurance Companies



Source: Table No. 4.4

The above table and figure show the type of budget practiced by the insurance companies of Nepal. It is seen that, nearly 57.14 percent of Nepalese insurance companies practiced over all master budgets, 28.57 percent of them practice operational budget and only 9.52 percent of them practiced cash budget.

4.2.5 Number of Insurance Companies Prepared One or More Type of Budget

Table No 4.5

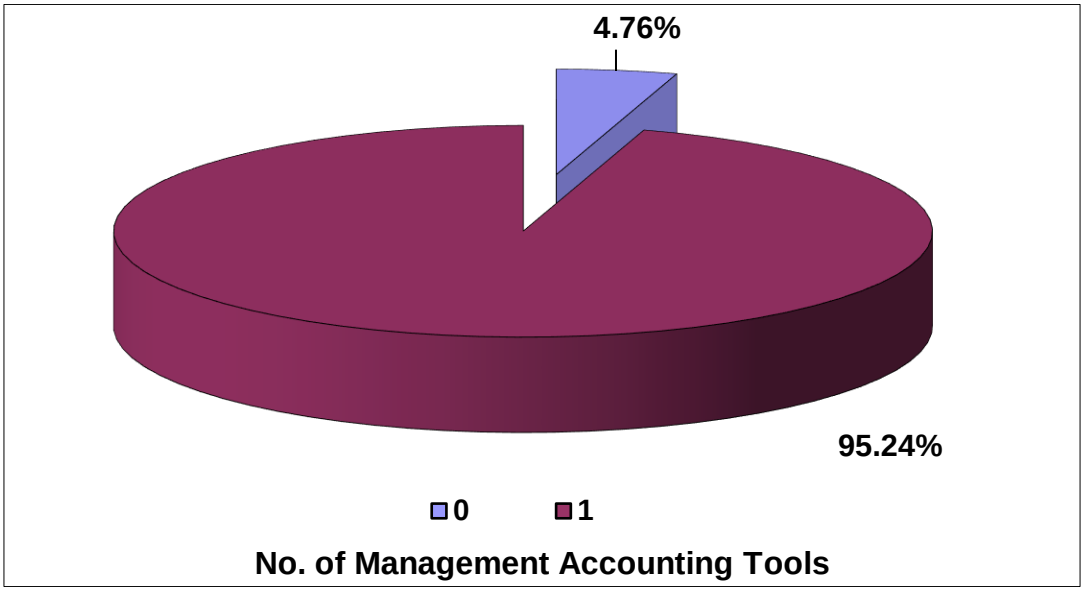
Number of Insurance Companies Prepared One or More Type of Budget

Number of Budget Prepared Method (x)	Insurance Companies		FX
	Number (F)	%	
0	1	4.76	0
1	20	95.24	20
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
Total	N=21		∑FX=20

(Sources: Appendix-IV)

Figure No 4.5

No. of Insurance Companies Prepared One or More Type of Budget



Source: Table No. 4.5

Average number of budget prepared per insurance company

$$\bar{X} = \frac{\sum FX}{N} = \frac{20}{21} = 0.95, \text{ i. e. } 1$$

The table and pie chart reveal that in average 1 budget has been prepared out of 95.24% of insurance company. It is also revealed that 4.76 % of insurance companies have not prepared any budget.

4.2.6 Time Period Covered by Budget in Nepalese Insurance Companies

Table No 4.6

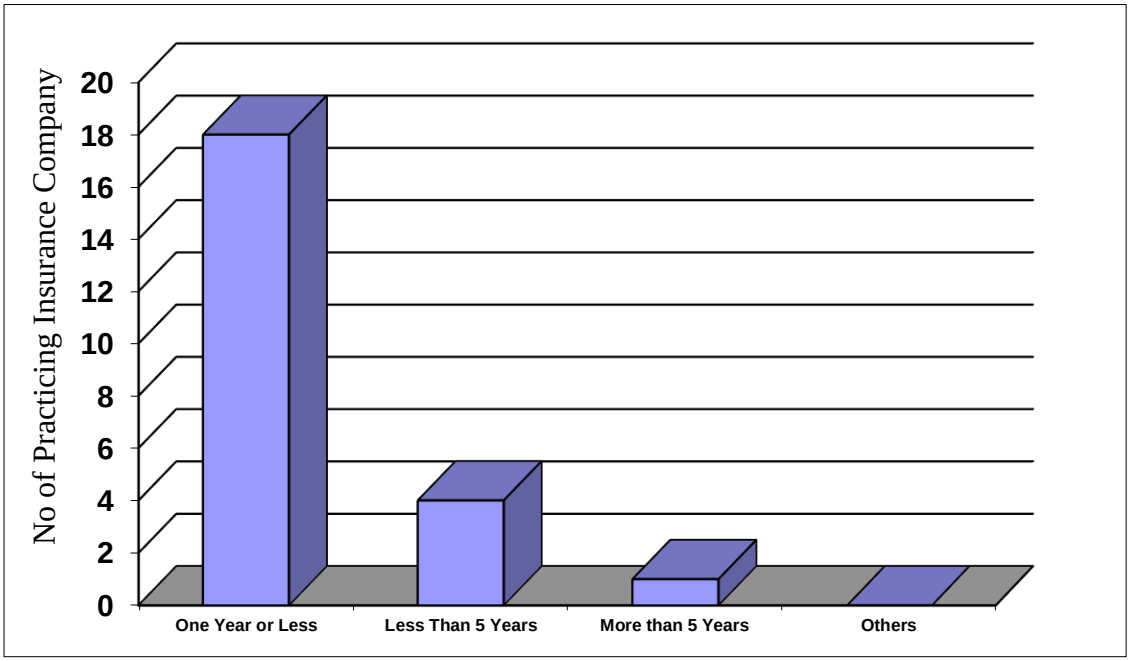
Time Period Covered by Budget in Nepalese Insurance Companies

S. N.	Period of Budget	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	One Year or Less	25	21	18	85.71
2	Less than 5 Years	25	21	4	19.05
3	More than 5 Years	25	21	1	4.76
4	Others	25	21	0	0

(Source: Appendix-V)

Figure No 4.6

Time Period Covered by Budget in Nepalese Insurance Companies



Source: Table No. 4.6

The above table and figure show that, 85.71 percent of total insurance companies prepared short term budget covering time period of one year or less, 19.05 percent of them prepared midterm budget covering the time period of less than five years and the only 4.76 percent of them prepared the long-term budget of more than five years period.

4.2.7 Bases Taken by Nepalese Insurance Companies While Preparing Budget

Table No 4.7

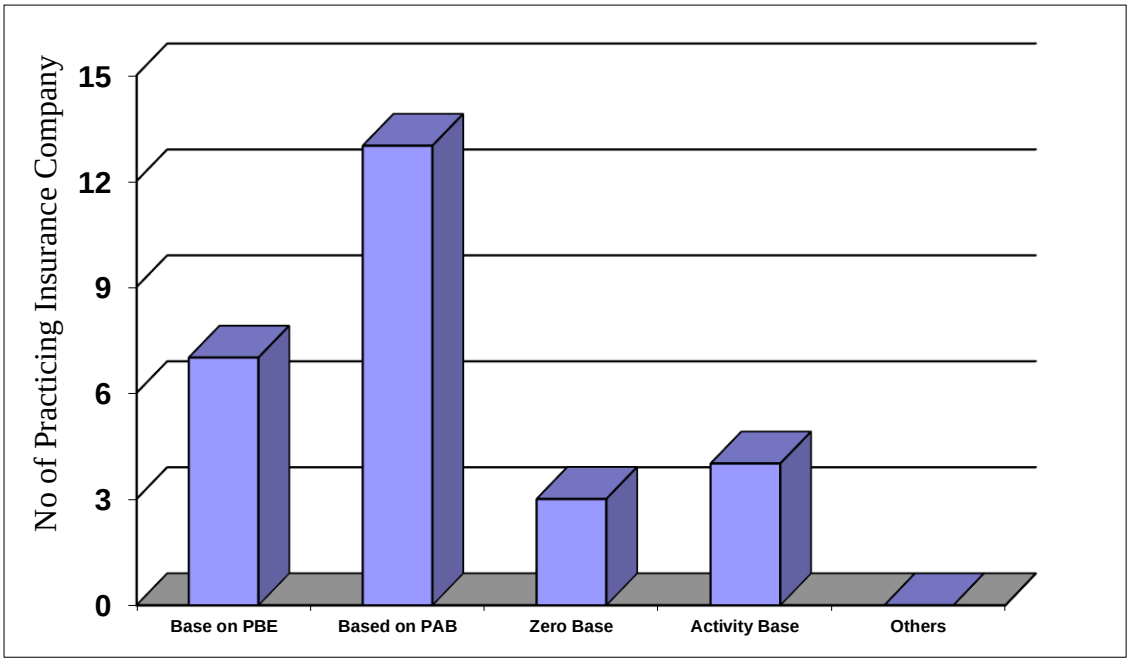
Bases Taken by Nepalese Insurance Companies While Preparing Budget

S. N.	Base of Preparing Budget	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	Based on Previous Budget Estimate	25	21	7	33.33
2	Based on the Past Actual Budget	25	21	13	61.90
3	Zero Base	25	21	3	14.29
4	Activity Base	25	21	4	19.05
5	Others	25	21	0	0

(Sources: Appendix – VI)

Figure No 4.7

Bases Taken by Nepalese Insurance Companies While Preparing Budget



Source: Table No. 4.7

The above table and figure reflect the budget estimation technique practiced by Nepalese insurance companies. It is seen in the table and figure that nearly 61.90 percent of Nepalese insurance companies prepared their budget on the basis of Past Actual Budget (PAB). Similarly, 33.33 percent, 19.05 percent and

14.29 percent of them prepare budget on the basis of the Previous Budget Estimate (PBE), Zero Base Budgeting and Activity Based Budgeting respectively.

