

CHAPTER- I

INTRODUCTION

1.1 Background of the Study

CVP is one of the more important approaches that have been developed to facilitate effective performance of the management process. PPC is an advance decision of expected achievement based on the most efficient operating standard in effect or in prospect at the time it is established against which actual accomplishment is regularly compared. In the word of Nine Meier Jack C. & Scimigal Raymond S. “Profit planning is an estimation and predetermination of revenues and expressed that estimates how much income will be generated and how would be in order to meet investment and profit requirement. In the case of institutional operation it presents a plan for spending income in manager that does not result in loss.”

Individually cost means price paid to acquire produce/ accomplish/ maintain anything, volume a mass or quality of something or amount, and profit means the ratio of such pecuniary gain to the amount of capital invested and analysis in resolution, separation or breaking into parts. In total CVP analysis is the effect on profit of changes in selling prices, services fees, cost, income tax rates and the organization's mix of products and services. CVP analysis provides management with a comprehensive overview of the effect on the revenue and cost of all the kinds of short run financial changes. CVP analysis provides the manager with a powerful tool for identifying those courses of action that will or will not improve profitability. The entire amount of profit planning is associated with CVP inter relationship. CVP analysis provides a sweeping overview of the effect on profit of all kinds of changes in sales, volume, expenses and product mix and sales price. Usually the CVP analysis provides the answer to the following questions: (*Pandey; 1988:541*)

-) What minimum levels of sales need to be achieved to avoid losses?
-) What should be the sales level to earn a targeted profit?
-) What will be the effect of changes in prices, cost and volume on profit?
-) How will profit be affected when sales mix is changed?
-) What will be the new BEP under changes in cost, prices, volume and sales mix?

The CVP analysis is of immense utility management as it provides an insight into the effects and interrelationship of factors, which influence profit of the firm. It is with the help of CVP analysis that the finance executive is enabled to present facts and figures in accurate reports and easily understood charts to management for action.

Nepal has a very slow pace of industrialization. The performance of existing industries is not satisfactory. The main objective of business is to increase the profit. The chance of making profit can be improved by proper planning and following a definite strategy. The industrialization sector has not been able to contribute adequately in GDP of the nation they are not able to make good profit. What are the reasons behind this? What can be done to increase the level of profit and thus industrial development? To find the solution to these questions we have undergone this research.

Great leap towards financial liberalization was undertaken by the then Nepal Government with a view to expedite the pace of economic development under structural adjustment program since the FY1987/1988. This gave freedom in fixing interest rate, strengthening of banking operation and shift to indirect from direct monetary control instruments. As a result, many tourism industries are growing in Nepal. The tourism sector plays an important role in the economic development of a country. Tourism sector contributes in total GDP by 38 percent and earns foreign currency by 24 percent. Tourism industry is a service industry. It consists of many components comprising Hotel, Motel, Restaurant, Bar, Travel agents, Jungle safari, Trekking Agents, Rafting Agents

etc. Tourism industry basically provides accommodation, entertainment and relaxation service. It is also known as individual service industry. In Nepal the scope of tourism is bright as the country is full of natural attraction as well as artificial construction. The tourism industry is rapidly developing in the competitive way around the world. To maintain the large number of tourism a large number of Hotels must be available. So far to maintain the rapid development of economy the tourism sector have significant role. Although Nepal had a lot of attraction for tourist, it was closed till 1950. After 1956, Nepal focused on the development of tourism industry in a planned manner. In the FY 1951/1952 the first Hotel was established in Jawalakhali, but it was remained passive due to several factors. Hotel Coronation was the first commercial Hotel of Nepal and now it has been changed into Snow Line Hotel. With the passage of the time many hotels have been established in Nepal. Stars Hotel has been established gradually because of the liberal market and friendly economic policy of the Nepal Government, and then the Ministry of Culture, Tourism and Civil Aviation are also helping in this regard.

The Hotel industry is perhaps one of the oldest commercial endeavors of an urge to travel spurred by the invention of the “Wheel”. The earliest Inns were ventures by husband and wife teams who provided large halls for travelers to make their own beds and sleep on the floor. They also provided food, wine, Ale, etc and stabling facilities. These conditions prevailed for several hundred years. The industrial revolution brought business ideas and also changed travel mode. The idea in Hotel keeping was taken by the emerging nations of Europe especially Switzerland. The word “Hotel” was used in England in about 1760 after a passage of over 80 years. The American lodging houses were called Inn. The real growth of the modern Hotel industry took place in U.S.A with the opening of city Hotel in New York in 1794 A.D. This was the first building specially erected for Hotel purpose. Some of the Hotels built at that time but the real boom in hotel building came in early Twentieth century. The depression in 1930 had a disastrous effect on the Hotel industry. It was

felt that the Hotel would never recover, but the outbreak of world war 2nd brought a tremendous upsurge. In the earlier 1950, two new concepts emerged; one was Motels, which was restricted to the North American Continent. International chain could provide the expertise technology and marketing trust that individual owners could not provide. Some international chains are Sheratons, Hyatt, Holiday Inn, and Ramada Inn etc. Today's Hotel to all the needs and wishes of a guest and the future holds promise for a future mushrooming of modern. "Hotel" or "Inn" is defined by British law as a "place where a bonfire traveler can received food and shelter provided them in the position to pay for it and is in a fit condition to be received". Hence, a hotel must provide food (and beverages) and lodging to travelers on payment and has in turn the right to refuse if the travelers is drunk, disorderly, or is not in a position to pay for the service.

The hotel is classified to suit the standard of the guest. Hotel may be classified according to the following basic factors.

1. Categorization by Location

Downtown Hotel: It is located in the heart of the city. Rates in these Hotels are normally high due to the rate of return on investment (ROI) computed on these capital intensive hotels is substantially high. Normally business clientele prefer such Hotels.

Sub-Urban Hotel: Located in the suburbs, it has the advantage of quiet surroundings. Rates quoted are low. Such Hotel is quiet setting ideal for conferences, seminars, educational program etc.

Resort Hotel: This type of hotel is located in the hills or at beaches. It is mainly patronized by vacationers. Basic facilities are provided and the rates offered are on American plan, i.e. room plus all means included.

Airport Hotel: As the name suggests, these Hotels are situated at the airport and are ideal for transit passengers who have only a few hours in the city

making it impossible for them to stay in a Downtown Hotel. Rate charges for room only i.e. European plan.

Motel: This type of hotel is located in highways. They provide modest board and lodging to highway travelers. Rates quoted are on European plan i.e. room only.

Inns: They are similar in size with modest board and lodging facilities. They may be located anywhere within or outside the city.

2. Categorization by Number of Rooms

Hotel with 25 rooms and less may be termed “small”, those with 25 to 100 may be called “Medium”, and those with 101 to 300 are called “Large”. Hotels with over 300 rooms are called “Very Large”

3. Categorization by Type Plan

Hotels are classified according to the type plan they offer. Nepal has Hotels on European plan, American plan or continental plan. Those plans are decided by the hotel on a variety of factors including type of clientele.

4. Categorization by Type of Clientele

This categorization is based on the type of patronage. Rates are European plan for business and American plan for groups and family. Such Hotels are normally situated in resort cities.

5. Categorization by Length of Guest Stay

It differs from hotels to hotels i.e. transient hotels, Residential Hotels and semi-residential hotel.

6. Categorization by Facilities that the Hotel Offers

Facilities offered by hotels may be the most important criteria for classifying Hotels. Some countries adopt the star rating system as follows,

Five Star Hotel	-----	Luxury Hotel
Four Star Hotel	-----	First Class Hotel
Three Star Hotel	-----	Middle Class Hotel
Two Star Hotel	-----	Lower Middle Class Hotel
One Star Hotel	-----	Moderate Class Hotel

In the contest of Nepal, there are eight Five Star Hotels in Nepal. They are Hyatt regency, hotel yak and yeti, Soaltee crown plaza, Radisson hotel, Hotel Shangri-la, The Malla Hotel, Hotel de'l Annapurna, Everest Hotel and Fulbari resort Pokhara. Among them Soaltee hotel is chosen for the study by the researchers. Since Soaltee Hotel is not only the second largest hotel but also an oldest five star hotel of Nepal and also it is quite popular among regional tourist.

1.2 Soltee Hotel Limited at a Glance

Soaltee Hotel Limited was established in 1968 under the Company Act 1964 as a private limited company. Later on in 1975 it was converted into public limited company and admitted International Finance Corporation, Washington D.C and Oberoi Hotel, India as shareholders. The Hotel was operating in collaboration with Oberoi hotel under the name of Soaltee Oberoi till May, 1994. The management of the hotel has been changed from Oberoi Hotel to Hotel Inn Crown Plaza since 1st June 1994 and then onwards the hotel is in operation under the name of Hotel Soaltee Holiday Inn Crown Plaza.

