CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The structural unit of the governance of the organizations is missing in Nepalese institutions. The adverse effect of these strategically handicapped planning has given to greater poverty inside the country. Within the country, adaptations to new technologies are also practiced in the recent days. “The then Nepal Academy for Science and Technology (NAST) was engaged in preparing technology profile of industries located in ten industrial districts which revealed that some industries are still using old technologies” choice of technology has been done in haphazard manner, most industries are using Indian machinery and lack of workshops for repairing equipment and machinery has constrained smooth running of industries (NAST, 2001) .

The economic performance has markedly deteriorated in recent months, halting the acceleration of output and export growth. Growth in non-manufacturing sector is projected to decelerate and manufacturing value added is expected to contract. Other constraining factors are the decline in export demand caused by global economic slowdown and internal factors such as frequent strikes, insurgency and terrorist attacks on economic targets and power shortages i.e. load shedding of electricity. The untimely hail and other natural catastrophes also adversely affect growth in the agricultural sectors.

Nepal Rastra Bank in its mid-term reviewed of the annual monetary policy announced around 12% for the fiscal year 2008/2009. As monetary policy response to the risk to inflation the bank rate which was being used to indicate policy stance were revised up by 25% basis point to 6.25% from the level of 6%. The total budget deficit has widened significantly to 10.5% of the total expenditure mainly due to the rapid increase the capital expenditure. However, revenue growth remained encouraging at 9.8% compared to a rise of 5.9% a year age. The revenue deficit showed an improvement because of lower level of principal repayment. Like in the foreign trade sector, the deficit under merchandise trade increased by 20.2% during the period as compared to an increase of 8.5% recorded

last year. A surge in total imports by14.8% relative to a rise of total exports by 6.8% widened the merchandise trade deficit in the first five months of the fiscal year 2008/2009. The total imports had increased by 10.4%, total exports had increased by 13.2% in the comparable period of the fiscal year 2007/2008. According to the press released by NRB, of the total imports, imports from India surged by 21.2% in the first five months of 2008/2009 compared to 18.1% rise in the comparable period of the fiscal year 2007/2008. Imports from overseas countries also registered a growth of 5.6% in the first months of 2008/2009 as compared to a slight increase of 0.9% in the same period of last year. While the growth of exports to overseas remained negative by 8.5%.

Based on monetary statistics the overall balance of payment posted a surplus of Rs. 5.3 billion compared to a surplus of Rs. 1.8 billion in the corresponding of the fiscal year 2007/2008 primarily due to the higher inflow of remittances. A significant increase of 30.3% in worker's remittances contributed to this magnitude of rise in BOP surplus in the same period. The consumer price index even jumped to 12.9% during the first five months which was 10% in the last year.

Under the financial account the government of Nepal received Rs. 1.2 billion as foreign loan and repaid Rs. 1.8 billion in amortization, resulting in a net outflow of Rs. 565.3 million in the first four months of this fiscal year. Government of Nepal had borrowed a sum of Rs. 820.6 million as a foreign loan in the fiscal year of 2007/2008. The foreign currency and deposit liabilities increased by Rs. 1.8 billion fiscal year 2010. In comparison to mid July 2009, gross foreign exchange reserve rose by 7.8% to Rs. 140 billion in mid December 2008 as against decline of 1.4% in the corresponding period of previous year.

The size of fiscal deficit expanded to 1.9% of total expenditure in the first five months the fiscal year of 2008/2009 compared to 1.7% during the same period of last year. Under the capital account, capital transfer went up to Rs. 1.2 billion from the level of Rs. 471.9 million in the previous year. Net foreign assets (NFA) an expansionary factor of money supply, expanded by 4.9% (Rs. 5.33 billion) during the review period. Such assets had increased by 1.7% (Rs. 1.8 billion) in the previous year

As a result of the open market operation of the NRB, excess liquidity remained at minimum level in the first five months of the fiscal year 2008/2009, despite significant increased in workers remittances. In mid December 2008, the short interest rate remained lower compared to the same period last year.

The total international reserves continued to accumulate in the review period. In mid December 2005, international reserves were sufficient to cover 10.4 months equivalent of merchandise imports and 8.8 months worth of merchandise and service imports. (NRB macro economic report published in The Rising Nepal on February 18, 2006)

1.2 Background of Insurance Company

Human beings have to shoulder many misadventures, catastrophes, calamities during one's life. Sometimes, they are bearable and damages are of small value and sometimes, they are unendurable and result in great losses affecting the economy of the concerned people as well as of country.

The concept of insurance was first introduced in Europe. It is being reformed and revised many time since it is first introduced. Indeed, the modern concept of insurance develops with the establishment of Lloyds of London and other insurance companies in the western part of the world.

According to Oxford Dictionary, the meaning of insurance is that a contract made by a company or society or by the state to provide or guarantee of compensation for loss, damages, sickness and death etc. in return of regular payment. It also defines as measure taken to safeguard against loss and failure of properties.

Then people decided to look for a way out from such catastrophes and losses. After many study and research, the traditional concept of insurance emerged.

Insurance, in general term, means the security given by the authorized insurance agencies/offices against damages, losses, casualties and calamities occurred to

individuals, society and business organizations during the lifetime. Insurance can be provided for several kinds of damage, casualty and calamity.

The traditional concept of insurance embraces indemnities against limited aspects only, such as fire, marine calamity, death, burglary, natural calamities and destruction etc. later on the modern concept extended the areas of insurance and comprised insurance against loss of profit, cash in transit, fidelity, medical scheme, public liability, educational and marriage deposit for women etc.

The insurance in modern times is associated with every aspect of human activities. Its main function and activities lies into the field of trade, industry and commerce. Even its activities broadened with the science and technology.
As an individual, organization and society are involved in the different aspect of activities which are very risky. So, insurance can reduce the risk involving in human activities. Insurance is becoming one of the longest and autonomous service sectors among other business activities in present situation.

Mainly, the insurance business was started from the developed countries and gradually the developing and under developing countries also understood the concept of insurance as support for the development of industry, trade and commerce. Even in underdeveloped country like Nepal, the insurance business has found great potentiality and influenced its economy.

After the Rana Regime, development planning was set up in the field of trade, industrial environment and commercial sector, as a result, it was felt by the Government to establish an indigenous insurance company to indemnify and safe guard the physical losses and damage cause by modern science and technology.

The Nepal Insurance and Transport Company Ltd., established in BS 2003 as a first and only indigenous insurance company, was undertaken by Nepal Bank Ltd. As there were not many Nepalese insurance companies at that time, most of the life and general

insuring transactions fell into the hands of Indian insurance companies and this created a great crisis on internal resources and capital funds of the country.

Keeping in mind the above fact, the need for national insurance company for ensuring life was felt by the government of Nepal and set up Rastriya Beema Sansthan Pvt. Ltd. (RBS) on B.S. 2024, Poush 1 under Nepal Company Act 2024. Later on Rastriya Beema Sansthan Act 2025 came into existence to govern RBS. As per the Act, RBS was to function as Sansthan in full fledged way and all its transaction and liabilities were to be handed over to Government.

1.3 Overview of Rastriya Beema Sansthan

After the establishments of RBS, it sketched out different phenomenons. The main objectives of this company are to make available the ever increasing need of insurance facility required by growing trade and industry in country. This Sansthan has set the following objectives.

To mobilize the internal resource and capital for the economic development of the country and

To minimize the outflow of foreign currency.

(Joel; 1997: 6)

1.4 Source and Capital of Sansthan

Main source and capital of Sansthan is the share capital. The authorized share capital of the company is Rs.20,00,00,000. out of which Rs.10,00,00,000. each for General Insurance section and Life Insurance section respectively. The paid-up share capital of General Insurance section and Life Insurance section are Rs.6,90,47,400. and Rs.93,00,100. Respectively.

According to Insurance Act 1992, Rastriya Beema Sansthan needed to increase its paid-up share capital for General Insurance section and Life Insurance section to Rs.250

million and Rs.100 million respectively within stipulated time as directed by Rastriya Beema Samittee.

Besides share capital, the collection received from life and general insurance is also goes as a part of the capital structure of the Sansthan.

1.5 Management and Organization

The member of Board of Directors is selected by the Government. The Board of director should manage and work under the general rules and regulation of GON. The size of board of director contains five (5) members. One director is elected from among the general share-holders and rest from various organizations. The chairman is elected from five Boards of directors. This body implements and formulates the policies and plan of the company. Chairman and General Manager is appointed to work the day to day operations. The General Manager acts upon the directives and control of the Board of directors.

The success or failure of the business depends upon the well management.
The management of every organization has two major objectives, first is to manage the company well and second is to make more profits and expand the company.

1.6 Branches

The head office of Rastriya Beema Sansathan (RBS) is situated in Kathmandu, Ramshahapath. It has branches in Biratnagar, Bhairawa, Birgunj, Nepalgunj, Pokhara, Narayangath, Dhangadhi, Birtamod and Hetauda.

1.7 Role in the Economic Development

This Sansthan has been playing a key factor in the economic development in the country. It has played significant role for the national economy and it helps in mobilizing funds for the economic development of the country. Insurance Company not only reduces the risk but also collects the small capital, which is scattered around the country and injects

these amounts in the development activities of long term nature. So that RBS plays the vital role in mobilizing the internal resources which is needed for the economic development of the country, in the context of growing financial, commercial and industrial development.

- It is considered that insurance is the only one device for protecting all types of risk arising from financial, commercial and industrial development. It plays the following roles in the economic development of the country.
- It helps to minimize the outflow of foreign currency playing in account of premium fees
- To earn maximum foreign currency an account of reassurance.
- It mobilizes the internal resources and capital from collected money as premium.
- It safeguards indirectly as per GOVERNMENT OF NEPAL rules and regulations for the economic development of the country.
- (Kulkarni, 1985: 45).

Thus, RBS plays an important role for the economic development of the country.

1.8 Focus of the Study

The focus of the study is on effective Beema analysis and implementation to ensure the situation of the enterprises and their sustainability in various environments such as the competition in a wider, growing and challenging market.

Beema is very important for every enterprise because it leads an organization to ultimate success. But Beema cannot be useful unless BEEMA analysis which considerably contributes to improve the profitability as well as overall financial performance of an enterprise. Thus, the present study is focused on the BEEMA analysis and its application in RBS.

This study will provide information and draw attention of RBS management regarding what RBS can do for its development in future

1.9 Statement of the Problem

Economy success depends upon a sustainable economic growth. For the achievement of accelerated economic development in the country, Rastriaya Beema Sansthan had been playing vital role as that of agriculture and other primary sectors. It also helps the country by contributing in the creation of new employment opportunities and monetary amalgamation. As long as this sector couldn't be expanded on a promotional basis of company, due to the problem of political instability, Maoist problem and so on.

Success is not a matter of chance, profit doesn't just happen. It is to be planned and managed. Poor performance is the outcome of poor planning, controlling and decision making. This has raised the question whether Nepalese managers are proficient enough? Beema, decision making and controlling functions? The research questions mainly posed in this research were:

- Whether or not RBS is practicing Beema analysis?
- What are the key obstacles in the application of Beema analysis?
- Which part of Beema are mostly practiced in RBS?
- What will be the effect be of changes on premium, expenses and number of customer?

1.10 Objectives of the Study

The main objective of the study is examine "Profit Planning" as a tools to measure Performance of Rastriya Beema Sansthan. The specific objectives are as given

- To evaluate the profitability, financial position of RBS.
- To study the applicable tools of budgeting.
- To analyze the Beema and control.
- To provide submission and recommendations for improving RBS condition.

1.11 Significance of the Study

This study will be noteworthy significant in the following ways:

It examines the application of Beema analysis in the company.

It explores the problems and potentialities of Beema in the company. It will be useful to the potential managers, accountant, policy makers and planners etc.

It provides information on the application of the gear under Beema in the different state of affairs.

This study also directed towards providing necessary recommendations to the related department of the company.

It provides literature to the researcher, who wants to carry on further research in this field.

1.12 Limitations of the Study

This study is restricted only to Beema and control of Rastriya Beema Sansthan. The following factors have limited the scope of the study:

The study is based on primary as well as secondary data (i.e. Questionnaire, Interview, and financial statement collected from the company)

The study mainly covers the in financial and accounting aspect of RBS. It doest not cover or include other areas of RBS.

1.13 Organization of the Study

The study was classified into five major chapters. The titles of these chapters are outlined below.

Chapter One	Introduction
Chapter Two	Conceptual framework and Review of Literature
Chapter Three	Research Methodology
Chapter Four	Presentations and analysis of data
Chapter Five	Summaries, Conclusion and Recommendation

The first chapter covered background of the study, background of the company, statement of the problem, objectives of the study, significance of the study, limitations of the study. Therefore, this chapter was for brief introduction of the topic and it highlighted the fundamental objectives.

The second chapter focused on the fundamental concepts of Insurance. It also provided the meaning of Profit planning and control, its issues and objectives. This chapter is for pertinent literature and studies. This chapter is the backbone of study, where relevant studies were reviewed.

The third chapter presented the research methodology used in the study. It encompassed research design, nature and sources of data, method of data analysis, statistical / groups of data.

The fourth chapter is the main part of the research it dealt with the presentation, analysis and interpretation of data. Different types of tools and technique were used to analyzed the available data in order to achieve the objectives.

The last chapter presents the summary and conclusion of the study based on the analysis of the data and it also included recommendation.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Concept of Profit Planning

Profit is the primary measure of business success in any economy. Profit is not just happen but it is managed. If a firm can not make profit, it cannot generate capital for future. Profits are residual income left after the payment of the contractual rewards to others and for production. The difference between the outflow of expenses (i.e. cost of production and selling those products) and inflow of income (i.e. selling price) is called profit. It is a reward for business activities. Profit is obtained by subtracting the cost from revenue. Profit is determined the financial position, liquidity and solvency of the company.