4.2.8 Number of Nepalese Insurance Companies Taking One or More Base While Preparing Budget

Table No 4.8

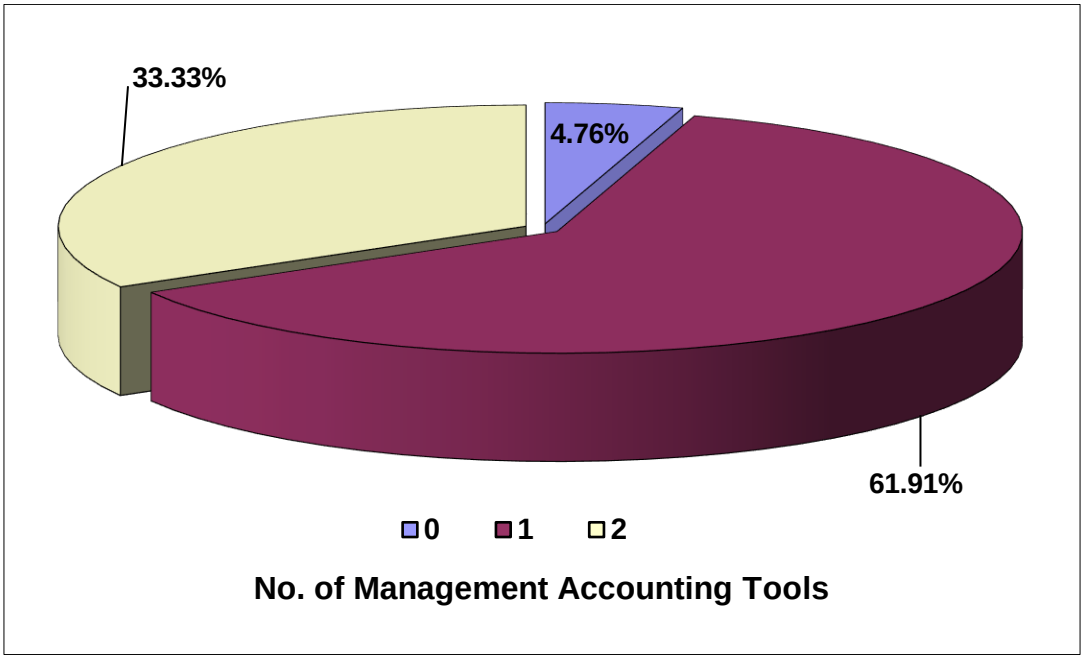
No. of Nepalese Insurance Companies Taking One or More Base While Preparing Budget

Number of Bases for Budget (x)	Insurance Companies		FX
	Number (F)	%	
0	1	4.76	0
1	13	61.91	13
2	7	33.33	14
3	0	0	0
4	0	0	0
5	0	0	0
Total	**N=21**		**∑FX=27**

(Sources: Appendix – VI)

Figure No 4.8

No. of Nepalese Insurance Companies Taking One or More Base While Preparing Budget



Source: Table No. 4.8

Therefore, average number of base for budget preparation per insurance companies

$$\bar{X} = \frac{\sum FX}{N} = \frac{27}{21} = 1.29, \text{ i. e. } 1$$

The above table and Figure shows that normally Nepalese insurance companies have taken only one base for preparing its budget. Out of 21 insurance companies 13 representing 61.91% used one base for preparing their budget, 7 insurance companies representing 33.33% used two bases while preparing their budgets and one company representing 4.76% used not any bases while preparing their budgets.

4.2.9 Capital Budgeting Tools Practiced in Nepalese Insurance Companies

Table No 4.9

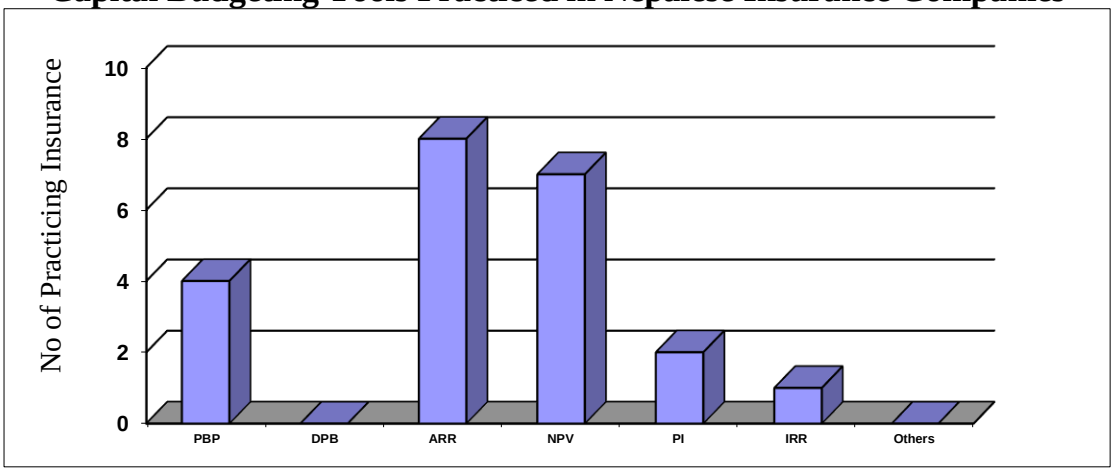
Capital Budgeting Tools Practiced in Nepalese Insurance Companies

S. N.	Capital Budgeting	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	Payback Period (PBP)	25	21	4	19.05
2	Discounted Payback Period (DPB)	25	21	-	-
3	Average Rate of Return (ARR)	25	21	8	38.10
4	Net Present Value (NPV)	25	21	7	33.33
5	Profitability Index (PI)	25	21	2	9.52
6	Internal Rate of Return (IRR)	25	21	1	4.76
7	Others	25	21	-	-

(Source: Appendix -VII)

Figure No 4.9

Capital Budgeting Tools Practiced in Nepalese Insurance Companies



Source: Table No. 4.9

The above table and figure represents the capital investment technique practiced by Nepalese insurance companies. It is revealed in the table and fig. that nearly 38.10 percent of Nepalese insurance companies are practiced average rate of return method for the purpose of capital budgeting analysis, 33.33 percent of them practiced net present value technique .Similarly, 19.05 percent and 9.52 percent of them practiced payback period and profitability index techniques. Only 4.76 percent of the Nepalese insurance companies practiced internal rate of returns as capital budgeting analysis technique.

4.2.10 Number of Capital Budgeting Techniques Practiced in Nepalese Insurance Companies

Table No 4.10

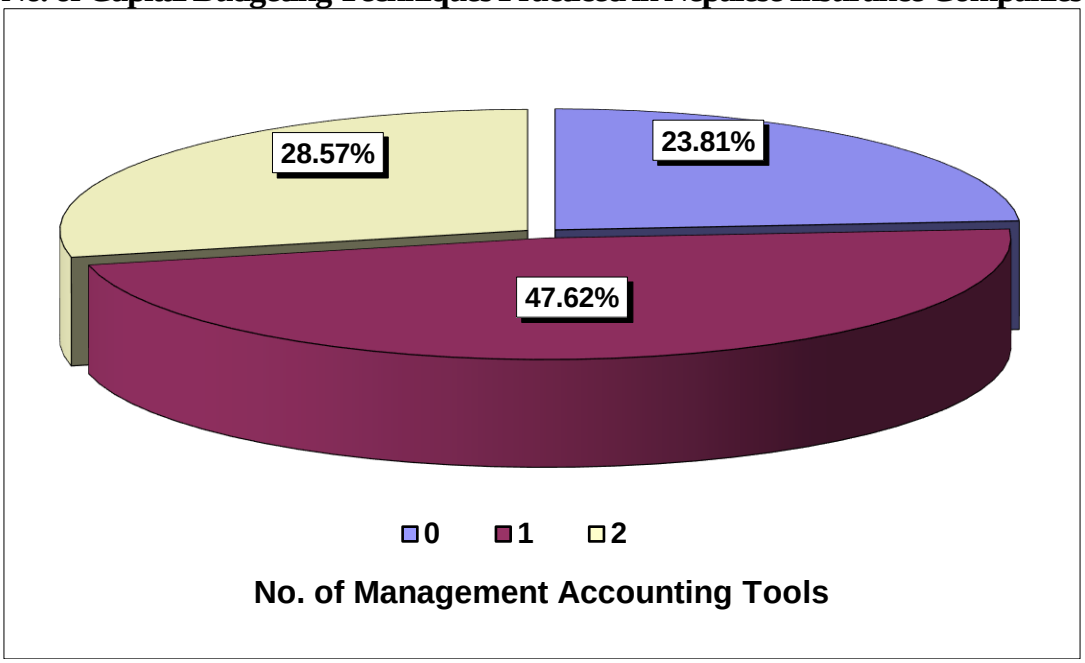
No. of Capital Budgeting Techniques Practiced in Nepalese Insurance Companies

Number of Capital Budgeting Technique (x)	Insurance Companies		FX
	Number (F)	%	
0	5	23.81	0
1	10	47.62	10
2	6	28.57	12
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
Total	**N=21**		**∑FX=22**

(Sources: Appendix –VII)

Figure No 4.10

No. of Capital Budgeting Techniques Practiced in Nepalese Insurance Companies



Source: Table No. 4.10

Therefore, average number of capital budgeting techniques practice by per insurance company

$$\bar{X} = \frac{\sum FX}{N} = \frac{22}{21} = 1.04, \text{ i. e. } 1$$

The table and fig show that, only one capital budgeting technique is practiced by the Nepalese insurance company. The percentage of insurance companies not practicing the capital budgeting technique is 23.81%. Where, 47.62% of the insurance companies used average number of capital budgeting techniques and only 28.57% of them practiced more than average number of capital budgeting techniques.

4.2.11 Techniques Adopted for Estimating Cost and Revenue by Nepalese Insurance Companies

Table No 4.11

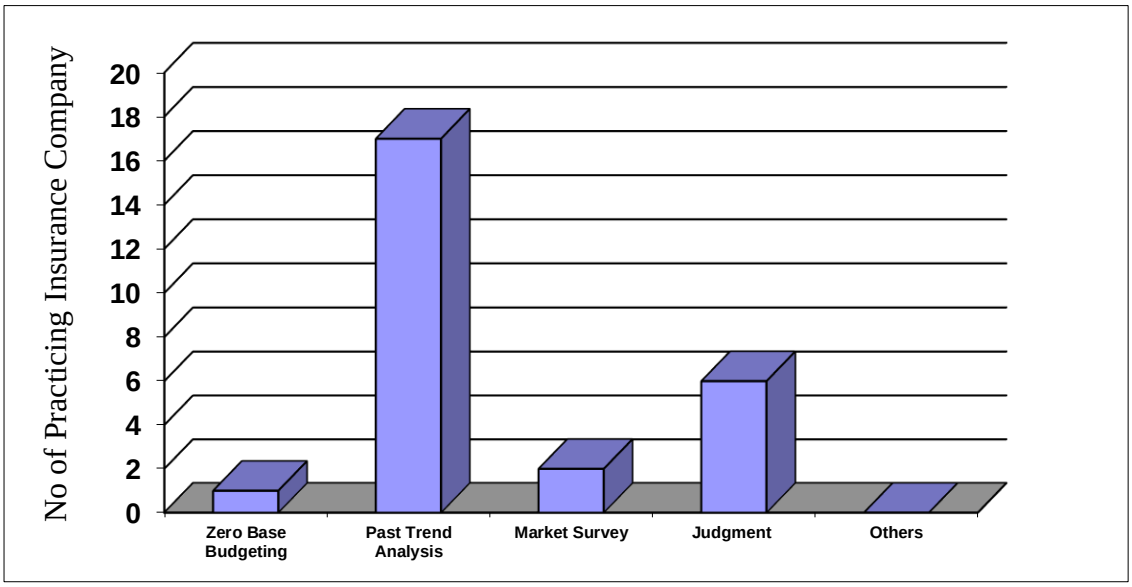
Techniques Adopted for Estimating Cost and Revenue by Nepalese Insurance Companies

S. N.	Cost and Revenue Estimation Techniques	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	Zero Base Budgeting	25	21	1	4.76
2	Past Trend Analysis	25	21	17	80.95
3	Market Survey	25	21	2	9.52
4	Judgment	25	21	6	28.57
5	Others	25	21	-	-