The main objective of the company is to provide Hotel facilities like Business center, Swimming Pool, Health Club, Beauty Parlor, Conference Hall, and Banquet Facilities. It provides same day laundry, Dry Cleaning, Free Transport Service. The facilities offered are Barber shop, Beauty Salon, Currency Exchange, Travel Agency, Car Rental, News and, Gift, Arts and Crafts shop etc. Some of the attraction are Casino Nepal (Black Jack, Roulette, Pontoon, Flush Table) a modern swimming pool surrounded by green lawns. It provides Nepalese, Indian, Chinese cuisine. Traditional Nepalese music and dance are

also attractive. All rooms overlook the mountains and are fully air conditioned with shower, Telephone and four channel Music.

Soaltee Crowne Plaza Kathmandu is considered a legendary landmark within the Kathmandu cityscape and is also the premier hotel of the Kingdom. It is spread over 11 acres of space and surrounded by manicured gardens and with views of the mountain ranges, the Soaltee Crowne Plaza offers a resort atmosphere for both business and leisure travelers.

Soaltee Crowne Plaza Kathmandu is located in the suburbs of Tahachal just ten minutes away from the city centre and 15 minutes away from the airport. The hotel offers free coach transfers to the hotel on request (subject to availability). There is a complimentary city shuttle to and from the hotel at regular intervals. The hotel also can arrange chauffeur-driven cars or coaches for business or sightseeing as there are no car rental facilities in Nepal. The hotel has five world-class restaurants and a Bar. Bukhara features meals cooked in tandoor, using recipes and methods preserved since the mediaeval ages. Garden Terrace Coffee Shop serves multicuisine breakfast, meals and light snacks. Al Fresco serves authentic Italian meals and is the most popular Italian restaurant in town. China Garden serves oriental delicacies from around South East Asia and Rodi Bar located just off the lobby offers the choicest drinks and snacks.

Kathmandu is proud to have many top-standard hotels and lodges to accommodate the numerous tourists coming to vacation here, and experience the magic and exoticism that it seethes in. One of the most popular names among the 5 Star Hotels in Kathmandu is the Soaltee Crowne Plaza Hotel in Kathmandu, which draws a steady crowd of tourists with the promise of deluxe accommodation at affordable prices. Soaltee Crowne Plaza Hotel in Kathmandu has made itself an accommodation that boasts of the perfect melding of comfort and hospitality. Its suitable location, and a services and facilities arranged for comfort, the hotel is an ideal accommodation choice among the many Hotels in Kathmandu in Nepal.

The Location of Soaltee Crowne Plaza Hotel in Kathmandu is chosen very carefully, and places the guests in an ideal locale, which is perfect for exploring the charms of the city. The Soaltee Crowne Plaza Hotel in Kathmandu stands in the suburbs of Tahachal, cushioned by the majestic Himalayas. The Soaltee Crowne Plaza Hotel in Kathmandu is easily accessible, being just 15 minutes away from the Airport, making it easy for guests to get to it.

The Room Facilities at Soaltee Crowne Plaza Hotel in Kathmandu are selected with care to ensure that the guests are treated to maximum comfort. One finds here an arrangement which is shaped to rest the guests with the maximum comfort possible. 283 Superior, Deluxe and Crowne Plaza Club rooms, 8 Executive Suites and 7 Regal Suites, as well as Non-smoking rooms are available at the Soaltee Crowne Plaza Hotel in Kathmandu. To increase the comfort and give the guests a homelike experience, the Soaltee Crowne Plaza Hotel in Kathmandu has lined up a fine range of services and facilities.

The Hotel Amenities and Services at Soaltee Crowne Plaza Hotel in Kathmandu are all-inclusive, and try to meet all the possible needs of the guests. The guests can see that all their needs are catered to, what with the amiable and efficient staff of the Soaltee Crowne Plaza Hotel in Kathmandu working round the clock. Right from your dining needs, to your leisure and recreational desires, and your business requirements, all are superbly catered to by the conveniences offered by the Soaltee Crowne Plaza Hotel in Kathmandu.

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Facilities & Activities

Unwind in our Health Club after a hectic day of sightseeing. Plunge into our blue water swimming pool which is designed in neoclassical architecture. Beauty Salon and Barber Shop offer a wide range of beauty treatments. Have a date with lady luck at Casino Nepal the biggest 24-hour, on-premise casino in Nepal. Pick up some souvenirs for your memories at our Shopping Arcade. Enjoy a game of bowling at the in-premise Bowling Alley.

Rooms & Suites

Soaltee Crowne Plaza Kathmandu offers 283 Superior, Deluxe and Crowne Plaza Club rooms, eight Executive Suites and seven Regal Suites. Non-smoking rooms are also available.

All categories of rooms feature:

-) Central air conditioning
-) Attached bathrooms
-) Colour television with satellite
-) International direct dial telephones
-) Internet and e-mail access capability
-) Temperature control
-) Tea / coffee making machine
-) Minibar
-) Hairdryers

) Check-in 1:00 pm

) Check-out 12:00 noon

Banquets & Meetings

Megha Malhar Convention Centre, recognised amongst the best in South Asia, offers an opportunity for successful and professional meetings to be held in this exotic destination. The Megha Malhar Convention Centre is housed in an independent complex and boasts two large conference halls, able to be combined into one impressive ballroom, two small lounges, an independent boardroom and the flexible Malshree Room, complete the choice. The rooms can accommodate meetings from ten to 600 delegates and are ideal for seminars, training sessions, sales presentations, product launches, and extravagant theme events and secure boardroom meetings.

State-of-the-art audio-visual events equipment is available with fully-trained technicians on hand to ensure a professional edge on any conference. The centre is linked to the hotel Lobby and also has a separate entrance for non-resident guests. A modern Business Centre is also located in the complex, providing full support to the meetings and conferences in progress.

To enhance the experience of your conference or meeting delegate, Soaltee Crowne Plaza's event coordinators can arrange a number of exciting and thrilling events for leisure activities. Meals customized to the conference theme or the tastes for your delegates can be organized to enhance the convention experience.

Dining & Entertainment

Whatever your taste you can indulge it in our five world-class restaurants and a Bar. Bukhara features meals cooked in tandoori, using recipes and methods preserved since the mediaeval ages. Garden Terrace Coffee Shop serves multicuisine breakfast, meals and light snacks. Al Fresco serves authentic Italian meals and is the most popular Italian restaurant in town. China Garden

serves oriental delicacies from around South East Asia and Rodi Bar located just off the lobby offers the choicest drinks and snacks. Relax in the privacy of your own room and dine with 24-hour Room Service.

TARIFF

ROOMS TYPES	RATES
Superior room single	\$ 180+ tax
Superior room double	\$190+ tax
Deluxe room single	\$200+ tax
Deluxe room double	\$210+ tax
Extra bed	\$35+ tax

SUITES ROOM

SUITES ROOM	
ROOMS TYPES	RATES
Crown plaza club	\$260+ tax
Executive suite	\$400+tax
Regal suite	\$800+ tax
Gosainkunda	\$900+ tax
Extra bed	\$ 35+ tax

GROUP TARIFF

Group types (minimum 15 and more)	
Room type	rates
Single room	\$ 140+ tax
Double room	\$ 150+tax
Extra bed	\$ 35+ tax

MEALS

MEALS	RATES
Breakfast	\$ 10+ tax
Lunch	\$ 18+ tax
Dinner	\$ 18+ tax

) All the above rates are exclusive of 10 % service charge and 13 % government taxes the above rates are subject to change without prior notice.

) *All major credit cards are accepted - Visa Card, Master Card and American Express.*

1.3 Statement of the Problem

Economy prosperity of a country depends upon its sustainable economic development. For the attainment of accelerated economic development in the country, Hotel industry is equally as important as that of agriculture and other primary sectors. The Hotel industry, in the process of value added contributes to the creation of new employment opportunities and economic integration. As long as this sector cannot be expanded on a promotional basis, proper economic development of a country cannot be possible. However, low incomes of the people, political instability, and undesirable other problems have not been able to make the desire head way by Hotel industry. The role of the government owned enterprises becomes very important especially in terms of developing the infrastructure, extending social services and increasing Hotel industry. Giving this fact, more prominence and greater recognition was given in the various plans of the Nepal Government to the role of Government Corporation. Success is not a matter of chance, profit doesn't just happen it is to be planned and managed. Cost volume profit analysis provides the technique of profit planning framework. Based on the annual report published, performance of the Nepalese Hotel industry cannot be considered as satisfactory. Poor performance is the outcome of poor planning, controlling and decision-making. Sufficient studies have not been conducted so far in Nepalese context. Thus, an attempt has been made to find Cost Volume relationship of Soaltee Hotel Limited. In addition, this study attempts to answer the following questions:

-) What is the relationship between Cost Volume and Profit in the context of Hotel industry?
-) What is the relation between Cost and Volume and Profit and Volume?
-) What are the components of cost of Hotel industry?
-) What will be the nature cost if least square is used to segregate cost?