Profit does not just fall, it should be properly planned. In other words, profit is not a matter of change; it comes from effective and realistic plan. Planning is deciding in advance or forward thinking what is to be done in future? Planning is the process of developing enterprise's objective and selecting the future course of action to accomplish them. It is the method of thinking about facts and purpose before planning starts from forecasting and determination of future events. It is the first essence of management and all other functions are performed within the framework of planning. Planning is the basic of profit plans. Planning includes the establishing enterprise's objectives, developing promise about the environment in which they are to be accomplished, selecting a course of action for accomplishing the objectives, initiating activities necessary to translate plans into actions and current re-planning to correct deficiency. The operational terms, planning process involves four stages

Profit planning is Planning for future operation in such a way as to maximize the profit or to maintain a specified level of the profit. A comprehensive the Profit Planning is also known as broad budgeting schedule developed in financial statement. Profit Planning

deals with the development of objectives, specification of short term goals and development of strategic and tactical profit plan profit planning is therefore a fundamental part of the overall management functions and is a vital part of the total budgeting process. The management determines the profit goals and prepares budgets that will lead them to the realization of these goals. Profit plan can be done only when the management has the information about the cost of the products both fixed and variables, and the selling price at which it will be in a position to sell the products of the company.

.In other words, profit plan is detailed expression of the expected results from the planning decisions. Profit planning is an important approach developed to facilitate for effective performance of management process like as planning, organizing, staffing, controlling etc. therefore profit planning carryout the responsibility of forwarding thinking about the future operation of the organization. Since, the precise measurement of operation is in terms of quantity. (I.e. the matters of profit planning are expressed in numerical value.)

2.1.1 Profit Planning Process and Basic Elements

Profit is not just happen but it is planned. The major processes of profit planning are as follows

- Preparation and evaluation of project plans.
- Development and Approval of strategic and tactical profit plan.
- Implementation of profit plan.
- Identification and evaluation of external relevant variables.
- Development (or revise) of the board objective of the business/enterprise.
- Development of specific goals for the business/enterprise.
- As controlling function of management: prepare monthly performance reports by responsibility and follow-up by provide feedback, take corrective action, re-plan, etc. (Kulkarni; 1985: 45).

Comprehensive and co-ordinate plan: - The profit planning considers all activities and operations of an organization. The budgets prepared by different departments inside an organization are compiled or coordinate. So before preparing a profit planning, firstly, all the departments/budgets have to becompiled.

- **Expressed in financial terms: -** All activities covered by budget are related with funds. Therefore, the budget has to be expressed in money units. (I.e. in Rupees, Dollars, Pounds etc.)

- **Plan for operational Resources and Expenses: -** It is the plan for the firm's operating all resources of budget is a mechanization to plan for the firm's all operations of activities. The two aspects of every operation are revenue and expenses. The budget must plan for quantity revenue and expenses related to specific operation. Planning should not be done for revenue and expenses only. The plan should be made for carry out the operations. The planning for resources will include planning assets and sources of funds.

- **Future plan: -** It is the plan for specific period. Time dimension must be added to a budget. A budget is meaningful only when it is related to a specific time. The budget estimates will be relevant only for some specific period.

2.1.2 Major Tools and Technique of profit planning and Control

Profit planning and control represents on overhaul plan of operations which covers a definite period and formulates of planning decision of management. It consists of three main budgets, which are:

(1) Operating Budget

I. Sales Budget
II. Production Budget
III. Purchase Budget
IV. Direct Materials Budget
V. Direct Labour Budget

VI. Manufacturing Overhead Budget

VII. Selling and Administrative Overhead Budget

(2) Financial Budget

Financial budgets are concerned with expected cash receipts/disbursement financial position and results of operations**.** The components of financial budget are:

I. **Budgeted Income Statement: -** The budgeted income statement is one of the key schedules in the budget process. It is the document that tells how profitable operations are anticipated to be in the forth coming period. After it has been prepared, it stands as a benchmark against which subsequent company performance can be measured.

II. **Cash budget: -** Cash budget is the detail showing cash receipt, cash disbursement and the balance cash. The cash budget is composed of four major sections: The receipt section, the disbursement section, the cash excess or deficiency section, and the financing section. The receipts section consists of the opening balance of cash added to whatever is expected in way of cash receipts during the budget period. The disbursement section consists of cash payments that are planned for the budget period. The cash excess or deficiency section consists of the difference between the cash receipts section total and the cash disbursement section total. The financing section provides a detailed account of the borrowing and repayments projected to take during the budgeted period. It is also includes a detail interest payment that will due on money borrowed.

III. **Budgeted Balance Sheet: -** Budgeted balance sheet is a statement of assets and liabilities prepared after the preparation of operating budgets and financial budgets. It is based on functional or operating budgets, cash budget, projected income statement and the previous year's assets and liabilities. In other words, budgeted balance sheet develops by beginning with the current balance sheet and adjusting it for the data contained in the other budget.

(3) Appropriation Budget: -The appropriation budget covers all types of expenditure on advertising and research sectors.

A part from above budgets, PPC also has relationship with the following additional budgets, CPV analysis, and completion of profit plan and performance reports: -

I. **Flexible Budget**: Flexible expenses budget relates only to expenses or costs. They are also called dynamic, activity or output adjusted expenses budges. The concept of flexible expenses budget is that all expenses are incurred because of passage of time, output, activity or combination of time and output or activity. Therefore, it is complementary to tactical profit plan which helps to provide an expenses plan. They should be adjusted to actual output for comparison with actual expenses in periodic performance report. Expenses or costs must be identified into fixed and variable expenses or costs in flexible budget

II. **Capital Expenditure Budget:** Capital expenditure budgeting is a process of planning and controlling of the long-term and short-term expenditure for expansion, replacement, and contraction of fixed assets. Capital budgeting is useful to earn future profit and reduce future costs. The major elements of a capital expenditure budget are cash flow and cash in-flows. Cash outflow includes the cost of project as cash outlays at different times during the life of the project. The cash out-flows are affected by the provision of residual value of old equipment, tax position, addition working capital needed etc. cash inflows are expected cash revenue during the life of a project affect the cash in-flows.

III. **Zero Base Budgeting:** Zero base budgeting is the method of budgeting in which managers are required to start at zero levels every year and to justify all cost as if the programmed involved were being initiated for the first time. No cost are viewed as being on going in nature, the manager must start at ground level each year and present justification for all costs in the proposed budget regard less of the type of cost involved. Zero base budgeting differs from traditional budgeting in

which budgets are generally initiated on an Incremental basis, the managers start with last year's budget and simply add to it according to anticipated needs. The manager does not have to start at the ground each year and justify on going costs for existing programmed.

IV. **Activity Based Budgeting:** Activity based costing can lead to improve decision making which principles extend budgeting.Activity based budgeting focuses on the lost of activities to produce and sell product and services. It separates indirect cost into separate homogeneous activity cost pools. Management uses the cause and effect creation to identify to cost drivers for each of these cost pools.

Cost Volume Profit Analysis: The analysis of relationship between cost, volume and profit is known as cost volume profit analysis. It is an analytical tool for studying the relationship between volume, cost, price and profit. Cost volume profit analysis is grate helpful in managerial decision making. Specially, cost control and profit planning is possible with the help of cost volume profit analysis.

Completion of Profit plan: The principle output of a budgeting is a comprehensive profit plan that ties together all phases of an organization's operations. The completion of profit plan is comprised of many separate budgets, or schedules, that are interdependent. In other words, completion of profit plan means the process of profit planning with the planned income statement and planned balance sheet.

Performance Report: Performance report is an important part of a comprehensive PPC system. The performance reporting phase of a comprehensive PPC programmed significantly influences the extent to which the organization's planned goals and object9ve are attained. Performance reports deal with control aspects of PPC or management control function of management defined as "The action necessary to assure the objectives, plans, policies and standards are being attend" or in other words, the objectives of control is to guarantee the achievement of the planned objectives of the

management by introducing periodic systematic correction measure. Performance report is on of the vital tools of management to exercise its control function effectively

Cost Classification

Classification of an item means to separate any item from its original combined form on the basis of some homogeneous/similar attarabutes/ characteristics. In other words, classification means to put an item or thing undaer a certain category.

“Cost classification is the process of grouping costs according to their iscommon characteristics. The same cost figure sometimes can be clasified accoriding to different ways of costing depending upon the purpose to be achieved and requirements of particular concern.” ***Jain and Narang***

The manager of a profit planning department should have an in-depth knowledge regarding the nature of costs and in which category it lies. Otherwise, planning and control of cost impossible.

2.1.3 Cost Classification for Assigning Cost to Cost Objects

Direct and indirect costs

Cost are often classified as being either direct or indirect. However, these terms have no meaning unless one first identifies some organizational segment to which the costs are to be related. A direct cost is a cost that can be obviously and physically traced to the particular segiment under consideration.

An indirect cost is a cost that must be allocated in order to be assigned to the segment under consideration. Manufacturing overhead, for example, would be an indirect cost of a product line.

2.1.4 Cost Classification for Decision Making

Relevant and Irrelevant Cost and Revenues

For decision-making, cost and revenues can be classified according to whether they are relevaant to a particular decision. Relevant costs and revenues are those future costs and revenues that will to a particular decision. Relevant cost and revenues costs and revenues

are those that will not be affected by the decision. For example, if one is faced with a choice of makin a journey b car ior by public taransport, insurance costs are irrelevant, since they will remain the same whatever alternative is choosen. However, petrol costs for the car will differ depending on which alternative is chosen, and this cost will be relevant for decision-making. Those costs which directly influence the decision are relevant costs and those costs which do not affect the decisions, are irrelevant costs.

2.1.5 Increatmental and Marginal Costs

In making decisions, managers compare the alternatives before them. Each alternative will have certain costs associated with it that must be compared to the costs associated with it that must be compared to the costs associated with the other alternatives available. Any cost that is present-under one alternative but is absent in whole or in part under another alternative is known as differential cost. Differential costs are also known as incremental costs.

The accountant's differential cost concept can be compared to the economist's marginal cost concept. In speaking of changes in cost and revenue, the economist employs the terms marginal cost and marginal revenue, and the cost involved in producing one more units of product is called marginal revenue, and the cost involved in producing one more unit of product is called marginal cost.

2.1.6 Avoidable and Unavoidable Costs

Sometimes the terms avoidable and unavoidable costs are used instead of relevant and irrelevant cost. Avoidable costs are those costs that may be saved by not adopting a given alternative, whereas unavoidable costs cannot be saved. Therefore, only avoidable costs are relevant for decision-making purposes. Thus we can say that all avoidable costs are relevant costs and all unavoidable costs are irrelevant costs because these costs do not affect the decisions. The decision rule is to accept those alternatives that generate revenues in excess of the avoidable costs.

2.1.7 Controllable and Non-Controllalble Costs

As with direct and indirect costs, whether a cost is controllable or non-controllable depends on the point of reference. All costs are controllalble at some level or another in a company. Only at the lower levels of management can some costs be considered non-controllable. Top management has the power to expand or contract facilities, hire, fire, set expenditure policies and generally exercise control over any cost as it desires. At lower levels of mangement, however, authority may not exist to control the incurrence of some costs, and these costs will therefore be considered non-controllable so far as that level of management is concerned.

2.1.8 Opportunity Costs

Some costs for decision-making cannot normally be recorded in accounting system. Cost that are collected within the accounting system are based on past payments or commitments to pay sometimes in the future. Sometimes it is necessary for decision-making to impute costs that will not require cash outlays, and these imputed costs are called opportunity costs. An opportunity cost is a cost that measures the opportunity that is lost or sacrificed when the choice of one course of action requires that an alternative course of action be given up. It is important to note that opportunity costs only apply to the use of scarce resources. Where resources are not scarce, no sacrifice exists from using these resources.

2.1.9 Sunk Costs

A sunk cost is a cost that has already been incurred and that cannot be changed by any decision made now or in the future. Since sunk costs cannot be changed by any present or future decision, they are not differential costs and therefore thery should not be used in anlaysing future courses of action. To illustrate the notion of a sunk cost, assume that a firm has just paid Rs 50,000 for a special purpose machine. Since the cost outlay has been made that Rs 50,000 investment in the machine is a sunk cost. Even through by hindsight the purchase may have been unwise, no amount of regret can relieve the company of its decision, nor can any future decision cause the cost to be avoided. In short, the Rs 50,000

is “out the window” from a decision point of view and will have to be reckoned with regardless of what future course of action the company may take. For this reason, such costs are said to be sunk.

2.1.10 Application of Cost- Volume-Profit Analysis

Cost volume profit analysis is applied specially for break even analysis and profit planning. Business organizations are to earn profit. profit planning is the fundamental part of the overall management function. profit planning can be done only when the management has the information about the cost of the product, both fixed and variable cost and the selling price of the product. The cost volume profit relationship will be established by break even analysis. Therefore, cost volume profit analysis uses for

i. Contribution Margin analysis
ii. Break Even Analysis.
iii. Profit Volume Analysis

2.1.11 Segregation of Semi-variable (Mixed) Costs

Cost-volume-profit analysis requires segregation of all costs between two parts: fixed and variable. This means that the semi-variable cost will have to be segregation into fixed and variable elements. This may be done by any one of the following methods

(i) Levels of Output Compared to Levels of Expenses Method

According to this method, the output at two different levels in compared with corresponding level of expenses. Since the fixed expenses remain constant, the variable overheads are arrived at by the ratio of change in expenses to change in output. Whereas;

$$\text{Variable Elements} = \frac{\text{Change in Amounts of Expenses}}{\text{Change in Activity or Quantity}}$$

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(ii) Range Method

This method is similar to output compared to levels or expenses method except that only the highest and lowest points of output are compared out of various levels. This method is also designed as 'High and low' method. The high low method is explained, step, as follows:

(a) Select the highest pair and the lowest pair.