(Source: Appendix -VIII)

Figure No 4.11

Techniques Adopted for Estimating Cost and Revenue by Nepalese Insurance Companies



Source: Table No. 4.11

The above table and figure reflect the cost and revenue estimation technique practiced by Nepalese insurance companies. It is seen in the table that nearly 80.95% of Nepalese insurance companies practiced past trend analysis for their cost and revenue estimation. Similarly, 28.57% and 9.52% of them practiced

judgment technique and market survey technique respectively to estimate the cost and revenue. Only 4.76% of them practiced zero-base technique to estimate their cost and revenue

4.2.12 Number of Cost and Revenue Estimation Techniques Practiced in Nepalese Insurance Companies

Table No 4.12

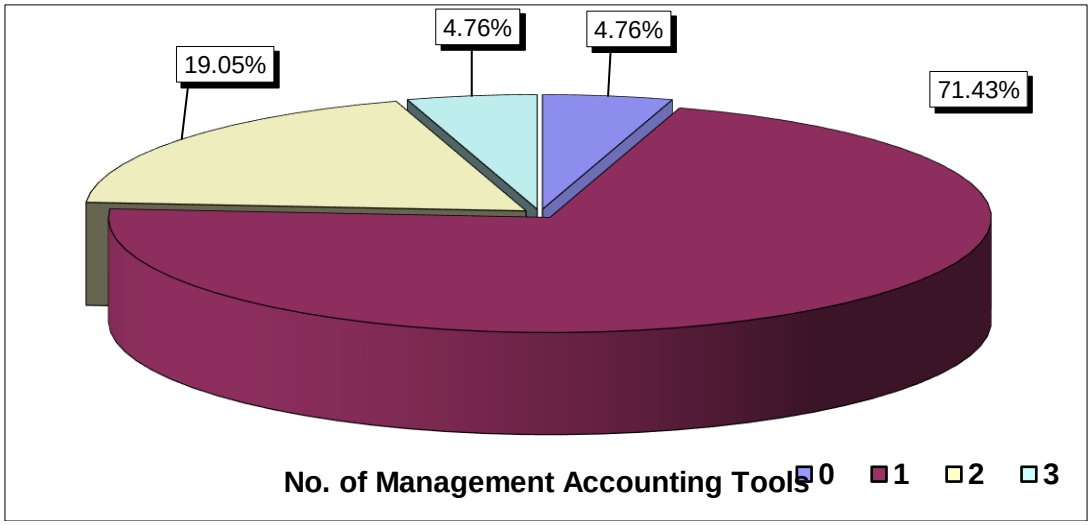
Number of Cost and Revenue Estimation Techniques Practiced in Nepalese Insurance Companies

Number of cost and Revenue Technique Tools (x)	Insurance Companies		FX
	Number (F)	%	
0	1	4.76	0
1	15	71.43	15
2	4	19.05	8
3	1	4.76	3
4	0	0	0
5	0	0	0
Total	**N=21**		**∑FX=26**

(Sources: Appendix-VIII)

Figure No 4.12

Number of Cost and Revenue Estimation Techniques Practiced in Nepalese Insurance Companies



Source: Table No. 4.12

Average number of cost and revenue technique used in each insurance company

$$\bar{X} = \frac{\sum FX}{N} = \frac{26}{21} = 1.23, \text{ i. e. } 1$$

The above table and figure shows that, in average 1 technique of cost estimation and revenue estimation were applied by Nepalese insurance companies. Out of total 21 insurance companies, 71.43% companies practiced one technique of cost and revenue estimation techniques. 23.81% of insurance companies practiced more than the average number of techniques to estimate their cost and revenue and rest 4.76% of them did not practice any types of cost and revenue estimation techniques.

4.2.13 Risk Adjustment Criteria Adopted by Nepalese Insurance Companies while Evaluating Capital Investment

Table No 4.13

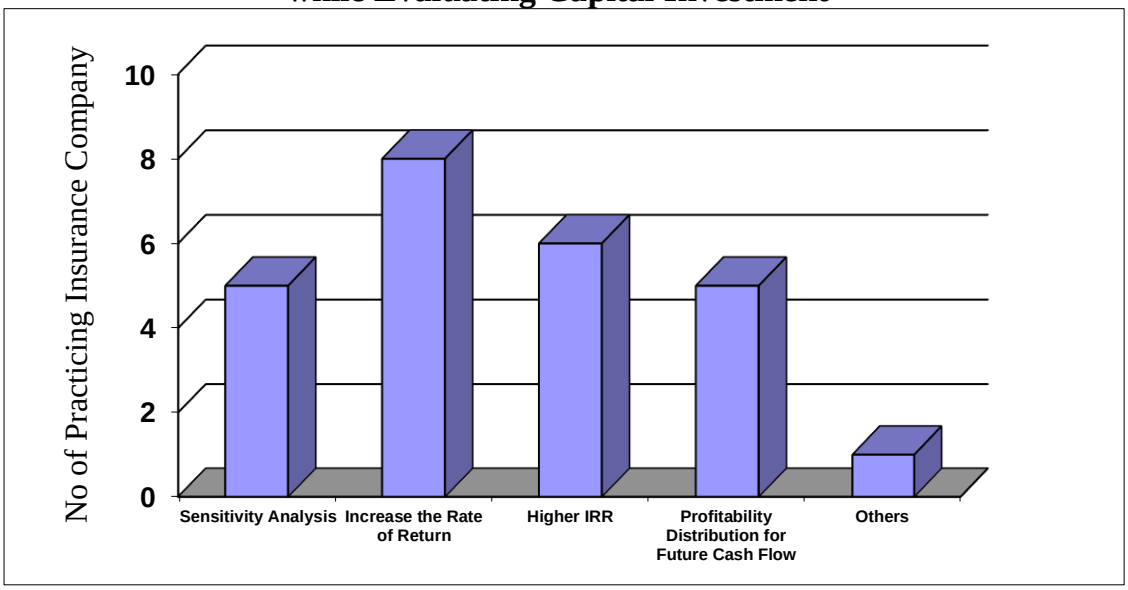
Risk Adjustment Criteria Adopted by Nepalese Insurance Companies while Evaluating Capital Investment

S. N.	Risk Adjustment Criteria	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	Sensitivity Analysis	25	21	5	23.81
2	Increase the Rate of Return	25	21	8	38.10
3	Higher IRR	25	21	6	28.57
4	Profitability Distribution for Future Cash flow	25	21	5	23.81
5	Others	25	21	1	4.76

(Source: Appendix -IX)

Others includes: Guideline provided by Beema Samitee

Figure No 4.13
Risk Adjustment Criteria Adopted by Nepalese Insurance Companies while Evaluating Capital Investment



Source: Table No. 4.13

Above table and figure represent the risk adjustment techniques practiced by insurance companies of Nepal while evaluating capital investment. It is revealed by the table and Fig. that 38.10% of Nepalese insurance companies used Increase the rate of return technique and 28.57% of them used higher IRR technique. Similarly, 23.81% and 23.81% of them use Profitability distribution for future cash flow technique, sensitivity analysis technique respectively. While the rest 4.76% of the insurance company adjust risk on the basis of guideline provided by the Beema Samitee (Insurance Regulatory Authority of Nepal).

4.2.14 Number Risk Adjustment Techniques Practiced by the Insurance Companies of Nepal

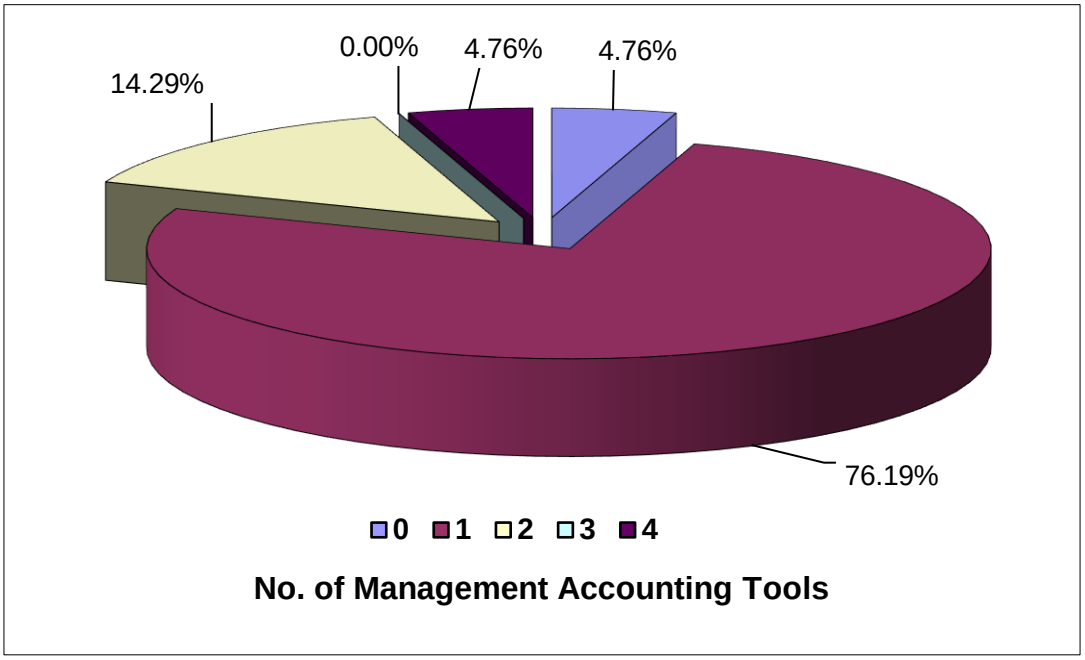
Table No 4.14
Number Risk Adjustment Techniques Practiced by the Insurance Companies of Nepal

Number of Risk Adjustment Criteria (x)	Insurance Companies		FX
	Number (F)	%	
0	1	4.76	0
1	16	76.19	16
2	3	14.29	6
3	0	0	0
4	1	4.76	4
5	0	0	0
Total	**N=21**		**∑FX=26**

(Sources: Appendix – IX)

Figure No 4.14

Number Risk Adjustment Techniques Practiced by the Insurance Companies of Nepal



Source: Table No. 4.14

The average number of risk adjustment technique practiced by each insurance company.

$$\bar{X} = \frac{\sum FX}{N} = \frac{26}{21} = 1.23, \text{ i. e. } 1$$

The table and fig. show that Nepalese insurance companies practiced one risk adjustment technique. The percentage of insurance companies using average number of risk adjustment technique is 76.19% using 2 risk adjustment techniques is 14.29%. Similarly, 4.76% of them used four techniques to evaluate capital investment alternative, whereas 4.76% them used no risk adjustment technique while evaluating capital investment.