-) How Hotel industries are classifying their costs?
-) Which factor is the major factor to determine total cost?
-) Is there significant relationship between revenue of SHL, profit of SHL and total revenue of Hotel industry?

1.4 Objectives of the Study

The main objective of the study is to examine “Cost-Volume-Profit-relationship of Soaltee Hotel Limited”. The other specific objectives are:

-) To study the relationship of cost volume and profit.
-) To evaluate budgeted and actual achievement of the hotel.
-) To provide suggestions and recommendation to the concerned authorities for the further implement.

1.5 Significance of the Study

The present research work is the study of the practice of Cost-Volume-Profit Analysis in Soaltee Hotel Limited. This study will be significant because it examines the application of CVP analysis in the hotel. It explores the problems and potentialities of the selected hotel. It will be useful to the potential managers, accountants, policy makers and planners etc. It provides information on the application of the tools under profit planning in the different circumstances. This study also directed towards providing necessary recommendations to the related department of the hotel. It provides literature to the researcher, who wants to carry on further research in this field.

1.6 Limitations of the Study

This study is confined only to Cost-Volume-Profit-Analysis as tools of profit planning and control of cost of Soaltee Hotel Limited. The following factors have limited the scope of the study:

-) Cost-Volume-Profit-Analysis covers a period of last five years only

ranging from the F/Y 2062/63 to 2066/67.

-) The study is based on primary as well as secondary data (i.e. Questionnaire, Interview, and financial statement were collected from the hotel)
-) The accuracy of this study is based on true response and the data provided by the management of the hotel.
-) It is not correct to assume that the total fixed cost would remain constant over the entire range of volume
-) Due to limited time and resources constraint much emphasis is given to make this study comprehensive.

1.7 Organization of the Study

The study has been classified into five major chapters. The chapters were outlined below.

Chapter - I	Introduction
Chapter - II	Review of Literature
Chapter - III	Research Methodology
Chapter - IV	Data Presentations and Analysis
Chapter - V	Summary, Conclusion and Recommendations

CHAPTER - I INTRODUCTION

The first chapter covered background of the study, introduction of the hotel, statement of the problem, objectives of the study, significance of the study, limitations of the study. Therefore, this chapter made an attempt to provide introduction of the topic and highlights the fundamental objectives.

CHAPTER - II REVIEW OF LITERATURE

The second chapter made an offer of the fundamental concepts of Hotel. It also provided the meaning of CVP, its issues and objectives. This chapter provided pertinent literature and studies. This chapter can be taken as the backbone of study, where relevant studies were reviewed.

CHAPTER - III RESEARCH METHODOLOGY

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.

CHAPTER - IV DATA PRESENTATIONS AND ANALYSIS

The fourth chapter being the main chapter of the research that dealt with the presentation, analysis and interpretation of data. Different types of tools and technique ware used to analyze the available data in order to achieve the objectives.

CHAPTER -V SUMMARY, CONCLUSION AND RECOMMENDATIONS

The last chapter presented the summary and conclusion of the study based on the analysis of the data and also provided recommendation.

CHAPTER II

REVIEW OF LITERATURE

2.1 Conceptual Framework

An organization is established to achieve some goals. It has its own objectives. To achieve goals of organization objective should clearly mention. In this competitive globalize business age an organization whether is it public or private profit is essential. Profit is not chance, it is result of successful management. The management of an enterprise requires continuing performance of certain managerial responsibilities. These responsibilities collectively are often called the function of management. Planning, organizing, staffing and human resource management, leading and interpersonal influence and controlling are major functions of management. Planning is process of developing enterprises objectives and selecting future course of action in advance. Controlling means evaluating the firm's activities against the plan and deciding what should be done if the plan is not being followed (Lynch & William, 1995:18). In business organization employees and trade union, Government community representative, investment analysts, suppliers, lender/Banker, managers, owners, customers etc. These all parties require various information of decision making their own purpose. Actual position of the enterprises can be found from financial statement. It shows the clear picture of enterprises profit and loss position, balance sheet etc. These are not sufficient to measure the firm's performance and plan. There are various tools and technique to measure and analyze the financial performance and determining various plans in management accounting. Cost Volume Profit Analysis (CVPA) is one of the major and popular tools to analyze the financial statement of the firms. It is one of the important part of profit planning and control or Budgeting.

2.1.1 Concept of Cost-Volume-Profit Analysis

The dictionary meaning of 'cost' is the price paid to acquire, produce, accomplish or maintain any things, 'volume' is a mass or quantity of something or amount, 'profit' is the ratio of such pecuniary gain to the amount of capital

invested and analysis is resolution, separation or breaking into parts. But actually cost volume profit analysis is the process of examining the relationship among revenues, cost and profit for the relevant range of activity and for a particular time frame. Basically, CVP analysis involves finding the most favorable combination of variable cost, fixed cost, selling price, sales volume and mix of products sold. CVP analysis provides the managers with a powerful tool for identifying that course of the action that will improve profitability.

CVP analysis is a management accounting tools to show the relationship between the ingredients of profit planning. Profit planning is the function of the selling price of product and units sold. The entire gamut of profit planning is associated with CVP inter relationships. CVP analysis is the technique that explores the relationships, which exist, between cost, revenue, output level and resulting profit. Cost volume profit analysis can be extended to cover the effects on profit of change in selling prices or service fees, cost, estimate of total cost, total revenue and profit at various sales volumes. CPV analysis provides the management with a comprehensive overview of the effects on revenue and cost of all kinds of short-run financial changes. It is related to profit, sales volume and cost.

Generally cost-volume-profit analysis provides information regarding Munakurmi, 2003:124).

-) Minimum level of sales to avoid losses.
-) Sales level to earn target profit.
-) Effect of changes in price, costs and volume on profits.
-) Effect of changes in sales mix on profit.
-) New break-even-point for changes.
-) Impact of expansion plan on CVP relationship.
-) Products those are most profitable and least profitable.
-) Whether to continue or discontinue the sales of product or operation of plant.
-) Whether to close or not the firm for a short term.
-) Effect on operating profit with the increase in fixed cost, etc.

Cost Profit Volume Analysis is the process of examining the relationships among revenues cost and profits for a relevant range of an activity and a particular time frame. It is one of the most important and powerful tools that manager have at their command in short term planning. It helps managers understand inter relationship between cost volume of profit in an organization by focusing on interaction between the following five elements:

-) Prices of Products
-) Volume or level of activity
-) Per unit variable cost
-) Total fixed costs
-) Mix of products.

In other words, CVP analysis applies the variable costing approach to analyze the built in relationship between cost, volume and profit. It analyses the short term static relationship between cost, volume and profit. It assumes that under constant underlying condition, CVP analysis can be used for the analysis of break even volume-break even analysis and contribution margin analysis-profit planning. This assumption of constant underlying conditions and the short term relationship however have been criticized by many authors.

The assumptions over emphasize the market sovereignty of producer (i.e. seller) rather than that of consumer. Therefore, to assume that seller has choice to sell as many as of his product in the market, at the given price fixed by him is neither true nor possible. Competitive market with a wide range of substitute products in the market has minimized the role of the seller and has over focused on the sovereignty of the management for profit planning. The contribution margin analysis provides the best possible answers of many “what if” questions of management. Most management decisions require a careful analysis of cost behavior in relationship to output volume. This is possible only through CVP analysis. Besides, CVP analysis deals with how profit and cost change with change in volume.

Cost volume profit analysis can be extended to cover the effects on profits of changes in selling price/service fees, cost, income, tax rate, product mix etc. It estimate total cost, total revenue and profit at various sales volume. It provides only an overview of the profit planning process. Cost volume profit analysis provides management with comprehensive overview of the effects of revenue and costs of all kinds of short run financial changes. It is related to profit, sales volume and cost (Munakarmi, 2034:4.01).

Cost volume profit (CVP) analysis examines the behavior of total revenues total cost and operating income as changes occur in the output level, the selling price, the variables cost per unit and or fixed cost of a product (Horngren, et at.,2003). The key motive of business, enterprises is to make and maximize profit. Profit does not happen by chance. It is to be managed. CVP analysis is supplementary tool of planning for profit. CVP is immensely helpful for developing alternative strategies in sales planning and cost estimation CVP analysis is an accounting technique showing the relationship between variables. It is equally applicable for nonprofit making organization to allocate for scare economic resources most effectively among the completion alternative. Allocation of scare resource among the various demanding sectors is the most important part of national planning.

A popular technique to study CVP analysis relationship is break even analysis (BEP). BE analysis is concerned with the study of revenues and cost in relation to sales at which the firm's revenues and total cost will be exactly equal or the net income will be zero. It is no profit no loss situation. This point is cornerstone of profit planning. Cost volume profit analysis (CVPA) is a popular analysis tool of management. It is very useful in profit planning and control management decision, cost control, budgeting etc.