(b) Compute the variable rate 'b' using the formula:

$$\text{Variable rate} = \frac{\text{Difference in Cost } 'y'}{\text{Difference in Activity } 'x'}$$

(C) Compute the fixed cost portion as

Fixed cost portion = Total semi-variable cost- Variable cost

(iii) Degree of Variability Method

In this method, degree of variability is noted for each item of semi-variable expenses. Some semi-variable items may have 30% variability while others may have 70% variability. The method is easy to apply but difficulty is faced in determining the degree of variability.

(iv) Scatter-graph Method

In this method, the given data are plotted on a graph paper and line of best is drawn, whereas semi-variable expenses is plotted on the vertical axis (Y-axis) and the activity measures is plotted on the horizontal axis (X-axis). The method is explained below: -

a) The volume of production is plotted on the horizontal axis and the costs are plotted on the vertical axis.
b) Corresponding to each volume of production costs are then plotted on the paper, thus, several points are shown on it.
c) A straight line of best fit is then drawn through the points plotted. This is the total cost line. The point where this line intersects the vertical axis is taken to be the amount of fixed element.

d) A line parallel to the horizontal axis is drawn where the line of best fit intersects the vertical axis. This is the fixed cost line.
e) The variable cost at any point can be known as noting difference between fixed cost and total cost lines.

The scatter-graph method is relatively easy to use and simple to understand. However, it should be best with extreme caution, because it does not provide an objective test for assuring that the regression line drawn is the most accurate fit for the underlying observations.

(v) Method of Least Squares

One popularly used method for estimating the cost-volume formula is regression analysis. Regression analysis is a statistical procedure for estimating mathematically, the average relationship between the dependent variable (y) and the independent variable (x). The regression method does include all the observe data and attempts to find a line of best fit. To find the line of best fit, a technique called the method of least squares is used. Method of least squares is based on the mathematical technique of fitting an equation with the help of a number of observations. The linear equation, (i.e. a straight line equation can be assumed as :

Y = a + bx and the various sub-equations shall be;

$y = a\Gamma b \quad x$

$xy = a \quad x\Gamma b \quad x^2$

An equation of second order, (i.e., a curvilinear equation) can be drawn as:

$Y = a\Gamma bx\Gamma cx^2$ and the various sub-equations to solve it. i.e., to find out the values of constraints a, b, and c shall be:

$y = nab \quad x^2$

$$xy = a \quad x + b \quad x^2 + C \quad x^3$$

$$x^2 y = a \quad x^2 + b \quad x^3 + C \quad x^4$$

Similarly the equations can be fitted for any number of order or degree depending upon the number of observation available and the accuracy desired.

Compute the per unit variable cost (b) and the fixed cost (a) by using the following formula:

$$b = \frac{N \quad xy - \quad x. \quad y}{N \quad x^2 - \left(x \right)^2}$$

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

Where;

Y = total cost, N = No. of series. x – production unit

b= variable cost per unit a – Fixed cost $\sum$ - sum of

2.2 Review of the Previous Studies

Many researchers were made in the area of profit planning and control and management accounting etc. in Nepalese context, many of the researchers were made of manufacturing concerns. An attempt was made to review some of the researchers, which were conducted submitted on profit planning and control and management accounting in the context of Nepal.

Parajuli,A(2003) had conducted a research in a topic‘Profit Planning in Beema Sansthan of Nepal: A case study of Beema Sansthan”an unpublished master level thesis submitted to Shanker Dev Campus Faculty of management T.U. His study was concerned to examine how far the profit planning system of National Life Insurance has been applied and effective. The study covers the time of ten years from 1978 to 1988 A.D. The data and other necessary information had been used from both the secondary and primary sources of data. In his research, the major relating of profit planning of the study is as follows

- There is no adequate co-ordination system and realization of objectives between the different level managers.
- Very few managers are competent to identify the factors and manipulate them for the successful formulation and implementation of the plan.
- .Enterprises have no any financial plan of enterprises. They only sales and production bunch targets.
- There is no any practice of profit planning

Ojha, K. P. (2004) has conducted a research in the topic " Profit Planning **i**n Beema Sansthan " This study was mainly centered with the current practice of profit planning and its effectiveness in National Life Insurance and Asian Life Insurance covering only six years period of time from fiscal year 2056 to 2066. Thus, the study used both secondary as well as primary sources of data. Mainly, primary data were collected and secondary have been used as per necessary. Interview and questionnaire approaches are the main techniques or primary sources of data. Statistical tools like percentage, mean, standard deviation, co-efficient of variation, time series, correlation and regression have been used to analysis the data. Similarly, financial tools like financial ratio, flexible budget, profit planning analysis, variance analysis have been also used. The major findings are as follows:

- Inadequate planning's of profit due to lack of skilled planner.
- Inadequate authority and responsibility to planning department.
- Various costs are not diagnosed as controllable and non-controllable expenses.
- Pricing system is not scientific.
- Failure in achievements due to inadequate evaluation of internal and external variables.
- Failure due to inadequate forecasting system.
- Lack of entrepreneurship and commercial concepts in overall operations of the enterprises.

Poudel, Surya P. (1995) had conducted a research entitled "profit planning in Manufacturing Company: A case study of Siddharth life Insurance". This study had mainly centered on application of profit planning oncept in SLI. The time period covered by this research was six years from FY 2056 to FY 2066.

The data other necessary information were collected by using secondary sources of data. Company had fluctuation trend in targeted production. The major findings are as follows:

- In variable cot structure, sales commission has the dominant role.
- In fixed cost structure, salary has occupied the dominant role.
- Actual sales of the company seem to be more than 50% of plan sales in most of years during the six years period.

Shrestha, Tulsi P. (2008) had conducted a research on a topic "Profit Planning in Sri Gurush Life Insurance." This study is mainly focused on the practice and effectiveness of profit planning system in GLI. The time period covered by the research was five years from FY 2057 to 2056.Necessary data and other information werecollected from both the secondary and primary sources of data. GLI objectives are not much clear, different specific financial goals are not prepared and strategic policies and programmes are not adequate to develop the company.

The major findings are as follows:

- GLI does not consider profit planning analysis while pricing the product.
- Inadequate forecasting system.
- Un-necessary centralization of power, so that decision making is only from top level.

Dahal, Narayan P. (2009) had conducted a research in a topic "Profit Planning in SagarMatha Insurance Company" A case study of "SagarMatha Insurance Company". This study is concerned in the application and effectiveness of profit planning system in

manufacturing establishment with special reference to SagarMatha Insurance Company. The time period covered by this research was ten years from FY 2058 to 2067.

The data and other necessary information were collected by using secondary as well as primary data. The objectives of manufacturing enterprises are controversial. The major findings are as follows:

- Lack of budgeting expertise, skilled planners and entrepreneurship.
- Great communication and co-ordination gap between different levels of management and workers.
- No any effective programs to achieve desired goals and objectives and to overcome the existing problems and challenges.
- No any systematic and effective financial plan.
- No any proper practice of segregation cost into fixed, variable and semi variable and it has any any proper records of different cost.

Badu, Madan B. (2010) had conducted a research entitled “Profit Planning in ALICO ”, This study is centralized in current practice of profit planning in ALICO.” Time period covered by this research is five years from FY 2061 to FY2066.The data and other necessary information were collected from secondary sources of data. The major findings are as follows:

- No proper practice of segregation of fixed cost and variable.
- No maintenance of periodic performance report systematically.
- Lower level participation in planning, decision making is not encouraged.
- Plan is prepared in traditional ad-hoc basis.
- Inadequate authority and responsibility to planning department.
- No proper analysis of environment variables.

2.3 Research Gap

The profitability of maximizing the revenue is not more possible under this circumstance unless management has revised their cost during decision making process while considering risk calculation for achieving objective.Thus to fill up cost-volume-profit analysis gap, the current research is conducted. Mainly this research is accounting and financial data analysis types of research. It examines the current practice of Beema analysis, a tool of in the RASTRIYA BEEMA SANSTHAN. Probably this might be the first research study carried of one private separate company on this topic in Nepal. There is the gap between the present research and the previous researches. Previous researches conducted on accounting on Beema and control and management covered only the budgeting practices in the manufacturing companies especially in public enterprises. The previous researcher did not disclose which of the Beema and control tools are in practice which is not why The company is experiencing unmanageable expenses plan. The fixed, variable and mixed expenses plan is the necessary elements for Beema and control. The cost of Rastriya Beema Sansthan is classified into fixed and variable. There is no practice of identifying semi-variable cost and their segregation into variable and fixed by using scientific method.

CHAPTER-THREE

RESEARCH METHODOLOGY

3.1 Research design

The main objectives of this study were to analyse the profit planning of Rastriya Sansthan (RBS). A researcher has collected the necessary data and information relating to profit planning analysis of accomplishes the objectives. It has adopted the descriptive and analytical research design to provide clear picture of RBS with its profit planning analysis. It attempted to collect necessary data and information analyzed the collected data by using various analytical tools.

3.2 Population and Sample Size

There are number of insurance companies in Nepal. Out of these Rastriya Beema Sansthan is taken for the analysis. Rastriya Beema Sansthan is one of the largest insurance companies of Nepal. It has coverage of most of region of the country.

3.3 Nature and Sources of Data

This study was based mainly on the secondary data. And this case study is relating only with RBS. So, the data relating to RBS has been collected from Beema Semite and various publications. Mainly the secondary data were used for the analysis of RBS.

3.4 Method of Data Analysis:

This study is a descriptive type of study. The available data were analyzed by using financial tools and statistical tools. Some of the method which were used to analyze the data is as follows.

3.4.1 Statistical Tools

3.4.1.1 Mean: Mean is the given set of observation is their sum divided by the number of observation.

Mean $\bar{X} = \frac{X}{N}$

Where X is the variable that is understudy like Fixed cost, Total cost, sales or profit. Mean defines the average of the historical data presented and the expected value for the next future period.

3.4.1.2 Segregation of cost under Least Square Method: One of the best and widely used methods for estimating the cost-volume formula is regression analysis. Regression analysis is a statistical procedure for estimating mathematically, the average relationship between the dependent variable(y) and independent variable (a). It includes all the observed data and attempts to find the line of best fit in estimation of variable and fixed cost. Under this method, the following least square formula can be used to estimate cost.

Y= a + bX

Where,

A= Estimated fixed cost i.e. constant

B= Variable rate i.e. slope of regression line

Y= Dependent variable i.e. estimated total cost

X= Independent variable i.e. Level of activity or units of products, hours etc.

$$a\,X \quad \frac{X^2 \quad Y\,Z \quad X \quad XY}{N \quad X^2\,Z f \quad X Å}$$

$$b = \frac{N \quad XY\,Z \quad X \quad Y}{N \quad X^2\,Z f \quad X Å}$$

3.4.1.3 Standard Deviation: Standard deviation shows the risk level of the organization.

$$S.D\ f \pm AX \sqrt{\frac{X^2}{N} Z \ \frac{X}{N}}^2$$

3.4.1.4 Coefficient of Variation: Coefficient of variation shows the risk level per rupee of the profit.

$$CV = \frac{\pm}{\overline{X}}$$

3.5.1.5 Pearson's Correlation Coefficient (r)

$$r = \frac{n \quad xy\,Z \quad x. \quad y}{\sqrt{n \quad x^2\,Z\!f \quad x\text{Å}^2}\sqrt{n \quad y^2\,Z\!f \quad y\text{Å}^2}}$$

Where x and y are the variables of those correlation is being studied. The value of 'r' lies between { 1.

If r > 0.5 High degree of positive correlation is predicted.

If r <0.5 low degree of positive correlation is predicted. And vice versa for the Negative correlation.

3.4.2 Accounting Tools: Under the accounting tools different types of technique should be used.

3.4.2.1 Application profit planning

One point of interest in the profit planning analysis is the break – even point. It is incidental to the broader scope of profit planning study. It is defined as the output level which evenly breaks – even the costs and revenues. Break-even sales volume is that level of sales volume in which a company neither makes a profit nor suffers losses. At this level of activity, the sales just cover the total costs, and the profit are zero. In other words, this is a point at which a company breaks the state of loss and enters into profit zone. Break-Even analysis helps the management to know that which sales volume will only recover its costs and after which volume it starts to make profit. At last, is a point at which the firm's total revenue are exactly equal to total cost, yielding zero income or the point at which losses ceases and profit begins. Breakeven point can be calculated by two methods.

- Graphical Method
- Formula Method

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Revenue Planning in Rastriya Beema Sansthan

The revenue plan is the foundation of Beema and control. It is the first plan to be prepared. All other planning is based on it. The revenue planning process is a necessary component of PPC because it provides basic management decision about marketing. It is an organized approach for developing a comprehensive revenue plan. If the revenue plan is not pragmatic, most of other component of overall profit plans becomes dogmatic.

4.1.1 Revenue Plan Analysis

A endeavor was made to present and analyze the previous budgeted revenue and actual revenue performance of Rastriya Beema Sansthan. The following table presents the budgeted and actual revenue and its deviations from the budgeted revenue for the fiscal year 2062/63 to 2066/067.