4.2.15 Technique of Measuring and Controlling Overall Performance of the Companies at the End of the Accounting Year in Nepalese Insurance Companies

Table No 4.15

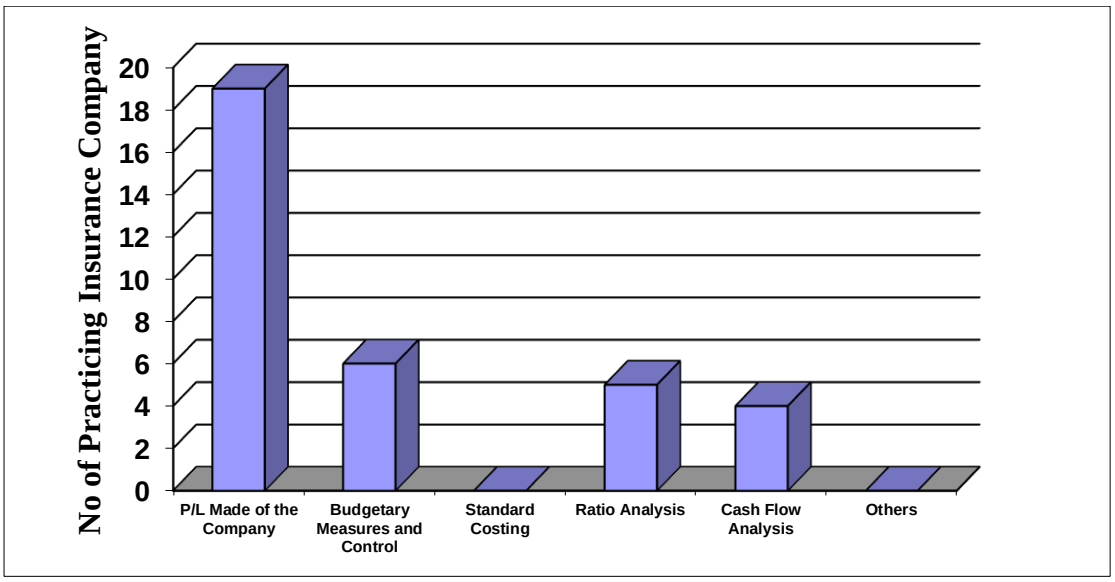
Technique of Measuring and Controlling Overall Performance of the Companies at the End of the Accounting Year in Nepalese Insurance Companies

S. N.	Controlling Technique	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	Profit and Loss Made of the Company	25	21	19	90.48
2	Budgetary measures and control	25	21	6	28.57
3	Standard Costing	25	21	-	-
4	Ratio Analysis	25	21	5	23.81
5	Cash flow Analysis	25	21	4	19.05
6	Others	25	21	-	-

(Source: Appendix -X)

Figure No 4.15

Technique of Measuring and Controlling Overall Performance of the Companies at the End of the Accounting Year in Nepalese Insurance Companies



Source: Table No. 4.15

The above table and figure show the measuring and controlling techniques practiced by insurance companies of Nepal. It is seen that, 90.48% Nepalese insurance companies used to adopt measure and control overall performance of their company at the end of the year on the basis of profit or loss made by the company. Similarly, 28.57%, 23.81% and 19.05% of them practice budgetary control, Ratio analysis, and cash flow analysis technique respectively to measure and control the overall performance of their company at the end of the year. It is also seen in the table that none of the Nepalese insurance companies use standard costing to measure and control the overall performance of the company.

4.2.16 Number of Technique of Measuring and Controlling Overall Performance of the Companies at the end of the Accounting Year Adopted by Nepalese Insurance Companies

Table No 4.16

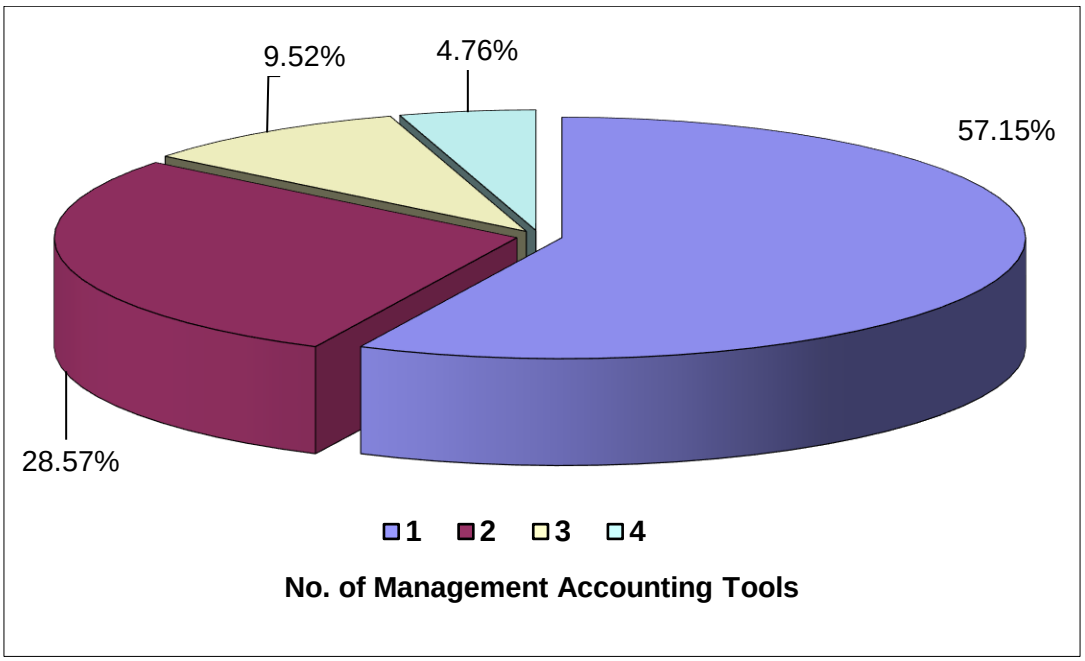
Number of Technique of Measuring and Controlling Overall Performance of the Companies at the end of the Accounting Year Adopted by Nepalese Insurance Companies

Number of Risk Adjustment Criteria (x)	Insurance Companies		FX
	Number (F)	%	
1	12	57.15	12
2	6	28.57	12
3	2	9.52	6
4	1	4.76	4
5	0	0	0
6	0	0	0
Total	**N=21**		**∑FX=34**

(Source: Appendix –X)

Figure No 4.16

Number of Technique of Measuring and Controlling Overall Performance of the Companies at the end of the Accounting Year Adopted by Nepalese Insurance Companies



Source: Table No. 4.16

Therefore,

The average number of year ending overall performance measuring and controlling technique practiced by each insurance company

$$\bar{X} = \frac{\sum FX}{N} = \frac{34}{21} = 1.62, \text{ i. e. } 2$$

It is found that in average 2 techniques were practiced to measure and control overall performance of Nepalese insurance companies at the end of the year. The table 16 and Fig. 16 revealed that 57.15% Nepalese insurance company used below average no. of year ending overall performance measuring and controlling techniques. While, 28.57% of them use exactly average number of year ending overall performance measuring and controlling techniques. And rest 9.52% & 4.76% of them used more than average number of the year ending overall performance and controlling techniques

4.2.17 Factors Effecting Decision Making Procedure in Nepalese Insurance Companies

Table No 4.17

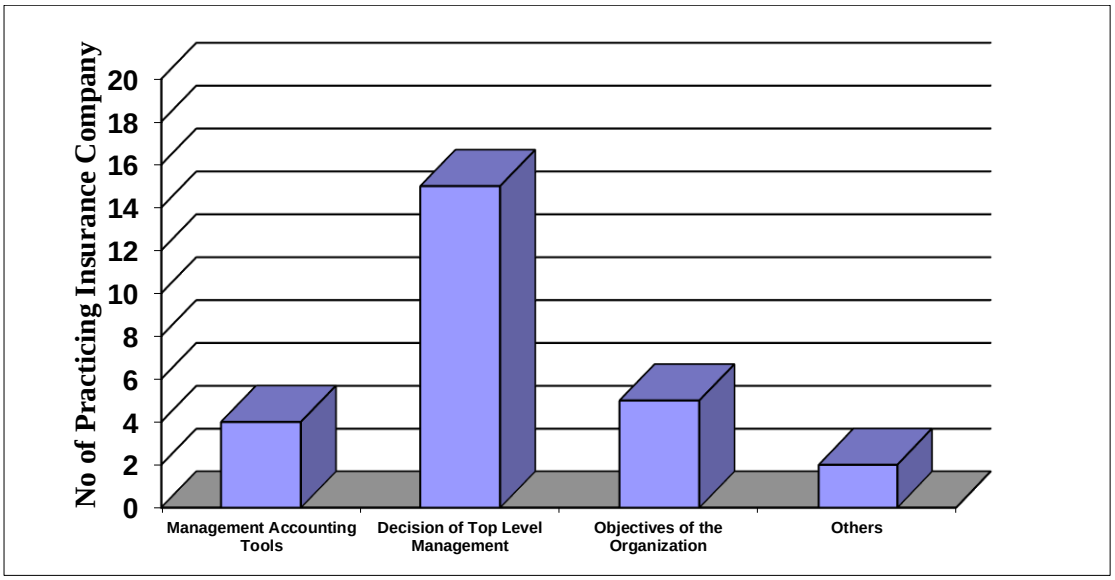
Factors Effecting Decision Making Procedure in Nepalese Insurance Companies

S. N.	Effecting Factor	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	Management Accounting Tools	25	21	4	19.05
2	Decision of Top Level Management	25	21	15	71.43
3	Objectives of the Organization	25	21	5	23.81
4	Others	25	21	2	9.52

(Source: Appendix -XI)

Figure No 4.17

Factors Effecting Decision Making Procedure in Nepalese Insurance Companies



Source: Table No. 4.17

Other includes: Company policy, Different unions' interference

The above table and Fig. show the factors affecting the decision making procedure of the insurance companies of Nepal. It is revealed that, about 19.05 percent of the Nepalese insurance companies take their decision on the basis of the information provided by the management accounting tools. Likewise, 71.43

percent of the companies take their business decision on the basis of guideline provided by top level management. And the rest 23.81 & 9.52 percent of the insurance companies' decision making process is affected by other factors like objective of the organization & company's policy and different union's interference respectively.