2.1.2 Use of CVP Analysis in Profit Planning

Planning, controlling and decision-making are the essential managerial functions. Cost- Volume-Profit analysis helps the managers to plan for profit,

to control cost and make decisions. As such it helps (Munakurmi, 2003:123-124).

-) To determine the break-even point in terms of unit or sales value.
-) To ascertain the margin of safety.
-) To estimate profit or losses at various level of output.
-) To help management to find the most profitable combination of cost and volume (units).
-) To determine the optimum selling price.
-) To determine the sales volume at which the profit goal of the firm will be achieved.
-) To determine the maximum sales volume to avoid losses
-) To determine most profitable and least profitable product.
-) To determine new breakeven point for changes in fixed or variable cost.
-) To assess the likely effect of management decision such as an increase or decrease in selling price on adoption of new method of production to reduce direct labour and increase output.

2.1.3 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 (Maheshwari, 2000: 174).

2.1.4 Contribution Margin Analysis

Contribution analysis involves a series of analytical techniques used to determine and evaluate the effects on profit of changes in sales volume (i.e. units sold), sales prices, fixed cost and variable cost. It focuses on contribution

margin. The term “profit” used in CVP analysis is the amount of contribution margin available from the sales revenue to absorb fixed cost and also to contribute towards company’s profit goal after deducting all variable costs of sales. Therefore, CVP analysis requires distribution of cost into variable cost and fixed cost. All semi variable costs need to be clearly segregated into variable and fixed component. The difference between selling price and variable cost (i.e. the marginal cost) is known as contribution margin. In other words, Fixed cost plus the amount of profit is equivalent to contribution margin. It can be expressed by the following formula:

$$\begin{aligned} \text{Contribution Margin} &= \text{Selling Price} - \text{Variable Cost} \\ &= \text{Fixed Cost} + \text{Profit} \end{aligned}$$

It can be conclude that profit cannot result unless contribution exceeds Fixed Cost. In other words, the point of no profit no loss shall be arrived at where contribution is equal to fixed costs (Maheshwari, 2000:176).

CVP analysis is the amount of contribution margin available from the sales volume of absorbs fixed cost and also contributes towards company’s profit goal after deducting all variable cost of sales. When the contribution margin is high then profit will also be high. Contribution margin usually is expressed as a percentage of sales or contribution margin ration i.e.

$$\begin{aligned} \text{Contribution Margin Ratio} &= \frac{\text{contribution margin}}{\text{sales}} \\ &= 1 - \frac{\text{variable cost per unit}}{\text{selling price per unit}} \end{aligned}$$

The variable usually uses in cost-volume-profit analysis are:

a. Sales Value

A firm or a company may have different product, services etc. The sale value is actually includes the quantity of total sales multiply by selling price per unit or sales rupees. Sales rupee is calculated sales units multiply by selling price per unit.

b. Variable Cost

Variable cost is that cost which is directly affected by change in the activity level. The per unit variable cost always remain constant. If the activity level decreases, the variable cost also decreases. If the activity level or production level increase, than the variable cost also increase. Change of variable cost effects P/V ratio, BEP and net income. When variable cost increases: Net income, P/V ratio and margin of safety will decreases but it increases BEP.

c. Fixed Cost

Fixed cost remains constant in total amount despite the changes in the level of activities. That is, the fixed cost remains unchanged in total as the activity levels vary. When other factors remain unchanged, the change in fixed cost affects BEP and Net income. Increase in fixed cost, increases the volume of BEP and decrease the Net income or vice-versa. Fixed cost is also called capacity cost.

d. Mixed Cost

Expenditures that cannot be categorized as purely fixed or variables is termed as mixed cost or semi-variable cost. Mixed costs contain both variable and fixed cost elements. Repair and maintenance, supervision, telephone cost, electricity charges are some example of mixed costs. It should be separated into the variable and fixed cost elements for profit planning, cost control and decision making.

e. Jumping Fixed Cost

Some costs remain fixed over a wide range of activity, but jump to different amount for activity levels outside that range. Such costs are called jumping costs or step fixed cost or moving fixed cost or ladder costs.

2.1.5 Break-Even Analysis

Break-even analysis is widely used technique to study cost-volume-profit relationship. The narrower interpretation of the term break-even analysis refers to a system determination of that level of activity where total cost equals total selling price. The broader interpretation refers to that system of analysis which determines probable profit at any level of activity. It portrays the relationship between cost of production, volume of production and the sales value. CVP analysis includes the entire amount of profit planning, while break-even analysis is also one of the techniques used in this process. However it is so popular for studying CVP analysis that the two terms are used as synonymous terms (Maheshwari, 2000: 175-181).

i. Break-Even Point

The point which breaks the total cost and the selling price evenly to show the level of output or sales at which there shall be neither profit nor loss, is regarded as break-even point. At this point, the income of the business exactly equals its expenditure. Break-even point can be determined by the two methods (Maheshwari, 2000: 175-181).

a. The Equation Method: - Break-even point can be calculated by using following algebraic equations:

$$\text{BE Sales Value} = \text{FC} + \text{VC} + \text{Profit}$$

$$\text{Or, } (\text{BE Sales Unit} \times \text{SPPU}) = \text{FC} + (\text{BE Sales Units} \times \text{VCPU}) \pm 0$$

b. The Unit Contribution Method: - BEP can also be ascertained through unit contribution margin approach. In this approach, BEP can be calculated by using following formula:

$$\text{BEP in units} = \left[\frac{\text{Fixed cost}}{\text{CMPU}} = \frac{\text{Fixed cost}}{\text{SPPU} - \text{VCPU}} \right]$$

$$\text{BEP in amount} = \left[\frac{\text{Fixed cost}}{\frac{P}{V} \text{ ratio}} \right] = \left[\frac{\text{FC}}{\text{CMPU}} \times \text{SPPU} \right]$$

At breakeven point, the desired profit would be zero. In this case the volume of output or sales is to be computed for “a desired profit”, the amount of desired profit should be added to fixed cost in the formula given above.

) Cash Break Even Point

It is the output where cash break even (i.e. the value of sales where cash realization on account of sales will be just sufficient to meet immediate cash liabilities). While calculating this point cash fixed cost (i.e. excluding depreciation and deferred expenses) and cash contribution (i.e. selling price less the cash variable costs.) are considered. This point helps the management in determining the level of activity below which there are chances of insolvency on account of the firm’s inability to meet cash obligation unless alternative arrangement are made (Maheshwari, 2000: 178)

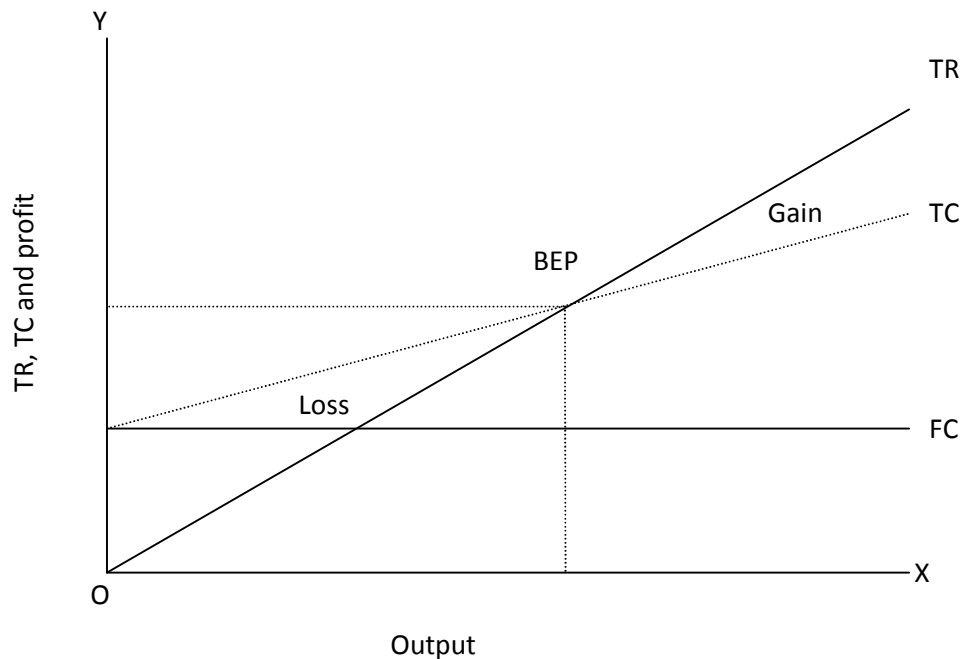
$$\text{Cash BEP in units} = \frac{\text{cash fixed cost}}{\text{cash contribution margin}}$$

Cost Break Even Point refers to a situation where the costs of operating two alternative plants would remain equal. The point enables the firm to identify which plant is the best to operate at or a given level of output assuming that sales price per unit is the same (Maheshwari, 2000: 179-180).

ii. Break Even Chart

The relationship between the costs, sales and profit can be shown in the form of a chart. Such a chart not only depicts the level of activity where there will be neither loss nor profit but also shows the profit or loss at various level of activity:

Figure No. 2.1: Break-Even Chart



In the above Break-Even Chart, an equilibrium point between sales or revenue curve and total cost curve is “Q” and it is known as BEP. Therefore “OS” is the break even sales volume and “OR” is the break even sales in amount. If the actual sales amount is more than break even sales, the organization will earn profit and if the actual sales amount is less than the break even sales, the organization will suffer from loss.