Table 4.1

Rastriya Beema Sansthan

Total Budgeted and Actual Revenue/ Turnover (Rs.in Crore)

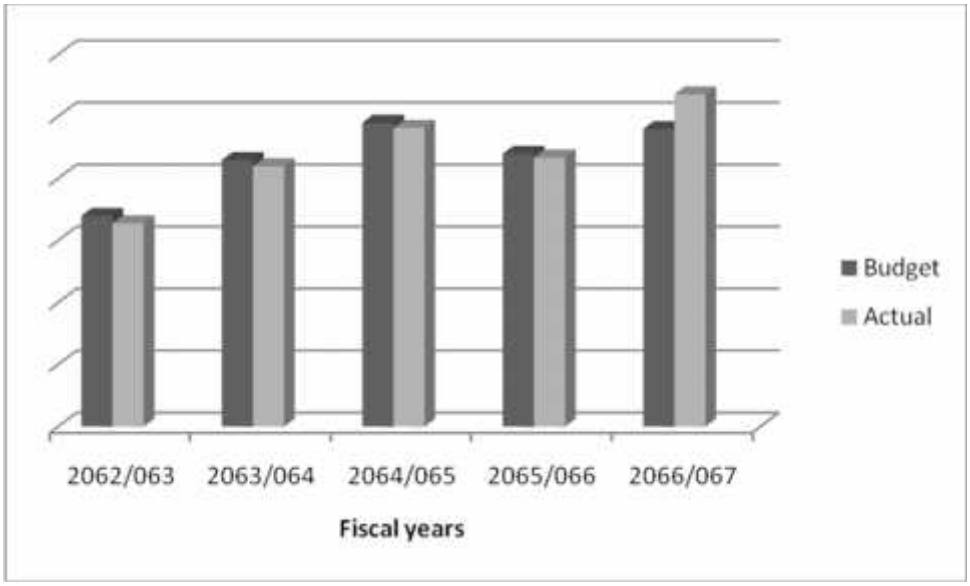
Year	Details			
	Budget	Actual	Deviations	% Deviation
2062/063	170	164	(6)	(3.53%)
2063/064	215	210	(5)	(2.32%)
2064/065	245	241	(4)	(1.63%)
2065/066	220	217	(3)	(1.36%)
2066/067	240	268	28	11.67%
Average	179	220		

Source :Annual report Appendix I

Figure :4.1

Rastriya Beema Sansthan

Total Budgeted and Actual Revenue/ Turnover (Rs.in Crore)



The above table discloses that there is acceptable level of deviations between the budgeted and actual Revenue. Generally Budgeted Revenue exceeds Actual Revenue except in the fiscal year 2066/067. The volatile trend of budgeted revenue disclosed that management prepared it on the basis of external environment especially political scenario. In order to find out the nature of variability of the budgeted revenue and actual revenue of different years, it is necessary to calculate the Arithmetic mean, Standard Deviation with Coefficient of Variation.

Table no. 4.2

Rastriya Beema Sansthan

Summary of Statistical Calculation

Details	Budgeted Revenue (X)	Actual Revenue (Y)
	(Rs. In crore)	(Rs. In crore)
Mean($\overline{X}$)	218	220
Standard deviation(±)	26.57	34.61
Coefficient Variation (C.V)	12.19%	15.73%
Correlation (r)	0.9427	
Probable error of Correlation(P.E)	0.0336	

The details of calculation of Mean, Standard Deviation, Coefficient Variation, Correlation and Probable Error are presented in the appendix 1 and 2.

The above table 4.2 shows that, the co-efficient of variation of budgeted revenue (C.V.X) and Actual Revenue (C.V.Y). A distribution with similar C.V is said to be more homogeneous or uniform or less variable than other. It shows that the budgeted revenue are more homogeneous or uniform or less variable than the Actual Revenue, which indicates low efficiency of planner. The actual revenue was more variable than the budgeted revenue with the high percentage of C.V.

Another statistical tools correlation of coefficient was used to analyze the degree of relationship or association between the budgeted revenue and actual revenue.

There should be closer relationship (Approximately perfect positive Correlation) between the budgeted revenue and actual Revenue. And hence, the actual Revenue increase with increase in budgeted Revenue and vice versa. To find out the correlation between

budgeted figures, we can take the Karl Pearson's co-efficient correlation was used. By calculating 'r' a relationship between budgeted and actual revenue can be examined.

The probable error (P.E) of the correlation co-efficient (r) is the basis of interpretation of its value. In other words the significant is tested with the probable error of 'r'. The value of 'r' is greater than 6x0.0336 of 'r' (i.e. 0.97>0.0336). It means the value of 'r' is highly significant. So, it can be said that actual Revenue will go on same direction of the budgeted Revenue.

The regression line can also be fitted to show the degree of relationship between budgeted Revenue and actual Revenue and to estimate the possible actual Revenue with given budgeted figures purposes, the actual Revenue have been assumed to be dependent variables and budgeted Revenue as independent.

Table 4.3

Revenue Analysis

Rastriya Beema Sansthan

(Rs. In Millions)

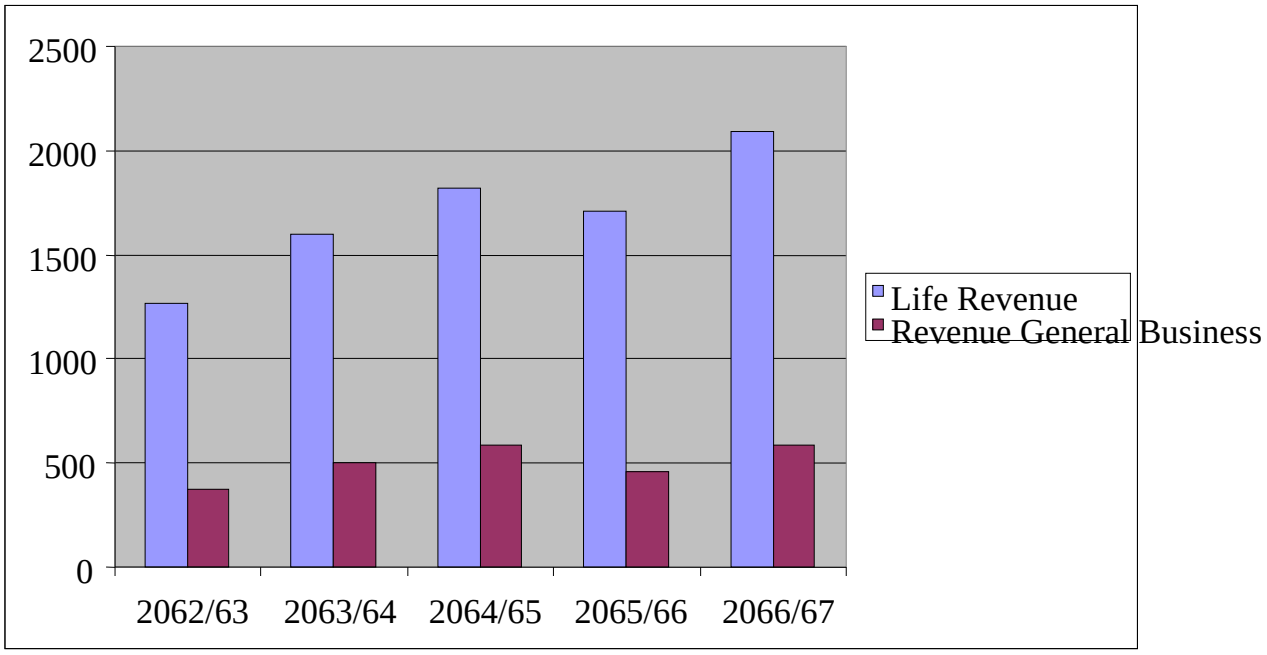
Year	Revenue		
	Life	General Business	Total
2062/063	1,269	373	1,642
2063/064	1,599	504	2,103
2064/065	1,821	590	2,411
2065/066	1,713	455	2,168
2066/067	2,096	585	26,81
Average	1,416.33	417.83	

Like Revenue from Life Insurance, Revenue from General Insurance is also increasing year after another except in fiscal year 2065/066. In the base year i.e. 2062/063 revenue from General Insurance is Rs.373 million. It is increasing by 35%, 17%, (23%), 28% respectively from one after another.

Figure 4.2

Revenue Analysis

Rastriya Beema Sansthan



The above figure reveal that revenue from Life Insurance has been significantly increasing over the five fiscal years except the in the fiscal year 2065/066. In the base year i.e. 2062/063 revenue from Life Insurance is Rs. 1269 million. Similarly it increased by 26%, 14%, (6%), and 22% respectively from year after another year.

From above figure it can be implied that revenue from Total Insurance is also increasing as revenue from both the Life Insurance and General Insurance are increasing. In the fiscal year 2063/064, 2064/065 it is increased by 28%, 14.65% and decreased in the fiscal year 2065/066 by 10% and again robust by 23.67% in fiscal year2066/067

Table 4.4

Profit and Loss Analysis

Rastriya Beema Sansthan

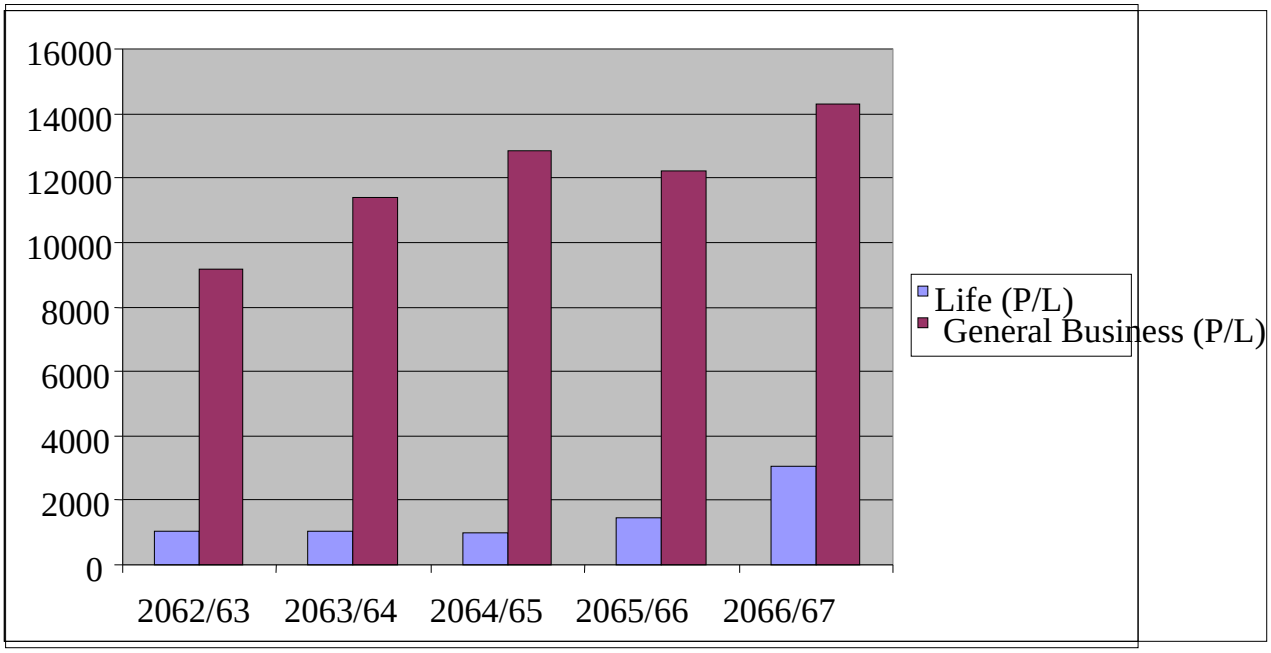
(Rs. InLakhs)

Year	Profit and Loss		
	Life	General Business	Total
2062/063	1,060	9,140	10,200
2063/064	1,045	11,381	12,426
2064/065	1,006	12,831	13,837
2065/066	1,474	12,237	13,711
2066/067	3,054	14,267	17,321
Average	1,527.8	11,9712	

Figure 4.3

Profit and Loss Analysis

Rastriya Beema Sansthan



The above figure 2 discloses about the profit and loss of the Rastriya Beema Sansthan . In the fiscal year 2062/063 the total profit from life insurance business is Rs. 1060 (Lakh). After the base year the profit is in decreasing trend for next two fiscal years i.e. by 1.5% and 3.75% then again increases rapidly for remaining years i.e. by 46.52% and 107.2% respectively.

The profit earned from General Insurance business is Rs.9140 lakhs in the fiscal year 2062/063 and then it is increased by 24.52%, 12.74%, (4.63%), and 16.60% respectively in the following the fiscal years 2063/064, 2063/064, 2065/066 and 2066/067.

The aggregate profit earned by the Rastriya Beema Sansthan is also increasing because both sectors are enjoying growth trend. In the fiscal year 2062/063 the profit is Rs.10200 lakhs, after this year profit is increased by 21.82% and 11.35% in next two fiscal year and then profit declined by 0.91% in the fiscal year 2065/066 and then again increased by 26.33% in fiscal year 2066/067.