4.2.18 Mixed Cost Segregation Techniques Practiced by Nepalese Insurance Companies

Table No 4.18

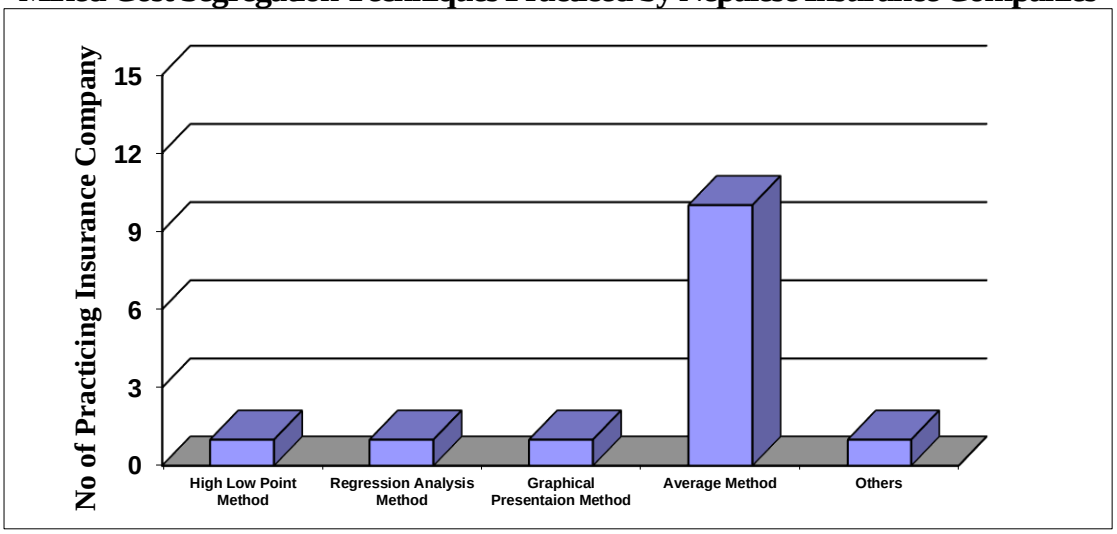
Mixed Cost Segregation Techniques Practiced by Nepalese Insurance Companies

S. N.	Cost Segregation Techniques	No. of Population	No. of Sample	No of Practicing Insurance Company	Percentage (%)
1	High Low Point Method	25	21	1	4.76
2	Regression Analysis Method	25	21	1	4.76
3	Graphical Presentation Method	25	21	1	4.76
4	Average Method	25	21	10	47.62
5	Others	25	21	1	4.76

(Source: Appendix -XII)

Figure No 4.18

Mixed Cost Segregation Techniques Practiced by Nepalese Insurance Companies



Source: Table No. 4.18

Other includes: Guideline provided by Beema Samitee

The above table and Fig. show the method practiced for segregating mixed cost into fixed and variable cost by Nepalese insurance companies. It is seen in the table and fig that 47.62 percent of Nepalese insurance companies used average method for segregating mixed cost into fixed and variable. And 4.76% of them use High-low point method, regression analysis method and graphical presentation method. And 4.76% of them followed the mixed cost segregation guideline provided by Beema Samitee.

4.3 Why Management Accounting Tools are to be Essentially Applied in Every Insurance Companies of Nepal?

In response of aforesaid question, the majority of the respondent's managers, financial controllers, and/or Account managers agreed upon the fact that management accounting tools are to be essentially applied in every insurance companies of Nepal for accurate and timely decision making, effective management information system and cost control of the company. They also see the following possible benefits which can be achieved through the application of management accounting tools in Nepalese insurance companies.

- Rational decision
- Higher profitability
- Uniformity in financial statement
- Better and consistent financial information flow
- For the better marketing strategy materialization
- Helps to risk analysis
- Helps to make rational annual budget and guideline for capital investment
- Perfect financial status to the stakeholders and shareholder
- Easy to prepare financial statement
- Provides relevant information provides to internal users.
- Fast and easy claim settlement
- Objectivity in all working level activities
- Proper analysis of the position of the company

- Upgrade the overall economic benefit to the company.
- Help to compare the current status of the company with its past achievement or with other companies.
- Help to find deviation, consistency and uniformity.
- Better risk management
- Provide premises for the future planning.
- Accurate accounting
- Better service of general public/customers.
- Useful for trend analysis
- Segmental performance practice, etc.

4.4 What are the Problems Appearing the Application of Management Accounting Tools in Nepalese Insurance Companies?

Even though, the respondents belief the aforementioned benefits with the application of management accounting tools in Nepalese insurance companies. They also see the various causes which are creating the problem regarding the application of Management accounting tools in Nepalese insurance companies. Of them the main causes are lack of expertise, ignorance of management commitment etc. This can be explained as follows

- Not fully computerized system initiated in managerial function to gather data and consolidate them for producing information.
- Lack proper Human Resource Management
- Unhealthy competition in insurance market
- Unreliable control by Beema Samitee
- No clear guideline provided by Beema Samitee
- Lack of skilled manpower in regulatory authority board (Beema Samitee)
- Effected by international changes in accounting system in insurance business
- Lack of knowledge in working level people
- Lack of adaptation capacity of changing technology

- Traditional management concept
- Lack of training to the people
- Unique nature of the business
- Not availability of suitable accounting software to the insurance business
- Management accounting tools are suitable only for manufacturing companies rather than in service industries like insurance business.
- Lack of competent staff.
- Ignorance of Management
- Lack of information technology

4.5 Analysis of Hypothesis Test

Hypothesis 1:

Null hypothesis (Ho):- There is no significant relationship between the use of Net Present Value (NPV) and Internal Rate of Return (IRR) techniques as Management Accounting tools. (i.e. practicing of Net Present Value technique and Internal Rate of Return techniques are independent).

Alternative hypothesis (H1):- There is significant relationship between the use of Net Present Value (NPV) and Internal Rate of Return (IRR) techniques as Management Accounting tools. (I.e. practicing of Net present value technique and Internal Rate of Return techniques are dependent).

Test statistics: Under Null Hypothesis (H_0)

For 2×2 contingency table,

$$\chi^2 = \frac{N(ad-bc)^2}{(a+b)(c+d)(a+c)(b+d)}$$

Where, N = Total number of observation

2×2 Contingency Table

Management Accounting Tools	**Practitioner Insurance Companies**		**Row Total**
	Yes	**No**	
NPV	a = 7	c = 14	21
IRR	b = 1	d = 20	21
Column Total	**8**	**34**	**42**

(Source: Appendix-VII)

Since frequencies of cell 'b" is less than 5, Yates correction formula for calculating χ^2 should be applied. For this purpose, 0.5 has to be added to the cell frequency b (i.e. 1) and accordingly remaining frequencies should be adjusted fixing row total and column total. Thus, the adjusted 2 × 2 contingency table will be as follows:

2×2Contingency Table

Management Accounting Tools	**Practitioner Insurance Companies**		**Row Total**
	Yes	No	
NPV	a = 7 - 0.5 = 6.5	c = 14 + 0.5 = 14.5	21
IRR	b = 1+ 0.5 = 1.5	d = 20 – 0.5 = 19.5	21
Column Total	8	34	42

$$\chi^2 = \frac{42(6.5\times19.5-1.5\times14.5)^2}{(6.5+1.5)(14.5+19.5)(6.5+14.5)(1.5+19.5)}$$

$$= \frac{42(126.75-21.75)^2}{8\times34\times21\times21}$$

$$= 3.8603$$

Degree of Freedom (D. F.) = (t- 1) (c-1) = (2 - 1) (2 - 1) = 1

Tabulated Value of χ^2 at 5% level of significance for 1 d. f. is 3.841

Decision: Since the calculated value of χ^2 (i.e. 3.8603) is greater than that of tabulated calculated (3.841), null hypothesis (Ho) is rejected. This concludes that practicing of Net present value (NPV) technique and Internal Rate of Return (IRR) techniques are dependent.

Hypothesis 2:

Null hypothesis (H_0):- There is no significant relationship between the use of Cost-volume profit analysis (CVP) and Flexible Budgeting techniques as Management Accounting tools. (i.e. practicing of BEP analysis technique and Flexible Budgeting technique are independent).

Alternative hypothesis (H_1):- There is significant relationship between the use of Break Even Analysis (BEP) and Flexible Budgeting techniques as Management Accounting tools. (i.e. practicing of BEP analysis technique and Flexible Budgeting technique are dependent).

Test statistics: Under Null Hypothesis (H0)

For 2×2 contingency table,

$$\chi^2 = \frac{N(ad-bc)^2}{(a+b)(c+d)(a+c)(b+d)}$$

Where, N = Total number of observation

2×2Contingency Table

Management Accounting Tools	**Practitioner Insurance Companies**		**Row Total**
	Yes	**No**	
CVPA	a = 5	c = 16	21
Flexible Budgeting	b = 4	d = 17	21
Column Total	**9**	**33**	**42**

(Source: Appendix-II)

Since frequencies of cell 'b" is less than 5, Yates correction formula for calculating χ^2 should be applied. For this purpose, 0.5 has to be added to the cell frequency b (i.e. 4) and accordingly remaining frequencies should be adjusted fixing row total and column total. Thus, the adjusted 2× 2contingency table will be as follows:

2×2Contingency Table

Management Accounting Tools	**Practitioner Insurance Companies**		**Row Total**
	Yes	**No**	
CVPV	a = 5 - 0.5 = 4.5	c = 16 + 0.5 = 16.5	21
Flexible Budgeting	b = 4+ 0.5 = 4.5	d = 17 – 0.5 = 16.5	21
Column Total	**9**	**33**	**42**

$$\chi^2 = \frac{42(4.5\times16.5-4.5\times16.5)^2}{(4.5+4.5)(16.5+16.5)(4.5+16.5)(4.5+16.5)}$$

$$= \frac{42(74.25-74.25)^2}{9\times33\times9\times33}$$

$$= 0$$

Degree of freedom (d f) = (t- 1) (c-1) = (2 - 1) (2 - 1) = 1

Tabulated Value of X2 at 5% level of significance for 1 d. f. is 3.841

Decision: Since the value of χ^2 (i.e. 0) is less than that of tabulated calculated (0), null hypothesis (H_0) is accepted. This concludes that practicing of BEP analysis technique and Flexible Budgeting technique are independent as management accounting tools.

4.6 Major Findings

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

- While analyzing the application of management accounting tools practiced in Nepalese insurance companies for planning, controlling and decision making, it was found that Ratio Analysis, Cash flow statement and capital Budgeting are widely practiced representing 71.43%, 66.67% and 47.62% respectively out of total 21 insurance companies. Similarly, Responsibility Accounting, Cost-volume Profit Analysis and flexible budgeting tools also were practiced representing 28.57%, 23.81%, and 19.05%, respectively. But other management accounting tools including standard costing, and Zero-Base Budgeting were least in practice, representing only 4.76% each.
- In average four management accounting tools were practiced in Nepalese insurance companies. Out of total sample number of insurance companies, 38.10% did not meet the average number of tools used, while 33.33% met the exactly average number of management accounting tools and remaining 28.57% companies were practiced more than average number of management accounting tools.
- While analyzing the budget preparing system of Nepalese insurance companies, it is found that Finance Department prepared the budget in 95.24% of the insurance companies. In 14.29% insurance companies, Budget committee prepared the budget. In 9.52 % of the insurance companies, head office and chief executive officer made the budget for the company. The involvement of outside experts and planning department in budget preparation system was almost nill in Nepalese insurance companies.
- In average one system was applied to prepare budget in each insurance company of Nepal, out of total insurance companies 95.24% use one system for the preparation of budget. And 4.76% of insurance companies have not applied any systems for preparing its budget.
- With regard to functional budget, 57.14% Nepalese insurance companies prepare over all master budget, 28.57% insurance companies prepare operational budget. And only 9.52% of the companies prepare

cash budget. Hence, It is seen that, majority of the insurance companies practices the overall master budget.