2.1.6 Application of Break-Even Analysis

Break-even concept can be used to formulate different policies in a business enterprise. Some of these applications are (Maheshwari, 2000:182). Determine of profit at different levels and margin of safety. To find the level of output to get the desired profit. Effect of price reduction on sales volume and changes in sales mix. Selection of most profitable alternative and make or buy decision and drop and/or add decisions.

2.1.7 Assumptions of Break-Even-Analysis

Contribution analysis and break even analysis are based on a specific set of assumption that should be clearly understood. These underlying assumptions are (Maheshwari, 2000:182-183). All cost can classify into two parts, fixed cost

and variable cost. There is not cost other than fixed and variable. There is a relevant range of validity (activity) for using the results of the analysis and sales price does not change as units of sales change. There is only one product or in case of multiple products, the sales mix among the products remain constant. Basic management policy about operation will not change materially in short run. The general price level (inflation/deflation) will remains essentially stable in the short run. Sales and production levels are synchronized, that is inventory remains essentially constant or zero. Efficiency and productivity per person will remains essentially unchanged in the short run. If any of the above assumptions were changed, revised budget would be needed for a new analysis

2.1.8 Utility of CVP or B/ E Analysis

Break – even analysis is the most useful technique of profit planning and control. It is a device to explain the relationship between cost, volume and profits. The utility of the break- even analysis lies in the following advantages: (*Brown & Howard; 1969: 353- 355*).

-) It is simple basic device to understand accounting data.
-) It is a useful diagnostic tool.
-) It is provides basic information for further profit improvements studies.
-) It is useful method for considering the risk implications of alternatives actions.

The breakeven analysis is a simple concept to comprehend and interpret the accounting data. Many business executives and others are unable to understand accounting data contained in financial statement and reports. When these data are presented through break- even charts, it becomes very easy to grasp and interpret them. However, the executives using break even analysis should remember the limitations of this device and should not attach too much value to it.

The break even analysis is a useful diagnostic tool. It indicates to management the causes of increasing breakeven point and falling profits. The analysis of these causes will reveal to management what actions should be taken. As a practical matter, knowledge of where the breakeven point lies can be quite useful to management in determining the need for action. However, an increasing breakeven point should not always be a matter of alarm to management. The important information to be analyzed is break even as a percentage of capacity. If the breakeven point as a percentage of capacity is increasing, it indicates unfavorable conditions. It is his kind of situation which needs immediate action. It is possible that due to plant expansion absolute breakeven point may increase, but capacity May be increase. This situation, where the break point as a percentage of capacity does not increase, is not unfavorable.

In the break even analysis, we compute BEP and P/V ratio prepare break even charts and P/V graphs and analyze and report the effect of changing factors on profits. These whole set of information is important to evaluate the reasonableness and usefulness of profits plans and other budgets and forecasts prepare by management. The break eve analysis, thus, provides the basic information for profit improvements studies and it is a useful starting point for detailed investigations.

The desirability of an action should be considered on the basis of its profit as well as risks. If profit alone is considered, a firm may commit to a risky action. The break-even analysis, to some extent, is a useful method for considering the risk implications of alternative actions. Considering the effects of the alternative actions on the break-even point can approach the problem of risk evaluation. From one alternative, a firm may expect higher profit and also a higher break-even point, while another alternative maybe produce comparatively lower profit but also entail a lower, break-even point. In taking a decision, the firm should not only consider the profits expected form the alternative but also the probability of reaching the BEP. If the probability of

achieving the BEP sales is low, the firms should prefer the second alternative where the BEP will be reached earlier.

2.1.9 Limitations of CVP or B/E Analysis

The BEP or CVP analysis is a simple and useful concept. But it is based on certain assumptions, which have been discussed earlier. These assumptions limit the utility and general applicability of the B/E analysis.

Therefore, the analysis should recognize these limitations and adjust data, wherever possible, to get meaningful results. The CVP analysis suffers from the following limitations: (*Dangol; 1997:545-546*).

1. It is difficult to separate costs into fixed and variable components
2. It is not correct to assume that the total fixed cost would remain unchanged over the entire range of volume
3. The assumption of constant selling price and unit variable cost is not valid
4. The B/E analysis is a short-term concept and has a limited use in long range planning
5. The B/E analysis is a static tool

2.1.10 Profit-Volume Analysis

The analysis of relationship between profit and volume is known as profit-volume analysis. The two factors profit and volume are interconnected and dependent with each other. Profit depends upon sales; selling price to a greater extent will depend upon the volume of production. Thus, the entire gamut of profit planning is associated with cost volume- profit inter-relationship.

Profit/Volume Ratio

-) This term is important for studying the profitability of operations of a business. Profit/volume ratio (i.e. P/V ratio) establishes a relationship between the contribution and the sales value. The ratio can be shown in

the form of a percentage also. The formula can be expressed by (Maheshwari, 2000: 184).

$$P/V \text{ Ratio} = \frac{\text{Contribution margin}}{\text{sales}} = \frac{S-VC}{S} = 1 - \frac{VC}{S}$$

) This ratio can also be called as contribution margin ratio. This ratio can also be known by comparing the change in contribution to change in sales or change in profit to change in sales. Any increase in contribution would mean increase in profit only because fixed costs are assumed to be constant at all level of production. Thus, (Maheshwari,2000: 185):-

$$P/V \text{ Ratio} = \frac{\text{Change in contribution}}{\text{Change in sales}} = \frac{\text{Change in profit}}{\text{changes in sales}}$$

) This ratio would remain constant at different levels of production since variable costs as a proportion to sales remain constant at various levels. The ratio is useful for determination of the desired level of output or profit and for the calculation of variable costs for any value sales. The variable cost can be expressed as under:

$$VC = \text{Sales} (1- P/V \text{ ratio})$$

Comparison of different P/V ratios is usually made by the management to find out which product is more profitable. Management tries to increase the value of the ratio by reducing cost or by increasing the selling prices.

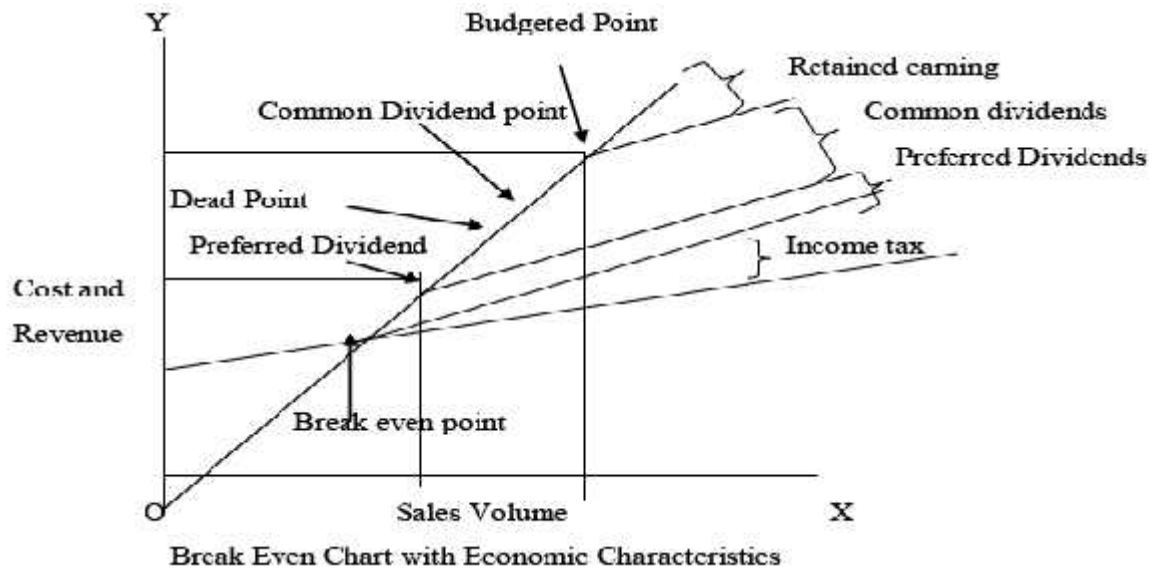
2.1.11 Economic Characteristics of Cost-Volume-Profit Analysis

Where cost-volume profit analysis is reasonably accurate, they can help management decision- making. Essentially, CVP analysis offers greater insight into the economic characteristics of the company and may be used to determine the approximate effect of various alternatives. CVP analysis is based on estimates, however, and the arithmetical manipulations generally involve averages, hence the results should never be interpreted as precise. Rather, the analysis may be cauterized appropriately as a „slide-rule“ approach that may be used to develop and test, with the minimum of effort, the approximate effect on

costs and profits of several types of management decisions (Welsch, et al., 1979:467- 468).