Table 4.5

Total Cost Analysis

Rastriya Beema Sansthan

(Rs. In Lakh)

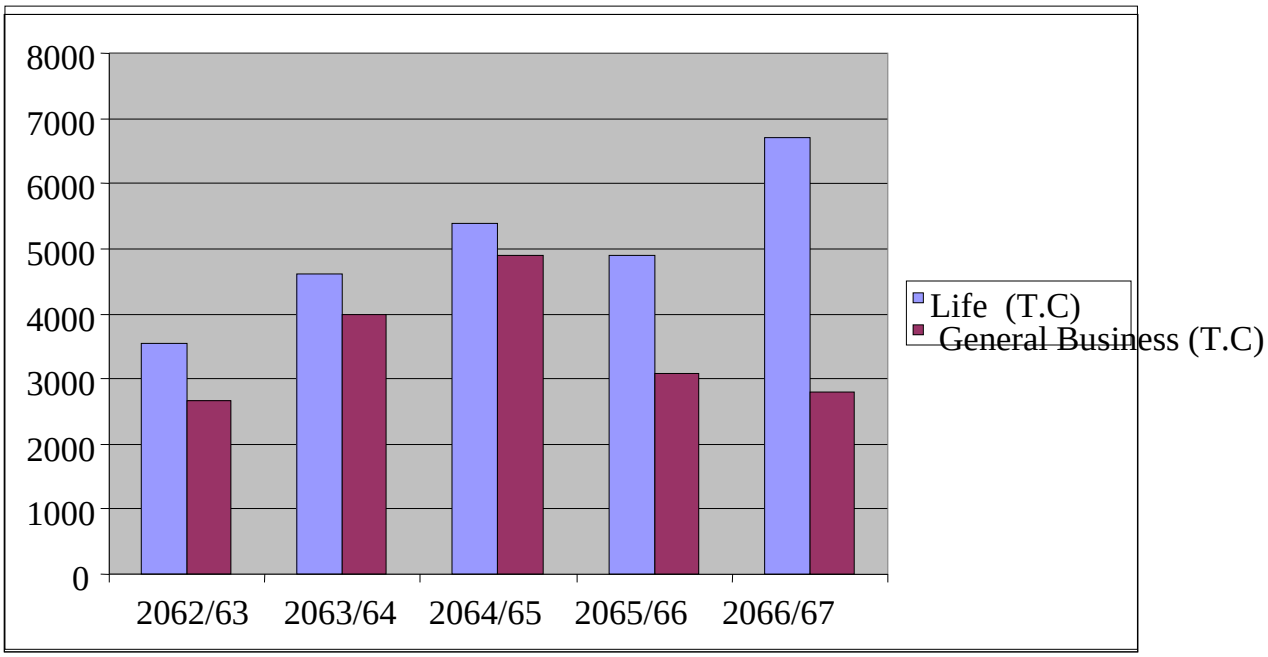
Year	Total Cost		
	Life	General Business	Total
2062/063	3552	2667	6219
2063/064	4610	3995	8605
2064/065	5379	4890	10269
2065/066	4889	3082	7971
2066/067	6693	2792	9485
Average	5,024.6	3,485.2	

Source :Annual report Rastriya Beema Sansthan 066/067

Figure 4.4

Total Cost Analysis

Rastriya Beema Sansthan



Above chart No. 3 disclosed that total cost of the Life Insurance business is in increasing trend except in fiscal year 2065/066. in the base year 2062/063 it is Rs.3552 lakhs. Total cost are increasing in fiscal year 2063/064, 2064/065, 2065/066 and 2066/067 by 29.78%, 16.68%, (9.11%) and 36.90% annually.

The Total cost of General Insurance business are also in increasing trend with exception in last two fiscal year. In fiscal year 2062/063 it is Rs.2667 lakhs and then increased by 49.8%, and 22.40% annually in next two fiscal year. In next two fiscal i.e. 2065/066 and 2066/067 it reduce by 36.97% and 9.41% respectively.

The Total Cost of the Rastriya Beema Sansthan is the summation of total cost of Life Insurance and General Insurance business. So in fiscal year 2062/063 it is Rs.6219 lakhs.

In next two fiscal year it is increased by 38.37% and 19.34% respectively. Again in fiscal year 2064/065 total cost reduced by 22.38% and than again it robust by 19% in fiscal year 2066/067.

4.3 Least Square Regression Analysis

A line fitted to a set of data points to estimate the relationship between two variables is called regression line. In other words, the device used for estimating the value of one variable from the other consists of a line through the points, drawn in such a manner as to represent the average relationship between two variables. Such line is called the line of regression.

One of the best and widely used methods in cost estimating and cost estimating in statistical technique called least square regression analysis. It is a statistical procedure for estimating mathematically the average relationship between dependent variable and independent variable. The regression method does include all the observe data and attempts to find a line of best fit, a technique is called the least square regression analysis. Method of least square is based on the mathematical technique of fitting an equation with the help of a number of observations.

Table 4.6

Segregation of semi-variable cost of Life Insurance

(Insurance Claim expenses by Least square method)

(In Lakh)

Year	Revenue (X)	Administrative(Y)	XY	X2
2062/063	12692	2,771	3,51,69,532	16,10,86,864
2063/064	15,991	3,399	5,43,53,409	25,57,12,081
2064/065	18,210	3,806	6,93,07,260	33,16,04,100
2065/066	17,126	3,291	5,63,61,666	29,32,99,876
2066/067	20,960	4,431	9,28,73,760	43,93,21,600
N=5	84,979	17,698	30,80,65,627	1,48,10,24,521

Source :Annual report Rastriya Beema Sansthan 066/067

Where, b = variable cost

$$b = \frac{N \quad XY\,Z \quad X \quad Y}{N \quad X^2\,Z f \quad X Å}$$

$$= \frac{5 \mid 308065627\,Z 84979 \mid 17698}{5 \mid 1481024521\,Z f 84979 Å^2}$$

= Rs 0.19799/unit

$a = \bar{\psi} - b\bar{\varepsilon}$

= 3539.6 – 0.19779 x 16995.8

=Rs. 175 (approx)

Table 4.7

Segregation of semi-variable cost of General Insurance

(Insurance Claim expenses by Least square method)

(InLakh)

Year	Revenue (X)	Administrative(Y)	XY	X2
2062/063	3727	189	704403	13890529
2063/064	5040	523	2635920	25401600
2064/065	5896	321	1892616	34762816
2065/066	4556	204	929424	20757136
2066/067	5846	290	1695340	34175716
N=5	25065	1527	7857703	128987797

Where, b = variable cost

$$b = \frac{N \quad XY\,Z \quad X \quad Y}{N \quad X^2\,Z f \quad X Å}$$

$$= \frac{5 \mid 7857703\,Z 25065 \mid 1527}{5 \mid 128987797\,Z f 25065 Å^2}$$

= Rs 0.0607/unit

$a = \bar{\psi} - b\bar{\varepsilon}$

= 305.4 – 0.0607 x 5013

= Rs.1 (approx)

The expenses that cannot be categorized as purely fixed or variable are termed as semi variable or mixed costs. Semi-variable costs contain both variable and fixed costs elements. Classification of costs into variable and fixed is very important to plan and control of costs. It helps to determine the volume of operation required to maintain the desired profitability. In Rastriya Beema Sansthan, account classification method is popular, so cost is classified on the basis of knowledge and experience of accountant of Insurance Industry.

Due to the lack of information about the reliable activities level, even we are not able to classify the identified semi-variable costs by using scientific methods. Here the Insurance Claim expenses of Rastriya Beema Sansthan are classified on the basis of information provided by the company. In the above table 4.6, fixed cost of the year is Rs 175 (in lakh) and the variable rate per unit is Rs 0.19799 for Life Insurance business. Similarly in the table 4.7 fixed cost of the year is Rs.1 (in lakhs) and variable rate per unit is Rs.0.0607 for General Insurance business.

Table 4.8

Details of Fixed cost and Variable cost

Rastriya Beema Sansthan

In Lakh

Year	Life Insurance				General Insurance			
	S	V	FC	TC	S	V	FC	TC
2062/063	2771	416	365	3552	189	2083	395	2667
2063/064	3399	622	589	4610	523	3038	434	3995
2064/065	3806	804	769	5379	321	4195	374	4890
2065/066	3291	793	805	4889	204	2640	238	3082
2066/067	4431	1219	1043	6693	290	2234	268	2792

Where,

TC = Total Cost

S= Semi variable Cost = Insurance Claim

V= Variable Cost = Reinsurance Premium + Agency Commission + Difference in Provision for an unexpired Risk + Beema Samiti Charge

FC= Fixed Cost = Management Expenses

Variable Cost

Variable costs are that cost which varies in direct proportion to change in output or activities level, but per unit is constant within one financial year. We are unable to present detail classification of expenses of variable expenses due to in appropriate discloser presented in F/S. Variable cost per unit are varies for different financial years effected by internal and external environment especially due to maoiest problem and the political instability in the country. In the above table, variable cost is fluctuated in both Life as well as in General business. There is increase in variable cost of Life Insurance in fiscal year 2064/065, 2065/066, and 2066/067. But there is slightly decrease in the fiscal year 2062/063 and 2063/064. But In the General Insurance the variable cost are increase in fiscal year 2063/064 and 2064/065 and all other fiscal year are decreasing order respectively.

Fixed cost

Fixed cost remains constant in total amount despite the changes in the level of the activity within the fiscal year. That is fixed cost remain unchanged in total as the output level varies within the year, but fixed cost per unit basis decreases as the level of activity increases and vice versa. Fixed cost in total are varies for different fiscal year effected by internal and external environment factors. The above table shows that there is gradually increasing of fixed cost in each fiscal year except in fiscal year 2066/067 of Life Insurance, where as there is fluctuation in fixed cost in different fiscal year of General Insurance. The fixed cost of General Insurance business is decreasing in fiscal year 2064/065, 2065/066, and in 2066/067 with respect with the fiscal year 2062/063. But in the fiscal year 2062/063 there is increase in fixed cost due to the internal and external environment of the company.

4.4 Cost-Volume-profit analysis of Rastriya Beema Sansthan

Cost volume profit analysis is applied specially for break even analysis and Beema. Business organizations are to earn profit. Beemais the fundamental part of the overall management function. Beemacan be done only when the management has the information about the cost of the product, both fixed and variable cost and the selling price of the product. The cost volume profit relationship will be established by break even analysis. Therefore, cost volume profit analysis uses for

Contribution Margin analysis

Break Even Analysis.

Profit Volume Analysis.

Margin of Safety Analysis

4.4.1 Contribution Margin Analysis

The difference between selling price and variable cost (i.e. the marginal cost) is known as contribution margin or Gross margin. In other words, Fixed cost plus the amount of profit is equivalent to contribution margin. It can be expressed by the following formula: -

Contribution margin = Selling Price- Variable Cost

= Fixed Cost + Profit

Contribution margin ratio = 1- P/V ratio

4.4.2 Break Even Analysis

The point which breaks the total cost and the Revenue evenly to show the level of output or Revenue at which there shall be neither profit nor loss, is regarded as breakeven point. Through contribution margin approach, break even point can be expressed as:

$$\text{Break even point in amount} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$$

4.4.3 Profit Volume Ratio Analysis

Profit volume ratio establishes a relationship between the contribution and Revenue volume. The two factor profit and volume are interconnected and dependent with each other. Profit depends upon Revenue; selling price to a great extent will depend upon the volume of production. It can be expressed by:

$$\text{Profit Volume Ratio} = \frac{\text{Contribution Margin}}{\text{Revenue}}$$

Weighted Average CM Ratio

Contribution Margin ratio of a product may not be represents the contribution margin of the firm if it is producing two or more product or providing two or more service. In the case weighted CM ratio or weighted P/V ratio have to be calculated. It represent the average contribution generated from Rs.1 revenue.

For determination of weighted CM ratio in term of Rs.1 revenue.

Step1	To find out sales mix ratio in sales amount
Step2	To find out CM ratio of each product.
Step3	To multiply the sales mix ratio and P/V ratio of each product separately
Step4	To find out overall P/V ratio by adding the product of Step3

Break Even Analysis Under Multiple Products/Services

If two or more than two products are manufactured and sold by the business organization, that is known as sales mix. The relative proportion or ratio of sales units

is called sales mix. In the case of multi product, the company wants to know overall break even point of the organization. The overall break even point can be calculated as below.

(a) Overall BEP (in rupees) = $\frac{\text{Total Fixed Cost}}{\text{weighted Average P/V ratio}}$

4.4.4 Margin of Safety Analysis

Margin of safety is the excess of budgeted or actual Revenue over the break-even Revenue volume. In other words, it is the different between the budgeted or actual Revenue and the break-even Revenue. It is a position above the breakeven point. It gives management a feel for how close projected operations are to be organization's break-even point. Managers often consider the size of the company's margin of safety when making decision about various opportunities. The larger is the safety margin, the greater is the chances for the company to earn profit (i.e. Larger the margin of safety, safer the company). A high margin of safety is particularly significant in times of depression when the demand for the company's or the firm's product is falling. A low margin of safety may result for a firm which has a low contribution ratio. When both the margin of safety and the P/V ratio are low, management should think of the possibilities of increasing the selling price, provided it does not adversely affect the Revenue volume or reducing variables costs by bringing improvement in the manufacturing process. Margin of safety can be ascertained by using the following formula

Margin of safety = Actual Revenue value – Break-even Revenue value

$= \frac{\text{Profit}}{\text{Profit Volume Ratio}}$ in amount

X $\frac{\text{Profit}}{\text{Unit Contribution Margin}}$ in Units

The relation between margin of safety and the actual Revenue is known as margin of safety ratio, which is determined as follows

$$\text{Margin of safety ratio} = \frac{\text{Actual Sales Z Break Even Sales}}{\text{Actual Sales}}$$

Table 4.9

Profitability analysis from the F/Y 2062/063 to 2066/067 of General Insurance Business of Rastriya Beema Sansthan

(Rs in Lakhs)

Year	2062/063	2063/064	2064/065	2065/066	2066/067
Revenue	3727	5040	5896	4556	5846
VC	2271	3560	4515	2843	2523
CM	1456	1480	1381	1713	3323
FC	396	435	375	239	269
Profit	1060	1045	1006	1474	3054
CM ratio	0.39	0.29	0.23	0.376	0.57
VR ratio	0.61	0.71	0.77	0.624	0.43
BEP sales	1015.38	1500	1630.43	635.64	471.93
MOS	2711.62	3540	4265.57	3920.36	5374.07

Here, contribution margin are increasing from Rs.1456 lakhs in fiscal year 2062/063 to Rs.3323 lakhs in fiscal year 2065/066 except in fiscal year 2064/065 it remains in Rs.1381 lakhs.