- With regard period of budget, 85.71 percent of total insurance companies prepare short term budget covering time period of one year or less, 19.05 percent of them prepare midterm budget covering the time period of less than five years and the only 4.76 percent of them prepare the long-term budget of more than five years period.
- Actual expenses of the previous year and past budget were widely taken as the basis in Nepalese insurance companies to prepare budget, representing 61.90%. The previous budget, Activity Based Budgeting and zero base budgeting were also taken as a basis for preparing budget representing 33.33%, 19.05% and 14.29% respectively.
- In average normally an insurance company of Nepal used only one base for preparing its budget in average. Out of 21 insurance companies 13 (i.e. 61.91%) insurance companies are considered exactly equal to the average number of base for preparing their budget and 7 (i.e.33.33%) insurance companies use two bases while preparing their budget and reaming one (4.76) of insurance company has not use any base while preparing their budget.
- With regards to Capital Budgeting techniques practiced by Nepalese insurance companies, it is revealed that nearly 38.10 percent of Nepalese insurance companies are used average rate of return method for the purpose of capital budgeting analysis, 33.33 percent of them practiced net present value technique .Similarly, 19.05 percent and 9.52 percent of them practiced payback period and profitability index techniques respectively for analyzing capital budget. Only 4.76 percent of the Nepalese insurance companies practiced internal rate of returns as capital budgeting analysis technique. It shows that the capital budgeting techniques were not widely practiced in Nepalese insurance companies.
- In average only one technique was practiced in Nepalese insurance companies to make capital budgeting decision. Out of total sample

number of insurance companies, 23.80% insurance companies did not apply capital budgeting techniques. Whereas, 47.62% companies applied exactly the average number of capital budgeting techniques, and 28.57% companies applied more than average number of capital budgeting techniques while purchasing fixed assets or making long-teen investment decision.

- While analyzing cost and revenue estimation techniques practiced by insurance companies, it was found that past trend analysis techniques was widely practiced representing nearly 80.95% of Nepalese insurance companies for estimating cost and revenue. Similarly, 28.57% and 9.52% of them practice judgment analysis and market survey techniques respectively to estimate the cost revenue. Only 4.76% of them practiced zero-base based budgeting to estimate their cost and the cost of the company.
- In average one technique was practiced for cost and revenue estimation in Insurance companies of Nepal. Out of 21 insurance companies, 71.43% companies exactly adopted the average number of tools, 4.76% of them did not practice any type of cost and revenue techniques and 23.81% companies practiced more than average number of cost and revenue estimation techniques.
- To adjust risk while evaluating capital investment 38.10% of Nepalese insurance companies used Increase the rate of return technique and 28.57% of them use higher IRR technique. Similarly, 23.81 % and 23.81% of them used Estimation of profitability distribution of future cash flow technique, sensitivity analysis technique respectively. While rest 4.76% of the insurance company adjust risk for capital investment on the basis of guideline provided by the Beema Samitee (Insurance Regulatory Authority of Nepal).
- In average, only one risk adjustment technique was practiced by Nepalese insurance companies. 76.19% of insurance companies using average 1 number of risk adjustment technique. Similarly, 14.29% & 4.76% of them used two and four techniques to evaluate capital

investment alternative respectively. whereas 4.6% them did not use risk adjustment technique while evaluating capital investment.

- To measure and control the overall performance of the company at the end of the year, 90.48% Nepalese insurance companies used profit or loss made by the company. Similarly, 28.57%, 23.81% and 19.05% of them practiced budgetary control, Ratio analysis, and cash flow analysis technique respectively to measure and control the overall performance of their companies at the end of the year. It is also seen in the table that no Nepalese insurance companies use standard costing to measure and control the overall performance of the company.
- In average, two techniques were practiced to measure and control overall performance of Nepalese insurance companies at the end of the year. It seems that 57.15% Nepalese insurance company used below average no. of year ending overall performance measuring and controlling techniques. While, 28.57% of them use exactly average number of year ending overall performance measuring and controlling techniques. And rests 14.28 % of them used more than average number of the year ending overall performance and controlling techniques.
- Regarding the factors affecting the decision making procedure of the insurance companies of Nepal, It is found that, about 19.05 percent of the Nepalese insurance companies made decision on the basis of the information provided by the management accounting tools. Likewise, 71.43 percent of the companies make their business decision on the basis of guideline provided by top level management. And rest 23.81 & 9.52 percent of the insurance companies' decision making process was affected by other factors like company's policy and different union's interference respectively.
- With regard to cost segregation, most of the respondents did not use the applicability of segregation of cost into fixed and variable. Even though some insurance companies had the practice of segregating cost into variable and fixed. 47.62 percent of Nepalese insurance companies used average method for segregating mixed cost into fixed and variable. And

4.76% of them used High-low point method, regression analysis method and graphical presentation method. And 4.76% of them followed the mixed cost segregation guideline provided by Beema Samitee.

- Regarding the service pricing techniques practiced in the Nepalese insurance companies, it is found that the companies are not allowed to determine the service price themselves; hence they have to follow the direction provided by the Insurance Regulatory board of Nepal "Beema Samitee".
- While analyzing open-end question, it was found that majority of financial manager an account managers agreed on the fact that management accounting tools were to be essentially applied in every Nepalese insurance companies for accurate and timely decision making, effective management information system, cost control, higher profitability, better and consistent financial information and so on.
- Although there are so many benefits, there are many constraints in the application of management accounting tools in Nepalese insurance companies. Some of them were identified as lack of expertise, lack of information about tools, high cost, lack of top management commitment, strict regulation of insurance authority board etc.

1. **Hypothesis findings:**

- **Hypothesis 1**: While testing hypothesis relating to practice of Net present value (NPV) and Internal rate of return (IRR) tools in Nepalese insurance companies, it is found that there is significant relationship between the practice of NPV and IRR as management accounting tools in Nepalese insurance companies, i.e. the practice of net present value technique and internal rate of return technique are dependant.
- **Hypothesis 2:** While testing hypothesis relating to practice of Cost-volume Profit analysis (CVP) and Internal Flexible budgeting tools in Nepalese insurance companies, it is found that there is no significant relationship between the practice of BEP and Flexible budgeting as management accounting tools in Nepalese insurance companies, i.e. the

practice of CVP analysis and flexible budgeting technique are independent.

CHAPTER-FIVE

SUMMARY, CONCLUSION & RECOMMENDATION

5.1 Summary

Management is an art of getting things done through other people by using the means of planning, organizing, staffing, directing and controlling to achieve organizational goal effectively and efficiently in a dynamic environment. Management has to concentrate its activities on the mobilization of organization's availed scarce resources in effective and efficient manner. Managerial skills and competencies are keys for organization. It is equally important for the organization no matter how it is commercial or non-commercial and public or private.

Insurance companies are one sector of economy as they safeguard against the risk that exists in business as well as in human daily life. Every insurance company has limited resources which should be mobilized in such a way that it can get its best. For better utilization of resources, different tools and techniques have been developed. Among them, management accounting tools have proved beneficial in different aspects of managerial activities.

Management accounting is one of the important disciplines of accounting. It is the branch of accounting whose main objective is to help managers in overall managerial activities by providing various information and helping in planning, controlling and decision making. Management accounting acts as a strategic business partner in support of managerial role in rational decision making.

Cost segregation, Cost-volume-profit analysis, Responsibility Accounting, Cash flow statement, standard costing, Zero-based Budgeting are the major tools of management accounting. Whether the Nepalese insurance companies are getting benefits from those management accounting tools or not? To identify these facts, this research was conducted.

The study was done with an objective to examine the present practice of management accounting tools in the Nepalese Insurance companies, and to identify the area where management accounting tools can be applied to strengthen the financial position of insurance companies. With respect to this objective, the present research has explored the real position of applicability of management accounting tools in Nepalese Insurance companies.

As per the nature and demand of the study, survey type research design was adopted with descriptive and analytical approach. The research is mostly based on primary source of information. Secondary source of data was also used. The data was collected from the respective insurance companies by distributing structured questionnaire. The raw data was applied to analyze and interpret the findings. The statistical tool chi-square χ^2 was used to test the assumptions.

5.2 Conclusion

Management accounting is a new discipline and still in developing stage in the context of modern business organization. Different types of management accounting tools and techniques are evolving as a new dimension to facilitate the management to perform the better managerial jobs covering from planning to control. These various types of management accounting tools and techniques are taught in the university college. However, they are found not fully practiced in Nepalese Insurance Companies. It is the realities of gap between the theory and practice.

On the basis of data analysis, it can be concluded that management accounting tools like Capital Budgeting, Ratio Analysis, and Cash Flow Statement were widely practiced in Nepalese insurance companies. Similarly, Cost-volume-profit Analysis, Responsibility Accounting, Activity Based budgeting were moderately practiced. The other management accounting tools like standard costing and Zero-based budgeting were in practiced by few Nepalese insurance companies. It can also be concluded that the main reason for not practicing standard costing in Nepalese Insurance is determination of premium by the insurance regulatory board (Beema Sameeti). In the context, insurance

companies are not independent to determine the price (premium) themselves. Accordingly, the main reason for not practicing zero-base budgeting was lack of proper knowledge about the tool.

Finally, it can be concluded that the Insurance companies of Nepal are in infant stage with respect to the application of modern management accounting tools. Yet, they are trying to adopt such tools and techniques to cope with the future expected opportunities and challenges to be faced due to the accession of globalization.

5.3 Recommendation

The management accounting tools and techniques in every type of organization are not the optional but also the compulsion in the better performance of the entity. Management accounting plays a significant role for every type of business organization. It provides the key ideas, guidelines and strategies to the management for better performance of managerial functions.

Economic liberalization, globalization, changing nature of human behavior and technological advancements are making complexity to every organization. To meet the expected challenges to grab the opportunities, the organization must practice the management accounting tools and techniques. Advance management accounting tools and techniques have been proved themselves as great helping tools for better utilization of scarce resources and achieving the organization goals by dynamic environment.

The analysis and interpretation of application of management accounting tools helped to draw some findings. Concerning these findings, it may be appropriate to make some suggestions and recommendations. It will be helpful to the concerned stakeholders of an organization to bring some improvements in Nepalese insurance companies through application of management accounting tools. Thus, the following recommendations were made on the basis of findings:

- To strengthen the competitiveness of Insurance companies and carry out managerial activities effectively and efficiently, the use of management

accounting tools and techniques are recommended to practice. For planning activities; tools like cost estimation, classification and allocation, profit measurement and recognition, cost volume- profit analysis, can be applied. It should be noted that while implementing any tool of management accounting it is suggested to analyze cost and benefits of the specific tools.

- Nepalese insurance companies are recommended not to use only traditional tools of accounting like past budget, past trend analysis etc. Rather, they should move towards the application of new, advance and modern management accounting tools such as target cost, activity based costing zero-base budgeting, etc. for smooth operation of Insurance companies.
- While preparing budget, only past actual expenses and past budget estimate should not be taken as bases. Along with these, zero base budgeting and environmental analysis should also be taken into consideration. It is because what had happened in the past cannot occur in the future.
- In budget preparation and planning process, there should be proper co-ordination between planning department, finance department and the governing boards of the insurance companies. If possible the companies should hire the professional experts for planning purpose.
- It was found that, in most of the Nepalese insurance companies they have considered profit and loss made by the company as base to measure and to control overall performance of the company. So, it is recommended that, insurance companies should considered other control mechanism like budgetary control & measure, ratio analysis and cash flow, so that the company can examine the real condition of the company from all the aspects, consequently they will be able to take proper decision for the future.