Figure 2.2

Economic Characteristics of Cost-Volume-Profit Analysis



The above Breakeven chart with economic characteristics indicates few of the economic characteristics of a business, which are (Welsch, 1979: 468).

-) Fixed costs, variable costs and total costs at varying volumes.
-) The profit and loss potential, before and after income taxes, at varying volumes.
-) The margin of safety- the relationship of budget volume to break even volume.
-) The breakeven point.
-) The preferred dividend or danger point- the point below which preferred dividends are not earned.
-) The dead point- the point where management earns only the “going” rate on the investment
-) The common dividend or unhealthy point – the point below which earnings are insufficient to pay the preferred dividends and the expected dividend on the common stock.

All these points, and as others, can be computed if data are developed for cost-volume profit purposes.

2.1.12 Margin of Safety

Margin of safety is the excess of budgeted or actual sales over the break even sales volume. In other words, it is the difference between the budgeted or actual sales revenue and the break even sales revenue. It is a position above the break-even point. It serves as a cushion or spring plate that enables a business firm to absorb the shocks of adverse business conditions. It indicates the extent to which sales may fall before suffering any loss i.e. greater the margin, safer the firm.

The soundness of business is indicated by margin of safety. The difference between total sales and break even sales is identified by margin of safety. The high margin of safety is good for business. It indicates that there can be substantial falling of sale and yet profit can still be made. On the other hand, if the margin of safety is small, it indicates the weak position of business. The small margin of safety shows that even a small reduction in sale or production will adversely affect the profit position of business.

The margin of safety indicates the extent to which sales may fall before the firm suffers a loss. Larger the margin of safety, safer is the firm. A high margin of safety is particularly significant in times of depression when the demand for the firm's product is falling. A low margin of safety may result for a firm which has a low contribution margin ratio. When the both the margin of safety and the cm ratio low, management should think of the possibilities of increasing the selling price, provided it does not adversely affect the sales volume, or reducing variable costs by bringing improvement in the manufacturing process(*Maheshwari, 2000:240*).

It gives management a feel for how close projected operations are to be organizations breakeven point. Managers often consider the size of the company's margin of safety when making decisions about various business 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)

(Munakarmi, 2003:127). Margin of safety can be ascertained by using the following formula:

Margin of Safety (in Units) = Actual Sales (in units) – Break Even Sales (in units)

Margin of Safety (in Rs.) = Actual Sales (in Rs.) – Break Even Sales (in Rs.)

$$\text{Margin of safety (in unit)} = \frac{\text{profit}}{\text{CMPU}}$$

$$\text{Margin of safety (in Rs.)} = \frac{\text{profit}}{\text{profit volume ratio}}$$

The relationship between margin of safety and actual sales is known as margin of safety ratio, which is determined as follows (Munakarmi, 2003:127);

$$\text{Margin of Safety Ratio} = \frac{\text{Actual sales} - \text{BE sales}}{\text{Actual sales}}$$

The following steps are needed to rectify margin of safety.

-) With increasing selling price.
-) With increasing sales volume, if the capacity of fixed cost is not fully utilized.
-) With reduction fixed cost if possible.
-) With reduction variable cost (with reduction the cost of raw materials, wages and other direct cost.)
-) With substituting product line by more profitable one.

2.1.13 Cost-Volume-Profit Analysis for Multi Product Firm

The relative production or sales of product is called the sales mix or the product mix. In the case of a multi-product firm, the contribution for each product can be found out by deducting its variable costs from sales revenue. The break-even point for each product can be calculated only if the total fixed costs of the firm are distributed and fixed cost for each product is known. The firm's overall break-even point can be calculated by dividing the total fixed costs by the contribution ratio for the firm. The multi-product firm's P/V ratio will be

the weighted average of the P/V ratios for all the products, the weights being the relative proportion of each product's sale. The P/V ratio for the multi product firm can also be calculated by dividing the total contribution from all products by total sales. A change in the product mix will not affect the firm's break-even point and profit if each product has the same P/V ratio. However, a change in the product mix will change in the break-even point and profit when products have unequal P/V ratios (Maheshwari, 2000: 182).

Break-Even Point for Multi-Product Company/Firm

In multi product firm a BEP in aggregate can be calculated. The sales mix is used to compute a weighted average unit contribution. This is the average of the several product unit contribution margin weighted by the relative sales proportion of each product. Following procedures are followed to calculate BEP for sales mix or multi product Calculate contribution margin or Profit-volume ratio for each product (Munankarmi, 2003: 137).

Calculate proportion of sales mix in Units or Values as follows:

$$\text{Sales mix} = \frac{\text{individual product's sales units or value}}{\text{total of all product's sales units or value}}$$

Calculate weighted average contribution for all Products as follows:

$$\begin{aligned} \text{Weighted average} &= (\text{sales mix (units)} \times \text{Unit Contribution Margin}) \\ \text{Or,} &= (\text{Sales Mix (Value)} \times \text{P/V Ratio}). \end{aligned}$$

Calculate Break-Even point (BEP):

$$\text{Break Even Point} = \frac{\text{Fixed Cost}}{\text{weight average contribution margin}}$$

Cost-Volume-Profit Analysis and Limiting Factors

CVP analysis is helpful in profit planning and a company will be able to produce any number of outputs of its choice (desires). But in the real world it is

not possible, because of some critical factors like finishing machine or raw material or labor. These critical factors in the CVP analysis are known as constraint.

CVP Analysis with a Single Constraint

Scarce resource should be efficiently allocated in order to maximize the contribution margin. A particular simple and instructive situation arises when there is only one constraining resource. This can occur if the firm's products are all produced on a single machine and output is limited by hours available on this machine. In the same way, single resource constraint arise, if the firm's products are all produced with only one material and output is limited by quantity available for that materials. When there is a constraint for a scarce resource to have alternatives uses, the contribution per unit should be calculated for each of these uses, the contribution per unit should be calculated for each of these uses. Then, the available capacity for such scarce resource should be allocated to the alternative uses on the basis of contribution per scarce resource (Munankarmi, 2003: 146).

CVP Analysis with Multiple Constraints

Where more than one scarce resource exists, the optimum production program cannot easily be established by the simple process applied in single resource constraint. Under the circumstances simple allocation of resource or the basis of contribution margin per unit is neither feasible nor desirable. Contribution margin per unit of scarce resources may be different for different scarce resources for the ranking of product; because production processes are affected by many constraints factors rather than single constraint. In such situation, linear programming technique may be used to optimize product mix. The linear programming formulation is required to determine a production plan that maximizes contribution from the product mix. Linear programming is a mathematical technique which shows how to arrive at the optimum results, allocating available resources in a meaningful manner. It is basically concerned

with the problem of allocating limited resources among competitive activities in an optimal manner. It is a technique to optimize the allocation of scarce resources in product mix problems which provides a valuable extension to cost-volume-profit analysis (Munankarmi, 2003: 148).

CVP Analysis under Condition of Uncertainty

CVP analysis can be used for various purposes such as choosing between machines and products, planning of profit and most significantly fixing up of selling price. Management has used this as a convenient tool of profit planning without giving consideration of risk and uncertainty involved in it. Although, margin of safety ratio explains the degree of sensitivity of the project and product in general but it fails to explain among of certainty in the product and also between the alternatives. To overcome such a difficulty, risk and uncertainty analysis like in any other management decision making can also be used in CVP analysis. Probability distribution approach is a simple statistical tool which may be used to measure the risk and uncertainty involved in CVP analysis. A probability theory normally suggests for postulation of various possibilities of happening of the event in consideration. This may be done either taking into consideration of the experience in the past or may be done by considering the personal intuition of the persons doing so. In business, references of past experience are hardly available not a person is likely to behave in the same manner in the similar situation in different time. Therefore, personal judgment plays significant role in the management decision making. The conditions thus, postulated are assigned probability (i.e. one's judgment towards likelihood of happening of the condition forecasted). It must be understood here that probability assigned here is a subjective probability based on, personal judgment of the man making such analysis (Pandey, 2003:17).

Step (Jumping) Fixed Cost and Multiple BEP

Break-even point is determined by dividing the fixed costs by the contribution margin per unit. If the fixed cost is jumping like a ladder (i.e. step fixed) then it

is required to consider a different amount of fixed cost corresponding to each step. As such, BEP is computed for each level of fixed cost. Some of these computed BEP may not be feasible because they may violate the limits imposed by the relevant range corresponding to the level of fixed costs considered in their computation. As a result real or actual BEP is determined through Trial and Error approach (Munankarmi, 2003:136).