CM ratio are in fluctuating trend. In first three fiscal year it is in decreasing trend and at last two fiscal year it is improving rapidly. As we know VC ratio has inverse relationship with CM ratio, so VC ratio is also fluctuating due to unstable trend in CM ratio.

Fixed Cost are volatile during the period of study as it indicate that management are trying to control it. So it is decreased from Rs.396 lakhs to Rs.269 lakhs during the period of study.

As we know that BEP in Rs. Means fixed cost divided by CM ratio. Above table reveal that CM ratio and Fixed Cost both are fluctuating. So BEP in value are also increasing for first three year and again it starts to decrease.

Actual revenue are increasing in all fiscal year except in fiscal year 2066/067 MOS is the excess of Actual revenue over BEP sales. Here, MOS is also in progressing trend with huge amount except in fiscal year 2064/065.

Table 4.10

Profitability analysis from the F/Y 2062/063 to 2066/067 of Life Insurance Business of Rastriya Beema Sansthan

(Rs in Lakhs)

Year	2062/063	2063/064	2064/065	2065/066	2066/067
Revenue	12692	15991	18210	17126	20960
VC	3012	3846	4435	3909	5475
CM	9680	12145	13775	13217	15485
FC	540	764	944	980	1218
Profit	9140	11381	12831	12237	14267
CM ratio	0.76	0.76	0.76	0.77	0.74
VR ratio	0.24	0.24	0.24	0.23	0.26
BEP sales	710.53	1005.26	1242.1	1272.73	1645.95
MOS	11981.47	14985.74	16967.9	15853.27	19314.05

Here, Contribution Margin, is increasing at all the year except in the fiscal year 2065/066 in which it is slightly reduced. CM ratio or P/V ratio are constant for three fiscal year and then slightly improved in fiscal year 2065/066 and than again reduced slightly in next year. As we know that VC ratio have inverse relationship with CM ratio so VC ratio is also constant for three fiscal year and at last fiscal year it has been increased.

Fixed cost are increasing from Rs. 540 in base year 2062/063 to Rs. 1218 in fiscal year 2066/067 From this it reveals that fixed costs are becoming uncontrollable by the management and it has detrimental the firm's profitability.

Simply BEP in Rs. Means fixed cost divided by CM ratio. Above table disclosed that CM ratio is fluctuating and fixed cost is increasing from fiscal year 2062/063 to

2066/067. That's why BEP in value is increasing from fiscal year 2062/063 to fiscal year 2066/067.

Actual Revenue are highly improving during the period of study except in fiscal year 2065/066. MOS is the different between Actual Revenue and BEP Revenue. There is huge MOS which is also in increasing trend except in fiscal year 2065/066.

Table 4.11

Profitability analysis from the F/Y 2062/063 to 2066/067 of Total Revenue

Rastriya Beema Sansthan

(Rs in Lakhs)

Year	2062/063	2063/064	2064/065	2065/066	2066/067
Revenue	16419	21031	24106	21682	26806
VC	5283	7406	8950	6752	7998
CM	11136	13625	15156	14930	18808
FC	936	1199	1319	1219	1487
Profit	10200	12426	13837	13711	17321
Proportion of life Insurance	0.773	0.76	0.755	0.79	0.782
Proportion of General Insurance	0.227	0.24	0.245	0.21	0.218
Weighted CM ratio	0.68	0.65	0.63	0.69	0.70
Weighted VR ratio	0.32	0.35	0.37	0.31	0.30
Weighted BEP sales	1376.47	1844.62	2093.65	1766.67	2124.29
MOS	15042.53	19186.38	22012.35	19915.33	24681.71

Contribution Margin is in increasing trend except in fiscal year 2064/065. here weighted average CM ratio is in decreasing trend for first three fiscal year and again start to increase in next two fiscal year. The volatility of weighted average CM ratio is due to fluctuation in relative proportion of revenue and CM ratio of Life Insurance and General Insurance business. The variability of weighted average VC ratio is due to instability of weighted average CM ratio in various fiscal year.

Total Fixed Cost are in increasing trend except in fiscal year 2065/066. from this it can be conclude that management are becoming failure to control the fixed cost and it may have negative consequence in firms profitability in long run

In general, BEP in Rs means. Total Fixed Cost divided by weighted average CM ratio. Above table disclose that weighted average CM ratio is fluctuating and total Fixed Cost are in increasing trend except in fiscal year 2065/066. That's why BEP in value is in increasing trend except in fiscal year 2065/066 in which it is reduced.
Actual revenue are improving during the period of study except in fiscal year 2065/066 where it is decreased. MOS is also very high due to huge Actual revenue over BEP revenue and it is in increasing trend with an exception in fiscal year 2065/066.

4.5 Sensitivity Analysis

As we know, Profit as measured in Accounting terms is the excess of revenue over expenses. Management, however, must look behind the summary figures to the factor which cause revenue and expenses (fixed and variable) to be what they are. What happen to them if any one of them swings? This analysis improves the managerial decision making activities, known as Profit Sensitivity analysis.

By determining the profit multiplier profile of a business it becomes possible to measure the extent of the impact (sensitivity) of changes in key factors (such as price, volume, variable cost, fixed cost and combination of factors which shows proportionate relationship, positive relationship, inverse relationship and no relationship) on profit. With this technique the management teams are not only able to obtain a numerical expression of their business orientation, but in addition, are able to assess a range of issues relating to product and service profitability, profit improvement and the effectiveness of alternative accounting procedures, control strategies and budget preparation methods. The following table provides the insights into the "what-if analysis".

Table 4.12

Different Factors Affecting CVP Analysis

Rastriya Beema Sansthan

Factors	Effect in PV ratio	Effect in BEP	Effect in Profit
Revenue			
Increase	No effect	No effect	Increase
Decrease	No effect	No effect	Decrease
Variable cost			
Increase	Decrease	Increase	Decrease
Decrease	Increase	Decrease	Increase
Fixed Cost			
Increase	No effect	Increase	Decrease
Decrease	No effect	Decrease	Increase
Increase in Revenue and decrease in variable cost	Increase	Decrease	Increase
Increase in variable cost and decrease in Revenue	Decrease	Increase	Decrease
Increase in variable cost and Increase in fixed cost	Increase	Increase	Decrease
Decrease in variable cost and decrease in fixed cost	Increase	Decrease	Increase
Increase in Revenue and decreased in fixed cost	No effect	Decrease	Increase
Decrease in Revenue and increase in fixed cost	No effect	Increase	Decrease

4.5.1 Effect in Changes in Revenue Value

The rise and fall in Revenue value will have no effect in profit volume ratio as a result breakeven point will remain constant. If rise and fall of Revenue value by 10% with other factor remain constant, it gets following result for the fiscal year 2066/067.

Table 4.13

Rastriya Beema Sansthan

Income statement with changes of Revenue Value

For the fiscal year 2066/067

Rs in Lakh

Details	Changes in Revenue Value		
	Original	10% Increase	10% Decrease
Revenue	26806	29486.6	24125.4
Less, Variable Cost	7998	8797.8	7198.2
Contribution Margin	18808	20688.8	16927.2
Less, Fixed Cost	1487	1487	1487
Profit/ Loss	17321	19201.8	15440.2
CM ratio	0.70	0.70	0.70
BEP	2124.29	2124.29	2124.29

The above tables 4.13 shows that the rise in Revenue value by 10%, the profit of the company will increase by Rs.1880.8 lakh i.e. by 10.86%. Similarly, with the decrease in Revenue value by 10% the profit of the company will decrease by Rs.1880.8 lakh i.e. by 10.86% which has also been proved in above calculation. Due to rapid (10%) rise and fall in Revenue value helps to increase and decrease in net profit because of low fixed cost and high CM ratio.

4.5.2 Effect of Changes in Variable Cost

The impact on change in Variable cost on profit is straight forward if it does not cause any change in Revenue and fixed cost. An increase in variable cost will lower P/v ratio, push up the BEP and reduce profit. On the other hand, if the variable cost decline, P/V ratio will increase, BEP will be lowered and profit will rise. If the increase and decrease in variable cost by 10% with other factor assumed remain constant, it gets following result for the fiscal year 2066/067.

Table 4.14

Rastriya Beema Sansthan

Income statement with changes of Variable Cost

For the fiscal year 2063/064

Rs. in Lakh

Details	Changes in Variable Cost		
	Original	10% Increase	10% Decrease
Revenue	26806	26806	26806
Less, Variable Cost	7998	8797.8	7198.2
Contribution Margin	18808	18008.2	19607.8
Less, Fixed Cost	1487	1487	1487
Profit/ Loss	17321	16521.2	18120.8
CM ratio	0.70	0.67	0.73
BEP	2124.29	2213.47	2036.98

Above table 4.14 shows that, with 10% increase in variable cost, break even points have increased by 4.20%, which indicate that variable cost and break even point have positive but not proportionate relationship. Similarly, with the decrease in variable cost by 10% the break even amount has been decreased by 4.11%.

4.5.3 Effect of Changes in Fixed Cost

A change in fixed cost does not influence P/v ratio. Other factor remains unchanged. Falls in the fixed cost however lower the BEP and raise the profit. An increase in fixed cost, caused either due some changes, will rise the BEP. If increase and decrease of fixed cost by 20% with other factor assumed to remain unchanged, it gets following results for the fiscal year 2065/066.

Table no. 4.15

Rastriya Beema Sansthan

Income statement with changes of Fixed Cost

For The Fiscal Year 2066/067

Rs. in Lakh

Details	Changes in Fixed Cost		
	Original	20% Increase	20% Decrease
Revenue	26806	26806	26806
Less, Variable Cost	7998	7998	7998
Contribution Margin	18808	18808	18808
Less, Fixed Cost	1487	1784.4	1189.6
Profit/ Loss	17321	17023.6	17618.4
CM ratio	0.70	0.70	0.70
BEP	2124.29	2549.15	1699.45

Above table no. 4.15 shows that 20% of fixed cost increase, breakeven point is increased by 20%, and with 20% decrease in fixed cost, BEP amount is decreased by same 20%. From this situation we can conclude that Break Even Point and fixed cost has direct proportionate relationship.

4.5.4 Effect in Changes in Revenue Value and Fixed Cost

An increase in Revenue and decrease in fixed cost increase the net income. If the increase of Revenue by 10%, and decrease the fixed cost by Rs. 400 (Lakh) Variable cost change according to the Revenue, and vice versa, it gets following results for the fiscal year 2066/067

Table 4.16

Rastriya Beema Sansthan

Income statement with changes of Revenue Value and fixed cost

For The Fiscal Year 2066/067

Rs. in Lakh

Details	Changes in Revenue Value and fixed cost		
	Original	10% Increase	10% Decrease
Revenue	26806	29486.6	24125.4
Less, Variable Cost	7998	8797.8	7198.2
Contribution Margin	18808	20688.8	16927.2
Less, Fixed Cost	1487	1087	1887
Profit/ Loss	17321	19601.8	15040.2
CM ratio	0.70	0.70	0.70
BEP	2124.29	1552.86	2695.71

Above table 4.16 reveals that, 10% increase in Revenue and Rs. 400(Lakh) decrease in fixed cost will decrease the BEP 26.9%, and increase the profit by 13.17%. Similarly, by increasing fixed cost by Rs. 400 (lakh) and reduce the Revenue by 10% and it will increase the BEP by 26.9%, and decrease the profit by 13.17% respectively.

4.5.5 Effect in Changes in Revenue Value and Variable Cost:

The impact of change in combination of variable cost, and Revenue value is dynamic. A decrease in variable cost and increase in Revenue decrease the P/V ratio and net income will rise. If the decrease of variable cost by 10%, and increase the Revenue by 10%, fixed cost remained constant and vice versa, it gets following results for the fiscal year 2066/067.

Table 4.17

Rastriya Beema Sansthan

Income Statement with Changes of Revenue Value and Variable Cost

For The Fiscal Year 2066/067

Rs. in Lakh

Detail	Changes in Revenue Value and variable cost		
	Original	10% Increase	10% Decrease
Revenue	26806	29486.6	24125.4
Less, Variable Cost	7998	7198.2	8797.8
Contribution Margin	18808	22288.4	15327.6
Less, Fixed Cost	1487	1487	1487
Profit/ Loss	17321	20801.4	13840.6
CM ratio	0.70	0.76	0.64
BEP	2124.29	1967.24	2340.51

Above table 4.17 reveals that, 10% decrease in variable cost and 10% increase in Revenue value then BEP will decrease by 7.39% and increase the CM ratio by 8.57%, and increase the profit by 20.01%. Similarly, by increasing variable cost by 10% and reduce the Revenue by 10% and it will increase the BEP by 10.18%, decrease CM ratio by 8.57% and decrease the profit by 20.01% respectively.