- Nepalese Insurance companies should prepare not only short-term annual budget, but also prepare medium term and long-term budget with specific mission, vision, goals and objectives.
- Cost segregating approach is found almost nil in Nepalese insurance companies. It is recommended that it should be applied by all insurance companies.
- It is recommended that, Nepalese Insurance Companies that should be applied Discounted Payback Period, Net Present Value, Internal Rate of Return Rate of Return, Profitability Index and Modified Internal Rate of Return should be depending upon the requirement making long-term investment.
- Cost estimation, segregation and allocation must be used by every Nepalese Insurance companies. It helps management for productive managerial functions covering from planning to control. So it is recommended to segregate of every Insurance company.
- It was found that most of the Insurance companies practiced only past trend analysis to forecast the cost and revenue of the future period. However what happened in the past might not happen in the future. So for the estimation/forecast of cost of insurance company, other techniques like Zero-base budgeting, Market survey, Judgment analysis should also be used.
- Academics who have better knowledge about the management accounting tools and techniques, should put an effort to develop environmental friendly, tools and techniques into practice, so that the existing gap between theory and practice can be somehow shortened. And the Nepalese insurance companies would be benefited from the use of management accounting.
- Out of total profit made by the insurance companies, small portion should be allocated for research and development program so that new tools and techniques can be developed and adapted in insurance companies.

- For effective implementation of management accounting tools and techniques, a separate department should be set up. Management accounting staff should be given opportunities for short-term on the job training program. If it is not feasible for them, then they need to take service from consultants.
- Internal and external information are needed for proper application of management accounting tools and techniques. Therefore, it is recommended to setup management accounting information system. It helps to get feedback information regularly.
- Interaction between academician and business organization is a must. Therefore it is recommended that insurance companies should create an atmosphere of interaction between the academician and the Insurance companies. The insurance can be benefited from academicians' knowledge about new tools and techniques of management accounting.
- Academicians should make their best effort to bring, advance management accounting tools, for conducting various programs like seminars, workshop etc. at national, regional or local level. Short-term on-the-job training packages on management accounting should be offered for Managers of insurance companies to acquaint them with the appropriate techniques of management accounting and to update their knowledge and skills.

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APPENDIX-I

REASEARCH QUESTIONNAIRE

Name of the company……

Address of the company ……

Name of the respondent (optional)……

Designation of the respondent……

Dear Sir/Madame,

Please kindly tick (√) on the given alternative of each question concerning management accounting practices used in your esteemed Insurance Company. I would like to make you that the information filled by you will be kept confidential and will not be published.

1. **Please mention the Management Accounting tools practiced in your insurance company for planning, controlling and decision making?**
   - a) Break-even Analysis (BEP) [ ]
   - b) Responsibility Accounting [ ]
   - c) Capital Budgeting [ ]
   - d) Ratio Analysis [ ]
   - e) Cash Flow Analysis [ ]
   - f) Standard Costing [ ]
   - g) Zero Based Budgeting [ ]
   - h) Flexible Budgeting [ ]
2. **If your insurance company has not practiced any of the above mentioned tools, what might be the reason?**
   - a) No information [ ]
   - b) High cost / quite expensive [ ]
   - c) Lack of expertise [ ]
   - d) Other, if any……..

3. Who is responsible to prepare the budget in your company?

a) Finance department [ ]

b) Planning department [ ]

c) Budget committee [ ]

d) Outside experts [ ]

e) Other, if any……

4. What type of the budget does your company practice (based on nature)?

a) Over all master budget [ ]

b) Cash budget only [ ]

c) Operational budget only [ ]

d) Other, If any…….....

5. What type of the budget does your company practice (based on time period)?

a) Short-term budget (1year or less) [ ]

b) Medium-term (Less than 5 years) [ ]

c) Long-term budget (more than 5 years) [ ]

d) Others, if any……

6. On what basis, does your company prepare the budget?

a) Based on the previous budget estimate [ ]

b) Based on the past actual budget [ ]

c) Zero base [ ]

d) Activity based [ ]

E) Other, if any……

7. Which of the following capital budgeting tools is being practiced in your company while making decision of long-term investment or purchase of fixed assets?

a) Payback period (PBP) [ ]

b) Discounted payback period (DPB) [ ]

c) Average rate of return (ARR) [ ]

d) Net present value (NPV) [ ]

e) Profitability index (PI) [ ]

f) Internal rate if return (IRR) [ ]

g) Other, if any……

8. Which pricing technique does the company practice in your company?

a) Full cost-based pricing [ ]

b) Variable cost-based pricing [ ]

c) Target return on investment pricing [ ]

d) Activity based cost pricing [ ]

e) Other, if any……

9. Which of the tool does your company practice to segregate mixed cost into fixed and variable?

a) High-low point method [ ]

b) Regression analysis method [ ]

c) Graphical presentation method [ ]

d) Average method [ ]

e) Other, if any……

10. Which technique does your insurance company practice for cost and revenue estimation?

a) Zero base budgeting [ ]

b) Past-trend analysis [ ]

c) Market survey [ ]

d) Judgment analysis [ ]

e) Other, if any ……

11. How does your company evaluate the risk while making capital investment decision?

a) Sensitivity analysis [ ]

b) Increase the rate of return [ ]

c) Higher IRR [ ]

d) Estimation of profitability distribution of future cash flow [ ]

e) Other, if any……..

12. **How does your company measure and controls the overall performance of the company at the end of the accounting year?**
    a) Profit/loss made by the company [ ]
    b) Budgetary measures and control [ ]
    c) Standard costing [ ]
    d) Ratio analysis [ ]
    e) Cash flow analysis [ ]
    f) Other, if any……
13. **What are the major factors, which affect decision making procedure in your organization?**
    a) Management accounting tools [ ]
    b) Decision of top level management [ ]
    c) Objective of the organization [ ]
    d) Other, if any……
14. **If you feel any problem regarding the application of the management accounting in Nepalese insurance companies, what would be the possible reasons in your opinion?**
    a) …… …….
    b) …….
    c) ……..
    d) ……
15. **If you think that the management accounting tools are to be practiced essentially in Nepalese insurance companies, in your opinion what would be the potential benefits?**
    a) …….
    b) …….
    c) ……..
    d) ……..

Signature Seal of the Company

Date:

Thanking You for Your Kind Co-operation

Appendix-II

Management Accounting Tools Practiced in Nepalese Insurance Companies

S. N.	Insurance Companies	Management Accounting Tools								
		CVP Analysis	Responsibility Accounting	Capital Budgeting	Ratio Analysis	Cash Flow Analysis	Standard Costing	Zero Base Budgeting	Flexible Budgeting	Total Tools
1	NLGICL	-	-	√	√	√	-	-	-	3
2	SICL	√	-	-	-	-	-	-	-	1
3	NIL	-	√	√	√	√	-	-	√	5
4	ALICO	-	-	√	√	√	-	-	-	3
5	RBS	-	-	-	-	-	-	-	-	-
6	LGICL	-	√	-	-	-	-	√	√	3
7	NLICL	-	-	-	-	√	-	-	-	1
8	PICL	-	-	-	√	√	-	-	√	3
9	LICNL	√	-	-	-	-	-	-	-	1
10	EICL	√	-	-	√	√	-	-	-	3
11	NBICL	-	-	√	√	√	-	-	-	3
12	AICL	-	-	-	√	√	-	-	-	2
13	NLICL	√	√	√	√	√	-	-	-	5
14	NICL	-	√	√	√	√	-	-	-	4
15	SIL	-	-	√	√	√	√	-	-	4
16	HGICL	-	√	√	√	√	-	-	-	4
17	UICL	-	√	√	√	√	-	-	-	4
18	PICNL	-	-	-	√	-	-	-	-	1
19	NAICL	√	-	-	√	√	-	-	-	3
20	TOICL	-	-	-	-	-	-	-	√	1
21	SICL	-	-	√	√	-	-	-	-	2
Total		**5**	**6**	**10**	**15**	**14**	**1**	**1**	**4**	**56**

(√) = Practiced (-) = Not Practiced

Appendix-III

The Responsible Department for Budget Preparation in Nepalese Insurance Companies

S.N.	Insurance Companies	Responsible Department for Budget Preparation					
		Finance Department	Planning Department	Budget Committee	Outside Export	Others	Total Tools
1	NLGICL	√	-	-	-	-	1
2	SICL	√	-	-	-	-	1
3	NIL	√	-	-	-	-	1
4	ALICO	√	-	-	-	-	1
5	RBS	√	-	-	-	-	1
6	LGICL	√	-	√	-	-	2
7	NLICL	√	-	-	-	-	1
8	PICL	√	-	-	-	-	1
9	LICNL	√	-	-	-	-	1
10	EICL	√	-	-	-	-	1
11	NBICL	√	-	√	-	-	2
12	AICL	√	-	-	-	-	1
13	NLICL	√	-	-	-	¥	2
14	NICL	√	-	√	-	-	2
15	SIL	√	-	-	-	-	1
16	HGICL	√	-	-	-	-	1
17	UICL	√	-	-	-	-	1
18	PICNL	√	-	-	-	-	1
19	NAICL	√	-	-	-	-	1
20	TOICL	-	-	-	-	∞	1
21	SICL	√	-	-	-	-	1
Total		**20**	**-**	**3**	**-**	**2**	**25**

(√) = Practiced (¥) = CEO of the Company (∞) = Head office (-) = Not Practiced

Appendix-IV

Types of Budget Prepared by Insurance Companies of Nepal

S.N.	Insurance Companies	Types of Budget				
		Overall Master Budget	Cash Budget Only	Operational Budget	Others	Total Tools
1	NLGICL	√	-	-	-	1
2	SICL	√	-	-	-	1
3	NIL	√	-	-	-	1
4	ALICO	√	-	-	-	1
5	RBS	-	-	√	-	1
6	LGICL	√	-	-	-	1
7	NLICL	-	-	√	-	1
8	PICL	√	-	-	-	1
9	LICNL	-	√	-	-	1
10	EICL	√	-	-	-	1
11	NBICL	√	-	-	-	1
12	AICL	-	√	-	-	1
13	NLICL	√	-	-	-	1
14	NICL	-	-	√	-	1
15	SIL	√	-	-	-	1
16	HGICL	-	-	√	-	1
17	UICL	-	-	√	-	1
18	PICNL	√	-	-	-	1
19	NAICL	√	-	-	-	1
20	TOICL	-	-	-	-	0
21	SICL	-	-	√	-	1
Total		**12**	**2**	**6**	**-**	**20**