Special Problems in Cost-Volume-Profit Analysis

Cost-Volume-Profit analyses are applied to individual products or parts of a business and all the products or activities combined. In the later case, three special problems may be encountered (Welsch, Hilton & Gordon, 2001:513-518).

) The Activity Base

When two or more products or activities are combined for break-even analysis, the activity base is usually in amount. Product unit is used for single product. The activity base must be in additive units using a common denominator of volume or output in multiple products. Therefore, for the company as a whole, net sales amount are usually the satisfactory common denominator because manufacturing, selling and administrative activities are expressed in combination.

) The Change in Inventory

Usually the budgeted changes in inventories (i.e. finished goods and work-in process) are immaterial in amount and thus may be disregarded in cost-volume-profit analysis. On the other hand, when the change in budgeted inventory is significant, it should be included in the analysis. Including the effect of inventory changes in cost in cost volume profit analysis requires subjective judgments about what management might do (about making inventory changes) at different volumes levels and the conceptual precision that is desired. Management considers two practical approaches or policies in the

inventory changes often used: (a) Disregard the inventory changes (b) Include the inventory changes.

) The Non- Operating Incomes and Expenses

Non-operating incomes (gains) and expenses (losses) and the extraordinary gains and losses, if material in amount, cause another problem in CVP analysis. The basic issue is whether they should be included or excluded. Extra-ordinary gains and losses are non recurring and unusual, therefore, they should be excluded. Non-operating incomes and expenses are recurring but they are not related to ongoing operations. Management considers the policy may be to:

(a) Include the non-operating incomes and expenses.

(b) Exclude the non-operating incomes and expenses.

2.1.14 Cost Structure and Operating Leverage

Cost Structure

Cost structure refers to the relative proportion of fixed and variable cost in the organization. The relationship of a company's variable and fixed cost is reflected in its operating leverage. The highly labor intensive organizations have high variable cost and low fixed cost and thus have low operating leverage and a relative low break-even point. Conversely, organizations that are highly capital-intensive have a cost structure that includes low variable and high fixed costs. Such a structure reflects high operating leverage and relatively high break-even point. Company with lower fixed costs and higher variable costs will enjoy greater stability in net income and will be more protected from losses during bad years but at the cost of lower net income in good years (Munankarmi 2003: 145).

Operating Leverage

Operating leverage is a measure of the extent to which fixed costs are being used in organization. The relationship of a company's variable and fixed cost is reflected in its operating leverage. Generally highly labour intensive

organizations have high variable costs and low fixed costs and thus low operating leverage and relatively low break-even point. Conversely, organizations that are highly capital intensive have a cost structure that includes low variable and high fixed costs which reflects high operating leverage with high break-even point. It shows that fixed cost and operating leverage has direct relationship. Higher the amount of fixed costs higher the operating leverage and breakeven point and vice versa. In other words, the firm with relatively high operating leverage has proportionally high fixed expenses; the firm's break-even point will be relatively high. The degree of operating leverage is determined as under (Munankarmi 2003: 145).

$$\text{Degree of Operating Leverage} = \frac{\text{contribution margin}}{\text{net income}}$$

Segregation of Semi-Variable (Mixed) Costs

Cost-volume-profit analysis requires segregation of all costs into two portions: fixed and variable. This means that the semi-variable cost will have to be segregated into fixed and variable elements. This may be done by any one of the following methods (Maheshwari, 2000:PP162-165).

i. Levels of Output Compared to Levels of Expenses Method

According to this method, the output at two different levels is 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;

$$\text{Variable Elements} = \frac{\text{change in activity or quantity}}{\text{change in amounts of expenses}}$$

ii. Range Method

This method is similar to output compared to levels of expenses method except that only the highest and lowest points of output are compared out of various levels. This method is also designated as “High and low” method. The high low method is explained; step-by step, as follows:

- (a) Select the highest pair and the lowest pair.
 (b) Compute the variable rate “b” using the formula:

$$\text{Variable rate} = \frac{\text{difference in cost 'y'}}{\text{difference in cost 'x'}}$$

- (c) Compute the fixed cost portion as

$$\text{Fixed Cost Portion} = \text{Total Semi-Variable Cost} - \text{Variable Cost}$$

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 fit 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: -

-) The volume of production is plotted on the horizontal axis and the costs are plotted on the vertical axis.
-) Corresponding to each volume of production costs are then plotted on the paper, thus, several points are shown on it.
-) 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.
-) A line parallel to the horizontal axis is drawn from the point where the line of best fit intersects the vertical axis. This is the fixed cost line.
-) The variable cost at any level 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 based on 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;

$$y = a + b x$$

$$xy = a x + b x^2$$

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

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

$$y = a + b x + c x^2$$

$$xy = a x + b x^2 + c x^3$$

$$x^2y = a x^2 + b x^3 + c x^4$$

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

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - \sum x^2}$$

$$a = \frac{\sum Y - b \sum x}{N}$$

Where;

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

b= variable cost per unit a = Fixed cost = sum of

2.2 A Brief Review of Books

The study of the interrelationship of sales costs and net income is usually called cost- volume profit analysis. CVP analysis examines the response of profit to changes in volume. It relies on linear cost analysis and on linear revenue assumptions. To gain understanding of CVP analysis, the common example of a firm which produces only single product will be used. The analysis will be expanded to cover firms with several products by multiple divisions (Fisher & Frank,:109).

CVP analysis consists essentially in examining the relationship between changes in volume (output) and changes in profit. The scope of C-V-P analysis ranges from the determination of the optimal output level of a single- product department to the determination of the optimal mix of large multi-product firm. All these decision rely on the simple relationship between changes in revenues and costs and changes in output levels (mixes). Output should be expanded or the output mix altered if the incremental revenue resulting from the change exceeds the incremental costs of making the change. Thus, all cost, volume and profit analysis is characterized by their emphasis on cost and revenue behavior over various ranges of output levels and mixes (Dopuch, et al., 1974:107).

Cost, Volume and Profit analysis includes the related concepts of (a) Contribution analysis and (b) Break even analysis. These concepts entered the mainstream of management accounting starting in the 1930's, with major emphasis in the 1950's. Both concepts rest upon the concept of cost variability (i.e. flexible or variable expenses budgets), Contribution analysis involves a series of analytical techniques to determine and evaluate the effects on profits of changes in sales volume, sales prices, fixed expenses and variable expenses. Basically, it applies the concept of a contribution margin income statement: Revenues minus variable expenses equals contribution margin, and contribution margin minus fixed expenses equals profit. Break-even analysis

focuses on the breakeven point: Fixed expenses divided by the contribution margin equals break even sales volume (the point at which profit is zero because revenue equals total cost). The result of breakeven analysis is usually graphed to show the relationships between revenue (i.e. sales), fixed expenses, and variable expenses, within a relevant range of sales volume (Welsch, et al.,1992:531).

CVP analysis is concerned with examining the relationship between changes in volume and changes in total revenue and costs in the short term. Drury has compared the economist's and accountant's models of CVP behavior. The major differences are that the total cost and total revenue functions are curvilinear in the economist's model, whereas the accountant's model assumes linear relationships. However, we have noted that the accountant's model was intended to predict CVP behavior only within the relevant range, where a firm is likely to be operating on constant returns to sale. A comparison of the two models suggested that, within the relevant production range, the total costs and revenue functions are fairly similar (Drury, 2000: 230).

2.3 Review of Related Studies

Researches in the area of 'cost-volume-profit' analysis as a tool to measure effectiveness of cost volume profit relation of a company in Nepalese context are not made. But many researchers have been made in the area of profit planning and control and management accounting in Nepalese context. As profit planning and control and management accounting covers major of the aspects of Cost-Volume-Profit analysis, researches made on these areas are taken into consideration for the sake of review to examine how profit planning and control and management accounting practices in Nepalese companies. Many of the researches have been made on manufacturing concerns and except a few most of them are not profound. An attempt is made here to review some of the researchers, which have been submitted on profit planning and control and management accounting in the context of Nepalese public enterprises.

Sharma (2002), had conducted a research entitled “*Management Accounting Practices in the listed Companies of Nepal*”. This study concerned to examine and study the practice of management accounting tools in the listed companies in Nepal. This study is based on primary data only. Stratified random sampling with proportionate allocation of percentage is followed to draw the sample. No secondary data has been used for his study. Some remarkable findings were as follows:

-) Different types of management accounting tools, which are taught in the colleges, are not found applied by the listed companies of Nepal.
-) Management accounting is to help managers in overall managerial activities by providing information and helping in planning, controlling and decision making.
-) Nepalese listed companies are in infant stage in practicing of management accounting tools such as capital budgeting, annual budgeting, cash flow, ratio analysis, zero based budgeting; activity based budgeting, activity costing, target costing and value engineering.
-) Lack of information and extra cost burden are the main reason behind not practicing such tools.
-) As Nepal is proceeding towards globalization and net membership of WTO, companies are recommended to apply management accounting tools to fit with the global environment.