4.5.6 Effect of Changes in Variable Cost and Fixed Cost:

A change in fixed cost does not influence P/V ratio, but changes in the variable cost effect the P/v ratio. Increase in variable cost and increase in fixed cost will decrease the CM ratio and similarly profit will also decrease. If increase in variable cost by 10% and decrease the fixed cost by Rs. 500 (Lakh) and vice versa will give the following results.

Table 4.18

Rastriya Beema Sansthan

Income Statement with Changes of Variable Cost and Fixed Cost

For The Fiscal Year 2066/067

NRs in Lakh

Details	Changes in Variable cost and fixed cost		
	Original	10% Increase	10% Decrease
Revenue	26806	26806	26806
Less, Variable Cost	7998	8797.8	7198.2
Contribution Margin	18808	18008.2	19607.8
Less, Fixed Cost	1487	987	1987
Profit/ Loss	17321	17021.2	17620.8
CM ratio	0.70	0.67	0.73
BEP	2124.29	1473.14	2721.92

Above table reveals that increase in variable cost and decrease in fixed cost will decrease the CM ratio by 4.29% and decrease the profit by 1.73% and decrease the BEP by 30.65%. but decrease in variable cost and increase in fixed cost will increase the CM ratio by 4.29% increase the BEP by 28.13% and increase the profit by 1.73% respectively.

4.5.7 Effect of Change in Variable Cost, Fixed Cost and Revenue Value

The impact of change in combination of variable cost, fixed cost and Revenue value is dynamic. An increase in variable cost for improving the quality of service will ultimately raise the Revenue value and if the fixed cost will reduce by adopting cost control measure then P/V ratio will decrease but net income will rise. If the increase of variable cost by 5%, Revenue by 10%, fixed cost decreased by Rs.500 (Lakh) and vice versa, it gets following results for the fiscal year 2065/066.

Table 4.19

Rastriya Beema Sansthan

Income Statement with Changes of Revenue Value, Variable Cost and Fixed Cost For the fiscal year 2066/067

Rs in Lakh

Details	Changes in Revenue Value, Variable Cost and Fixed Cost		
	Original	Increase	Decrease
Revenue	26806	29486.6	24125.4
Less, Variable Cost	7998	8397.9	7598.1
Contribution Margin	18808	21088.7	16527.3
Less, Fixed Cost	1487	987	1987
Profit/ Loss	17321	20101.7	14540.3
CM ratio	0.70	0.715	0.685
BEP	2124.29	1380	2900.5

Above table 4.19 reveals that, 5% increase in variable cost and 10% increase in Revenue value but decrease in fixed cost by Rs. 500 (Lakh), will decrease the BEP by 35% and CM ratio increase by 2.14%, hence boost-up the profit by 16.05%. Similarly, by reducing variable cost by 5% and increasing in fixed cost by Rs. 500 (Lakh), will reduce the Revenue by 10% and it will increase the BEP by 36.54% and decrease the CM ratio by 2.14%, the impact of which will decrement the profit by 16.05%.

4.6 CVP Analysis and Uncertainty

The organization may be failure to cover the fixed cost in the long term which can result in the demise of any organization, if much attention is given to the traditional CPV model (which ignores uncertainty). The basic CPV model is not adequate, bearing the decision making process. If one or more variable of the Beema analysis are subject to uncertainty, the management should analyze the potential impact of this uncertainty. This additional analysis is required in evaluating alternative course of action and in developing contingency plan.

4.6.1 The Normal Distribution

The most important continuous probability distribution used in the entire field of statistics is the normal distribution. The normal distribution is bell shaped curve that extends indefinitely in both directions, coming closer and closer to the horizontal axis without touching it. Most of the data relating to economic and business or even in social and physical sciences conform to this distribution. To confirm whether a distribution is normal it is usually necessary to ascertain the mean («) and the standard deviation (±). Is there is no dispersion, i.e. all observed values are the same, the mean, in this instance, would then be the same as the observed values. Moreover, as dispersion can deviates either side of the mean, it is usually necessary to quantify the amount. To compare two distributions it is necessary to translate the observations of both distributions into Z- values. Basically, Z-values convert each distribution into a standard normal form with a mean of zero, and standard deviations of one. The formula is:

$$Z = \frac{X\ Z\ «}{\pm}$$

Where X = value of variable

« X Mean value

± X Standard Deviation

Figure 4.5

The Normal Probability Distribution Curve

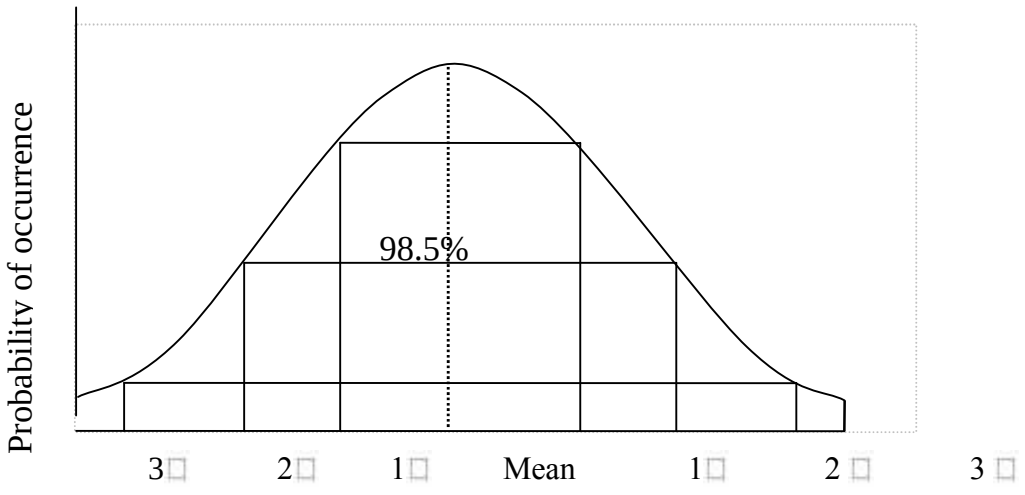


Figure 4.4 reveals that approximately 99.7 percent 95.4 percent and 68.3 percent of total observations lie within 3, 2 and 1 standard deviations respectively. The area of the curve is one.

The Beema analysis under uncertainty is to be calculated from the income statement presented in the table 4.2.

Here,

BEP Revenue = Rs. 21

So,

Expected mean Revenue $f\ll A$ = Rs. 220

Standard deviation $f\pm A$ = Rs. 34.61

It is expected that this pattern is to be continued in the future. Now that we have satisfied the requirement for a normal distribution, we are in the position to establish the probabilities of different profit level.

1. The Probability of at Least Breaking Even

Using z-table $X\frac{21Z220}{34.61}$

$XZ5.75$

The break even point therefore lies -5.75 from the mean of our standard normal distribution curve. The figure of 0.49999 represents the probability of achieving the BEP by 49.999%.

Symbolically,

P(X>21) = P(Z>-5.75)

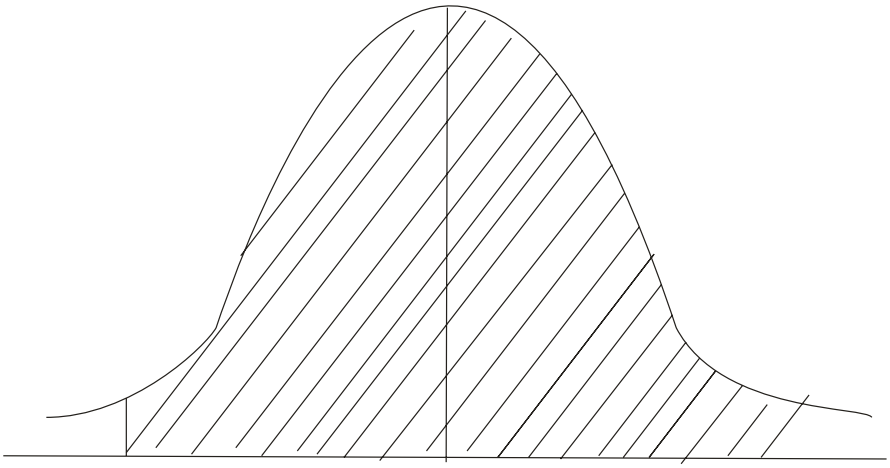
=P(0< Z< |) + P(0<Z<-5.75)

= 0.50 + 0.49999

= 0.99999 i.e. 99.999 %

Figure 4.6

The Probability of at Least Breaking Even



Z= -5.75 Z=0

Thus, the probability of being at least Break Even is 99.999%.

2. The Probability at least making Rs. 200 Crore profit

The Revenue that needed to be sold to earn a contribution that would produce a net profit of at least Rs. 200 Crore is:

$$\text{Using } X\frac{\text{Fixedcost}\,\Gamma\,\text{profit requirement}}{\text{contribution margin ratio}}$$

$$X\frac{15\,\Gamma\,200}{0.70}$$

$$X307.14$$

When x = Rs. 307.14 crore,

$$\text{Z -value} = \frac{307.14\,Z\,220}{34.61}$$

$$= 2.52$$

Now,

Symbolically,

$$P\,(X>200) = P\,(Z > 2.52)$$

$$= P\,(0< Z < \ |\ ) - P\,(0< Z<2.52)$$

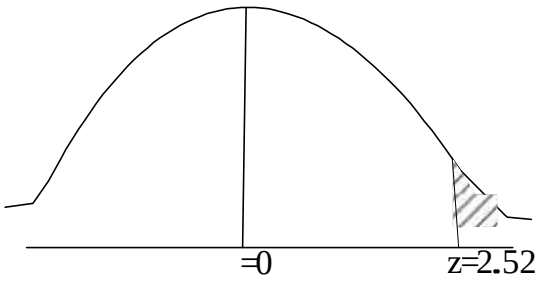
$$= 0.50 - 0.4941$$

$$= 0.0059$$

$$= 0.59\%$$

Figure 4.7

Probability of Profit Being At Least Rs. 200 Crore



Thus, the probability of profit being at least Rs. 200 Crore is 0.59%.

3. The Probability of at least making Rs. 400 Crore profit

Using;

$$X \frac{\text{Fixed cost } \Gamma \text{ profit requirement}}{\text{Contribution Margin}}$$

$$X \frac{15 \Gamma 400}{0.70}$$

$$X \text{Rs. } 592.86$$

Now,

$$\text{Z- value } X \frac{592.86 \, Z 220}{34.61}$$

= 10.77

Symbolically,

P(X>400) = P(Z>10.77)

= P(0<Z< |) - P (0<Z<10.77)

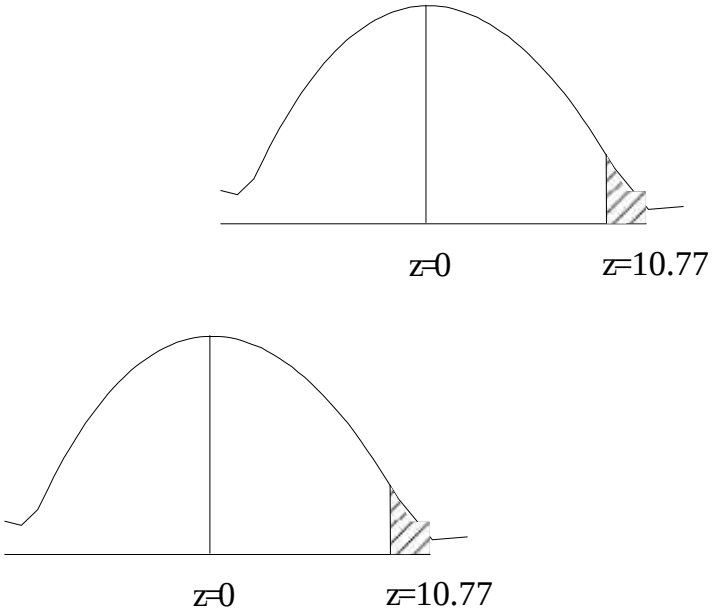
= 0.50 - 0.49999

= 0.00001

= 0.001%

Figure 4.8

Probability of Profit Being At Least Rs. 400 Crore



Thus the probability of profit being Rs.400 is 0.001%.

4. The probability of making profit between 200 and 400 Crore.

Symbolically,

$$P(200 < \varepsilon < 400) = P(2.52 < Z < 10.77)$$

$$= P(0 < Z < 2.52) - P(0 < Z < 10.77)$$

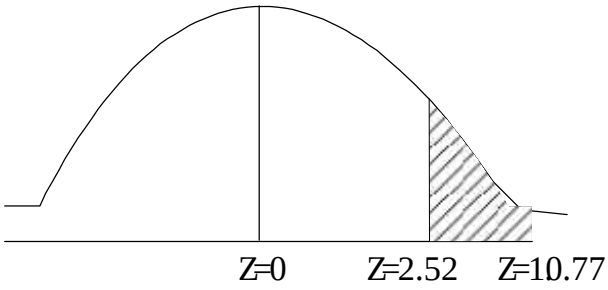
$$= 0.4941 - 0.49999$$

$$= 0.00589$$

$$= 0.589\%$$

Figure 4.9

Probability of Profit Being between Rs. 200 and Rs.400 Crore



Thus the probability of profit being between Rs. 200 Crore and Rs. 400 Crore is 0.589%.