(√) = Practiced (-) = Not Practiced

Appendix-V

Period Covered Budget Prepared by Insurance Company

S.N.	Insurance Companies	Period Covered Budget				
		One Year or Less	Less than 5 Years	More than 5 Years	Others	Total Tools
1	NLGICL	√	-	-	-	1
2	SICL	√	-	-	-	1
3	NIL	√	-	-	-	1
4	ALICO	-	√	-	-	1
5	RBS	√	-	-	-	1
6	LGICL	-	√	-	-	1
7	NLICL	√	-	-	-	1
8	PICL	√	-	-	-	1
9	LICNL	√	-	-	-	1
10	EICL	√	-	-	-	1
11	NBICL	√	-	-	-	1
12	AICL	√	-	-	-	1
13	NLICL	√	-	-	-	1
14	NICL	√	-	-	-	1
15	SIL	√	√	-	-	2
16	HGICL	√	-	-	-	1
17	UICL	√	√	-	-	2
18	PICNL	√	-	-	-	1
19	NAICL	√	-	-	-	1
20	TOICL	√	-	-	-	0
21	SICL	-	-	√	-	1
Total		**18**	**4**	**1**	**-**	**23**

(√) = Practiced (-) = Not Practiced

Appendix-VI

Basis of Preparing Budget in Nepalese Insurance Companies

S.N.	Insurance Companies	Basis of Preparing Budget					
		Based on the PBE	Based on PAB	Zero Base	Activity Base	Others	Total Tools
1	NLGICL	-	√	-	-	-	1
2	SICL	-	-	√	-	-	1
3	NIL	√	√	-	-	-	2
4	ALICO	-	√	-	√	-	2
5	RBS	√	-	-	-	-	1
6	LGICL	√	-	√	-	-	2
7	NLICL	-	√	-	-	-	1
8	PICL	-	√	-	-	-	1
9	LICNL	-	√	-	-	-	1
10	EICL	-	√	-	-	-	1
11	NBICL	-	√	-	√	-	2
12	AICL	-	√	-	-	-	1
13	NLICL	√	-	-	√	-	2
14	NICL	√	-	-	-	-	1
15	SIL	√	√	-	-	-	2
16	HGICL	-	√	-	-	-	1
17	UICL	√	-	-	√	-	2
18	PICNL	-	√	-	-	-	1
19	NAICL	-	√	-	-	-	1
20	TOICL	-	-	√	-	-	1
21	SICL	-	-	-	-	-	-
Total		**7**	**13**	**3**	**4**	**-**	**27**

(√) = Practiced (-) = Not Practiced

Appendix-VII

Tools Used to Make Decision Regarding the long Term Investment or Purchase of Fixed Assets in Nepalese Insurances Companies

S.N.	Insurance Companies	Tools							
		Payback Period	Discounted Payback Period	Average Rate of Return	Net Present Value	Profitability Index	Internal Rate of Return	Flexible Budgeting	Total Tools
1	NLGICL	-	-	√	-	-	-	-	1
2	SICL	-	-	-	√	-	-	-	1
3	NIL	√	-	√	-	-	-	-	2
4	ALICO	-	-	√	-	√	-	-	2
5	RBS	-	-	-	-	-	-	-	-
6	LGICL	-	-	√	√	-	-	-	2
7	NLICL	-	-	-	-	√	-	-	1
8	PICL	-	-	-	-	-	-	-	-
9	LICNL	-	-	√	-	-	-	-	1
10	EICL	-	-	-	√	-	-	-	1
11	NBICL	√	-	-	-	-	-	-	1
12	AICL	-	-	-	-	-	-	-	-
13	NLICL	-	-	-	√	-	-	-	1
14	NICL	-	-	-	-	-	-	-	-
15	SIL	-	-	-	√	-	√	-	2
16	HGICL	-	-	√	-	-	-	-	1
17	UICL	-	-	-	√	-	-	-	1
18	PICNL	√	-	√	-	-	-	-	2
19	NAICL	-	-	-	√	-	-	-	1
20	TOICL	-	-	-	-	-	-	-	-
21	SICL	√	-	√	-	-	-	-	2
Total		**4**	**-**	**8**	**7**	**2**	**1**	**-**	**22**

(√) = Practiced (-) = Not Practiced

Appendix-VIII

Techniques of Estimating Cost & Revenue in Nepalese Insurance Companies

S.N.	Insurance Companies	Techniques of Estimating Cost & Revenue					
		Zero Base Budgeting	Past Trend Analysis Market Survey	Judgment	Analysis	Others	Total Tools
1	NLGICL	-	√	-	-	-	1
2	SICL	-	√	-	√	-	2
3	NIL	-	-	-	√	-	1
4	ALICO	-	√	-	√	-	2
5	RBS	-	√	-	-	-	1
6	LGICL	√	√	-	-	-	2
7	NLICL	-	√	-	-	-	1
8	PICL	-	-	-	√	-	1
9	LICNL	-	√	-	-	-	1
10	EICL	-	√	-	-	-	1
11	NBICL	-	√	√	√	-	3
12	AICL	-	-	√	-	-	1
13	NLICL	-	√	-	-	-	1
14	NICL	-	√	-	-	-	1
15	SIL	-	√	-	√	-	2
16	HGICL	-	√	-	-	-	1
17	UICL	-	√	-	-	-	1
18	PICNL	-	√	-	-	-	1
19	NAICL	-	√	-	-	-	1
20	TOICL	-	-	-	-	-	-
21	SICL	-	√	-	-	-	1
Total		**1**	**17**	**2**	**6**	**-**	**26**

(√) = Practiced (-) = Not Practiced

Appendix-IX

Tools of Evaluating Risk While Making Capital Investment Decision in Nepalese Insurance Companies

S. N.	Insurance Companies	Tools of Evaluating Risk While Making Capital Investment Decision					
		Sensitivity Analysis	Increase the Rate of Return	Higher IRR	Estimating of Profitability Distribution of Future Cash Flow	Others	Total Tools
1	NLGICL	-	-	-	√	-	1
2	SICL	-	√	-	-	-	1
3	NIL	-	-	-	√	-	1
4	ALICO	-	√	-	-	-	1
5	RBS	-	√	-	-	-	1
6	LGICL	√	-	-	-	-	1
7	NLICL	-	√	√	-	-	2
8	PICL	-	-	-	-	-	-
9	LICNL	-	-	√	-	-	1
10	EICL	-	√	-	-	-	1
11	NBICL	√	√	√	-	-	3
12	AICL	√	-	-	-	-	1
13	NLICL	√	-	-	-	-	1
14	NICL	-	-	√	-	-	1
15	SIL	-	-	√	√	-	2
16	HGICL	-	√	-	-	-	1
17	UICL	-	-	-	√	-	1
18	PICNL	-	-	√	-	α	2
19	NAICL	-	√	-	-	-	1
20	TOICL	√	-	-	-	-	1
21	SICL	-	-	-	√	-	1
Total		**5**	**8**	**6**	**5**	**1**	**25**

(√) = Practiced (-) = Not Practiced (α) = Guideline Provided by Beena Samttee

Appendix-X

Technique of Measuring & Controlling Overall Performance of the Companies at End of the Accounting Year in Nepalese Insurance Companies

S.N.	Insurance Companies	Technique of Measuring & Controlling Overall Performance of the Companies at End of the Accounting Year						
		P/L Made by the Company	Budgetary Measures and Control	Standard Costing	Ratio Analysis	Cash flow Analysis	Others	Total
1	NLGICL	√	-	-	-	-	-	1
2	SICL	√	-	-	-	-	-	1
3	NIL	√	√	-	√	√	-	4
4	ALICO	√	√	-	-	√	-	3
5	RBS	√	-	-	-	-	-	1
6	LGICL	√	√	-	-	-	-	2
7	NLICL	√	-	-	-	-	-	1
8	PICL	√	-	-	-	-	-	1
9	LICNL	√	-	-	-	-	-	1
10	EICL	√	-	-	-	-	-	1
11	NBICL	√	√	-	-	√	-	3
12	AICL	√	-	-	-	-	-	1
13	NLICL	-	√	-	√	-	-	2
14	NICL	√	-	-	-	-	-	1
15	SIL	-	-	-	√	√	-	2
16	HGICL	√	-	-	-	-	-	1
17	UICL	√	-	-	√	-	-	2
18	PICNL	√	-	-	√	-	-	2
19	NAICL	√	-	-	-	-	-	1
20	TOICL	√	-	-	-	-	-	1
21	SICL	√	√	-	-	-	-	2
Total		**19**	**6**	**-**	**5**	**4**	**-**	**34**

(√) = Practiced (-) = Not Practiced

Appendix-XI

Factor Effecting Decision Making Procedure in Nepalese Insurance Companies

S.N.	Insurance Companies	Factor Effecting Decision Making Procedure				
		Management Accounting Tools	Decision of Top Level Management	Objectives of the Organization	Others	Total Tools
1	NLGICL	√	√	√	-	3
2	SICL	-	√	-	-	1
3	NIL	-	√	-	β	2
4	ALICO	√	√	√	-	3
5	RBS	-	-	-	μ	1
6	LGICL	-	-	√	-	1
7	NLICL	-	√	-	-	1
8	PICL	-	-	√	-	1
9	LICNL	-	√	-	-	1
10	EICL	-	√	-	-	1
11	NBICL	-	√	-	-	1
12	AICL	-	√	-	-	1
13	NLICL	-	√	-	-	1
14	NICL	-	-	-	-	-
15	SIL	√	-	√	-	2
16	HGICL	√	-	-	-	1
17	UICL	-	√	-	-	1
18	PICNL	-	√	-	-	1
19	NAICL	-	√	-	-	1
20	TOICL	-	√	-	-	1
21	SICL	-	√	-	-	1
Total		**4**	**15**	**5**	**2**	**26**

(√) = Practiced (-) = Not Practiced (β) = Company Policy (μ) = Different Union's Interference

Appendix-XII

Mixed Cost Segregation Techniques Practiced by Nepalese Insurance Companies

S.N.	Insurance Companies	Mixed Cost Segregation Techniques					
		High-Low Point Method	Regression Analysis Method	Graphical Presentation Method	Average Method	Others	Total Tools
1	NLGICL						
2	SICL	-	-	-	-	-	-
3	NIL	-	-	-	√	-	1
4	ALICO	-	-	-	√	-	1
5	RBS	-	-	-	√	-	1
6	LGICL	-	-	-	√	-	1
7	NLICL	√	-	-	-	-	1
8	PICL	-	-	-	-	-	-
9	LICNL	-	-	√	-	-	1
10	EICL	-	-	-	√	-	1
11	NBICL	-	-	-	-	α	1
12	AICL	-	-	-	√	-	1
13	NLICL	-	-	-	-	-	-
14	NICL	-	-	-	-	-	-
15	SIL	-	√	-	√	-	2
16	HGICL	-	-	-	√	-	1
17	UICL	-	-	-	√	-	1
18	PICNL	-	-	-	-	-	-
19	NAICL	-	-	-	√	-	1
20	TOICL	-	-	-	-	-	-
21	SICL	-	-	-	-	-	-
Total		**1**	**1**	**1**	**10**	**1**	**14**

(α) = Guideline Provided by Beena Samttee (√) = Practiced (-) = Not Practiced