4.7 Major Findings of the Study:

On the basis of various types of analysis of revenues and expenses observation and informal conversation, the following major findings were drawn**.**

- The revenue achievement of Rastrya Beema Sansthan is higher than the revenue target in the fiscal year 2065/066 The correlation between target and actual to revenue is positive. It reveals that the company is able to meet its global goal as specified in its annual report. The company tried to apply effective environmental scanning technique. It ables to upsurge both budgeted and actual Revenue except in the fiscal year 2064/065
- Cost trend of Rastriya Beema Sansthan is increasing year by year except in fiscal year 2064/065
- The proportions of fixed cost are lower than variable cost in total cost structure, which normally indicates low risk.
- Variable cost volume of Rastriya Beema Sansthan is nearly 33% on average. It means that the contribution margin of the company is about 77% of total revenue.
- Company's CM ratio is increasing so a rupee increase in Revenue, CM will also increasing by the same ratio.Break Even Points are increasing it due to the increase in contribution margin ratio and increase in fixed cost. As the company has high MOS, the company might be at minimal risk.

- Financial position of the company is good. The company is becoming successful in exceeding BEP every year with huge margin of safety.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

PPC analysis is an analytical technique for studying the relationship between volume, costs, prices, and profit which helps to manage future cost and profit. Beema is a management technique and it is a written plan in all aspects of the business operation for specific period. Beema analysis is a device used to determine the usefulness of Beema process of the firm. In fact, the entire field of Beema has become associated with the Beema inter relationship.

Every organization effectively achieves organizational objectives through the efficient use of scarce resources. Future is uncertain which creates risk and to reduce risk, systematic management is essential. It has observed that Rastriya Beema Sansthan has succeeded in living up to the expectation of insured mainly life insured and general insured like vehicle, fire, marine, aviation, engineering and miscellaneous insured etc. As per the nature of the study, the secondary data with descriptive and analytical approach for revenue analysis, Cost Analysis, Profitability Analysis, Contribution Margin Analysis, P/V Ratio Analysis, BEP Analysis and Beema Analysis under uncertainty, etc are used. And to support the study, primary data are collected informally from the staff of the company. The main objective of the present research is to examine cost-volume-profit analysis as a tool to measure effectiveness of Beema of Rastriya Beema Sansthan So, this study was undertaken to evaluate Beema analysis of the company.

From the analysis, the Beema analysis shows that the company has high contribution, high P/V ratio, low BEP and positive margin of safety. The sensitivity test of Beema analysis shows that costs increases (i.e. variable and fixed cost) , the BEP will also increase and when the cost decrease the BEP also decrease. But at the time of profit increases much more times than revenue increase due to its low fixed cost. Company’s profit conditions are not excellent as due to successful in exceeding BEP

revenue. Lack of detail information on scientific cost analysis and extra cost burden and less emphasis on the analysis as the company is in loss are the main reason behind not practicing effectively and efficiently Beema tools like Beema Analysis.

5.2 Conclusion

The profitability of maximizing the revenue is not more possible under this circumstance unless management has revised their cost during decision making process while considering risk calculation for achieving objective. Finally, Beema analysis is useful as a framework of reference, as a vehicle for expressing overall managerial performance, and as a planning device via break even technique and what-if scenarios. The following points highlight the analytical usefulness of Beema analysis as a tool of PPC.

Due to this reason the accumulation and apportion of cost on the basis of responsibility centre (i.e. cost centre) is not done by the company. That's why it becomes practically difficult to define cost on the basis of activity and to classify it on the basis of variability. Therefore, Rastriya Beema Sansthan has not been able to use efficiently and effectively Beema analysis and make the realistic and smart budget.

As the title variation in targeted revenue and actual revenue proves that the Revenue planning of the company is scientific. Profit pattern of the company shows that the company is effective in the Beema and its implementation. The cost structure of Rastriya Beema Sansthan disclose appropriate variable cost and low fixed cost so this cost structure indicates the low risk because its fixed cost are low and it will generate huge net profit as smartly as revenue grow rapidly. Different types of Beema tools, which are used in the academic field and in multinational companies of developed nation, are not found applied by Rastriya Beema Sansthan It reveals the gap between the theory and practice. Beema analysis is not effectively applied by Rastriya Beema Sansthans, because of no implementation of scientific method of segregating cost into fixed and variable, which is the hardcore of BEEMA Analysis. The company has not established implemented costing and cost classification policy. Even if the company has low fixed cost it can be categories a "Capital intensive" because it provide financial security to those who are in financial risk from unforeseeable event. The

Beema analysis exhibit that the variable cost ratio is decreasing which means the company's CM is in increasing more than the revenue increases. BEP of the company has also increased its main reason is due to increase in fixed cost. As the lower BE revenue, the business of the company is in low risk, and so further investment in this condition is considered to be safe. The "what- if" analysis shows that the changes in either revenue or variable cost alter the CM, CM ratio or BEP where as response of change in fixed cost are highly stimulus. The MOS of the company is positive so a percentage decrease in revenue, the financial health of company can be jeopardized. The fixed cost of the company is slowly increasing however, if management failed to control the fixed cost of Rastriya Beema Sansthan which may unable to leverage the profit significantly in long run. The company's aim seems to cover the market share rather than to obtain reasonable profit and cost management. A change in either the revenue or the variable cost per rupee alters CM ratio and BEP.As revenue exceed the BEP, a higher unit of CM or CM ratio will result in greater profit than a small unit CM or CM ratio.The lower the BE revenue, the low risky the business and the investment is save, other things being equal.

A positive MOS means low operating risk, since a small decrease in revenue doesn't makes business failure and also provide enough playground to implant restructuring programmed in the company using CM income statement model and a spreadsheet program such as EXCEL, a variety of what-if planning and decision scenarios can be evaluated.

Better Beema analysis indicate i.e. trend of fixed cost and CM ratio; the company is finally healthy or sick.
Better Beema analysis provides vision for planning, decision making and controlling process in Beema.

5.3 Recommendations

Nepalese companies should integrate with the global environment with best fit managerial strategies development. As the competition is very high in the context of liberalization, company should provide attention toward cost minimization and capturing market share rather than profit maximization. For this, Beema analysis tools can be great help. Thus, the following recommendations based on the finding of research study are:
Cost planning and controlling should focus on the relationship between cost and benefits derived from those cost rather than increasing cost in order to boost revenue.

Classification of cost as variable and fixed or controllable and non controllable must be made within specific framework of responsibility centre and time.Rastriya Beema Sansthan should consider BEP analysis while preparing revenue plan, production plan and setting price of its services.

Separate cost control department should be established for the effective management of cost. As Rastriya Beema Sansthan is service providing company, more emphasis should be given on improving the quality of service without comparing the contribution ratio.

On the basis of the study of Beema Analysis as a tool to measure effectiveness of PPC of Rastriya Beema Sansthan, it seems necessary to develop, implement and improve the process of Beema analysis from beginning to end with PPC. Nepal is stepping toward globalization with membership of WTO.Rastriya Beema Sansthans should make proper manpower planning.

The company must increase revenue rapidly in order to enjoy huge profit, because low fixed cost can forward the company to approach towards new technology Systematic and periodicals performance reports should be strictly followed to be conscious about poor performance and take corrective action immediately and timely.

A systematic approach should be made toward comprehensive Beema.

As the company is enjoying huge profit so it must approach towards restructuring program and latest technology.

Due to strong financial health the company must diversified its product portfolio and take initiative towards becoming global players in the contest of 21st century.

This can considerably contribute to the increase in profitability of Rastriya Beema Sansthan. Since separating semi variable costs into their fixed and variable elements is at the heart of Beema analysis, all decision makers sought to be fully aware of and understand, the cost structure of their operation, otherwise Beema analysis will provide meaningless information.

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Website

www.beemasansthan.com

Appendix 1

Calculation of Mean, Standard Deviation

and Coefficient of Variation of Actual Sales and budgeted sales

Year	Budgeted Sales (X)	$(X-\bar{X})$	$(X-\bar{X})^2$	Actual Sales (Y)	$(Y-\bar{Y})$	$(Y-\bar{Y})^2$
2062/063	170	-48	2304	164	-56	3136
2063/064	215	-3	9	210	-10	100
2064/065	245	27	729	241	21	441
2065/066	220	2	4	217	-3	9
2066/067	240	22	484	268	48	2304
Total	**1090**		**3530**	**1100**		**5990**

Mean $(\bar{X}) = \frac{X}{N} = 1090/5 = 218$

Mean $(\bar{Y}) = \frac{Y}{N} = 1100/5 = 220$

Standard Deviation of X (σ) $= \sqrt{\frac{1}{N} \sum (X - \overline{X})^2}$

$= \sqrt{\frac{1}{5}(3530)}$

$= 26.57$

Standard Deviation of Y (σ) $= \sqrt{\frac{1}{N} \sum (Y - \overline{Y})^2}$

$= \sqrt{\frac{1}{5}(5990)}$

$= 34.61$

C.V of X $= \frac{\sigma}{\overline{X}} \times 100$

$= \frac{26.57}{218} \times 100$

$= 12.19\%$

C.V of Y $= \frac{\sigma}{\overline{Y}} \times 100$

$= \frac{34.61}{220} \times 100$

$= 15.73\%$

Appendix 2

Calculation of Correlation and Probable Error of Correlation of

Rastriya Beema Sansthan

Year	X	Y	XY	X^2	Y^2
2062/063	170	164	27880	28900	26896
2063/064	215	210	45150	46225	44100
2064/065	245	241	59045	60025	58081
20644/65	220	217	47740	48400	47089
2066/067	240	268	64320	57600	71824
Total	**1090**	**1100**	**244135**	**241150**	**247990**

$$r = \frac{n \quad xy \; Z \quad x \quad y}{\sqrt{n \quad x^2 \; Z f \quad x Å^2} \; \sqrt{n \quad y^2 \; Z f \quad y Å^2}}$$

$$= \frac{5x244135 - 1090x1100}{\sqrt{5x241150 - f1090Å^2} \; \sqrt{5x247990 - f1100Å^2}}$$

$= 0.9427$

$$P.E = 0.6745 \frac{1 Z r^2}{\sqrt{n}}$$

$$= 0.6745 \frac{1 Z ∫ 0.9427 Å}{\sqrt{5}}$$

$= 0.0336$

Appendix 3

Segregation of cost on different fiscal year

Of Life Insurance

Rs In Lakh

Year	2062/063	2063/064	2064/065	2065/066	2066/067
(A) Semi-Variable	2771	3399	3806	3291	4431
Component of Fixed Cost included in Semi-Variable Cost	175	175	175	175	175
Fixed Cost	365	589	769	805	1043
(B) Total Fixed Cost	540	764	944	980	1218
Component of Variable Cost included in Semi-Variable Cost	2596	3224	3631	3116	4256
Variable Cost	416	622	804	793	1219
(C) Total Variable Cost	3012	3846	4435	3909	5475
(D) Revenue	12692	15991	18210	17126	20960

VC ratio(C/D)	0.24	0.24	0.24	0.23	0.26
CM ratio(1- VC ratio)	0.76	0.76	0.76	0.77	0.74
Total Cost (B+C)	3552	4610	5379	4889	6693

Appendix 4

Segregation of cost on different fiscal year

Of General Insurance

Rs in Lakh

Year	2062/063	2063/064	2064/065	2065/066	2066/067
(A) Semi-Variable	189	523	321	204	290
Component of Fixed Cost included in Semi-Variable Cost	1	1	1	1	1
Fixed Cost	395	434	374	238	268
(B) Total Fixed Cost	396	435	375	239	269
Component of Variable Cost included in Semi-Variable Cost	188	522	320	203	289
Variable Cost	2083	3038	4195	2640	2234

(C) Total Variable Cost	2271	3560	4515	2843	2523
(D) Revenue	3727	5040	5496	4556	5846
VC ratio(C/D)	0.61	0.71	0.82	0.62	0.43
CM ratio(1- VC ratio)	0.39	0.29	0.18	0.38	0.57
Total Cost (B+C)	2667	3995	4890	3082	2792

Appendix 5

Segregation of cost on different fiscal year

Of Total Insurance

Rs In Lakh

Year	2062/063	2063/064	2064/065	2065/066	2066/067
(A) Semi-Variable	2960	3922	4127	3495	4721
Component of Fixed Cost included in Semi-Variable Cost	176	176	176	176	176
Fixed Cost	760	1023	1143	1043	1311
(B) Total Fixed Cost	936	1199	1319	1219	1487
Component of Variable Cost included in Semi-Variable Cost	2784	3746	3951	3319	4545
Variable Cost	2499	3660	4999	3433	3453
(C) Total Variable Cost	5283	7406	8950	6752	7998
(D) Revenue	16419	21031	24106	21682	26806

VC ratio(C/D)	0.32	0.35	0.37	0.31	0.30
CM ratio(1- VC ratio)	0.68	0.65	0.63	0.69	0.70
Total Cost (B+C)	6219	8605	10269	7971	9485

Appendix 6

Statement Showing Revenue from General Insurance

Year Particular	2062/063	2063/064	2064/065	2065/066	2066/067
Gross Premium	300028351	396315030	537686220	375059732	521657350
Investment and other Income	72635961	107682614	51906055	80516515	62928943
Gross Revenue	372664312	503997644	589592275	455576247	584586293

Statement Showing Revenue from Life Insurance

Year Particular	2062/063	2063/064	2064/065	2065/066	2066/067
Gross Premium	815717376	834625051	1005000000	1094200000	1346350000
Investment and other Income	453452005	764444255	815990974	618441927	749632483
Gross Revenue	1269169381	1599069306	1820990974	1712641927	2095982483

Statement Showing Gross Revenue from Total Insurance

Year Particular	2062/063	2063/064	2064/065	2065/066	2066/067
Gross Premium	1115745727	1230940081	1542686220	1469259732	1868007350
Investment and other Income	526087966	872126869	867897029	698958442	812561426
Gross Revenue	1641833693	2103066950	2410583249	2168218174	2680568776