Dhakal, (2005), had conducted research work on "*Cost Volume Profit Analysis of Dairy Development Corporation*". This study concerned to examine the practice of CVP analysis & its effectiveness in DDC. The time period covered by this research was five years. The major finding are below.

-) DDC hasn't been segregating fixed and variable cost, care has been taken in this research to differentiate fixed cost and variable cost with help of degree of variability method.
-) DDC hasn't been practicing CVP analysis till now and there is no method adopted to segregate fixed and variable cost.

-) DDC has low contribution margin ratio in all the five year under study.
-) DDC has high wages & either availability of manpower is more than requirement or inefficiency of workers resulting in low productivity of labor.

Rijal (2005), had conducted a research on "*cost volume profit analysis tools to measure effectiveness of profit planning and control; A case study of NEBICO Private Limited.*" He has centered his study to examine CVP analysis as a toll in manufacturing industry and to analyze the CVP and its impact in profit planning. It covers five years financial statement. The major findings are as follows:

-) The company's variable cost is in proportion than fixed cost in total cost amount, which contribute for lower contribution margin.
-) The company has high fixed cost (i.e. salary and wages, technical and computer fees, depreciation, interest, provident fund and subsidies)
-) Company has no any plan to reduce cost. There is lack of effective cost control programs or techniques.
-) The company has no effective inventory policy. The inventory management, raw material handling and controlling system are not efficient an effective.
-) The board of directors is the main authority in price fixing and it directly interferes to price of biscuit and confectionary products.
-) Nebico Pvt. Ltd. has not proper practice of segregating the costs into fixed and variable or controllable and non controllable.
-) There is no proper co-ordination among production, administration, distribution, inventory and sales department.
-) Nebico has not utilized its capacity.

Shrestha (2006), had conducted a research entitled "*Cost, Volume And Profit Analysis Of Commercial Bank: A Case Study Of Himalayan Bank Limited*". This study concerned to examine the practice of CVP analysis & its

effectiveness in Commercial Bank, in this study the secondary data had been used mostly and related other information had collected by informal interview for segregating cost, Cost analysis, contribution margin analysis, P/V ratio analysis & Break Even analysis. The time period Covered by this Research was six years from FY 2061/62. The major findings are as follows:

-) CVP analysis has not practiced yet.
-) There is no Practice of segregating cost into fixed and variable. The costs are roughly classified and that classification is not scientific and appropriate.
-) All the level of management is not involved in profit planning and decision making of the Bank.
-) There is no complete and comprehensive budgeting system.
-) Lack of the system of SWOT analysis. Liberalized policy of Government, skill manpower, good management team, use of computer technology etc. are strength of Bank where as unable to provide service in rural area, market competition, conflict in Nation, Industries and Business closed done are weakness and threat.

Pradhan (2006), had conducted a research entitled "*Cost Volume Profit Analysis of Public Enterprises of Nepal (A comparative analysis between Nepal Telecom and Nepal Electricity Authority)*".

Findings

-) Segregation of fixed and variable cost is ignored by both enterprises. Cost volume profit analysis is not plasticizing by these enterprises no any method has been adapted to segregate to segregate cost into fixed or variable.
-) Actual operating income of the NTC is increasing in fluctuation of trend.
-) Variable cost of NTC is very less compare to its fixed cost and contribution margin ratio of NTC is very high. But NEA has variable cost and its contribution margin ratio is less.

-) NTC is running in profit but NEA is suffering from loss. No any systematic plans have been implemented for preventing the loss and improve profit of these enterprises.
-) Fixed cost of NTC is high in the comparison to variable cost. Employee cost and administration expenses are high. In NEA fixed cost like interest and depreciation are high. Long term loan in NEA are the main cause in increase interest.
-) High PVC ratio of NTC reduced the breakeven level of the company where as NEA has less PV ratio and BEP sales are more. As a result NTC is earning profit but NEA is suffering loss.

Adhikari (2007), Had conducted a research entitled “*Cost - Volume - Profit Analysis of Nepal Lube Oil Limited*”. This study concerned to examine the practice of CVP analysis & its effectiveness in company, in this study the secondary data had been used mostly and related other information had collected by informal interview for segregating cost, Cost analysis, contribution margin analysis, P/V ratio analysis & Break Even analysis. The time period Covered by this Research was seven years from FY 2056/57.

Findings

-) CVP analysis has not practiced yet.
-) There is no Practice of segregating cost into fixed and variable. The costs are roughly classified and that classification is not scientific and appropriate.
-) There is no complete and comprehensive budgeting system. As Nepal is proceeding towards globalization and net membership of WTO,
-) Companies are recommended to apply management accounting tools to fit with the global environment.

Sijakhwo(2008), Had conducted a research entitled “*Study on Application of Cost- Volume-Profit Analysis as a Management Tool in Bhaktapur Craft Paper Ltd*”. This study concerned to examine and study the practice of management

accounting tools in the Company. This study is based on secondary data only and accuracy of this study is based on true response and the data available from the company. The time period Covered by this Research was seven years from FY 2056/57.

Findings

-) Different types of management accounting tools, which are taught in the colleges, are not found applied by the Company.
-) There is no Practice of segregating cost into fixed and variable by using statistical technique i.e. least square method.
-) Proper estimation is not used while making projected or budgeted costs, profit and volume of the company
-) Mixed costs or semi-variable costs were segregated by using least square method.

2.4 Research Gap

There is gap between the present research and the previous research in terms of some objectives. Tools for analysis period of data and the organization, the main issue of this study is to cost volume profit analysis of Soltee hotel. It is mainly concern with Soltee hotel and data is taken in between 2062/63 to 2066/67. This study has been done to analyze the budget profit and loss analysis, CVP analysis of selected organization of future improvement on the basis of this study.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

The present work is mainly related with the quantitative plans and accounts of Soaltee Hotel Limited. So, analytical approach has been considerably adopted to present the data. But the qualitative aspects of the research such as effectiveness of profit planning in the Hotel, problem and formulating and implementing the profit plans, and the theoretical prescription were explained where ever necessary. Therefore, analytical as well as descriptive researches were applied as the research design for this study.

3.2 Populations and Sample Size

At present there are many five star hotels operating in Nepal. Among them, Soaltee Hotel Limited has been taken as a sample of the study. This study covers the time of last five years historical data ranging from 2062/63 to 2066/67, and on the basis the strength and weakness of managerial planning and financial aspects of Soaltee Hotel Limited were identified.

The latest 5 year's data has been taken as a sample for the comparative analysis. So, the study is based on the sample data.

3.3 Nature and Sources of Data

This study was mainly based on the secondary data. The required data have been extracted from the annual reports of Soaltee Hotel Limited. The supplementary data and information have been acquired from the various sources like Newspaper, Magazines, Brochures, Booklets, periodicals and bulletins, published and unpublished reports of other organization like Nepal Stock Exchange and official website of the company.

a) Primary data

Primary data is original in nature. For the purpose of research work, primary data were collected, basically, following techniques are adopted;

-) Direct observation.
-) Unstructured dialogues and discussions with personnel of the company.
-) Personal interview through questionnaires etc

b) Secondary data

This data has already been used by other only primary data are not sufficient to fulfill the requirement of the research work sometime it is very difficult to collect the primary data. In this situation it is better to use secondary data to accomplish the objectives of study. Secondary data is used from the following sources.

-) Annual report provided by the company.
-) Different publications made by the company.
-) Library
-) Books, booklets, journals, magazines

3.4 Method of Data Analysis

To analyze the data, different cost related tools under Cost-Volume-profit Analysis has been used. The various technique that have been used are as follows,

- 1 Statistical Tools
- 2 Accounting Tools

3.4.1 Statistical Tools

Under the statistical tools various technique were used

Mean

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

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

Where, X is the variable that is under study 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.

Segregation of Cost under Least Square Method

One popularly used method for estimating the Cost volume formula is regression analysis. Regression analysis is a statistical procedure for estimating mathematically average relationship between the dependent variables and the independent variables. The regression method does include all the observed data and attempts to find a line of best fit. To find the line of best fit, a technique called the method of least square was used. Method of least square is based on the mathematical technique of fitting an equation with the help of a number of observations.

$$y = a + bx$$

Where,

y = estimated total cost

a = estimated fixed cost

b = variable rate

x = independent variable

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

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

Standard Deviation

The standard deviation is defined as the positive root of the mean of the squared deviation from their mean of a set of values. It is also known as Root Mean Square Deviation. It is usually denoted by the Greek letter σ (Small Sigma)

The SD is calculated by the following formula:

$$SD = \sqrt{\frac{\sum X^2}{N}}$$

Where, $X = x - \bar{x}$ and $(\bar{x}) = \frac{\sum x}{N}$

Coefficient of Standard Deviation (CSD)

The relative measure of dispersion based on SD is called coefficient of SD.

Thus,

$$\text{Coefficient of SD} = \frac{\sigma}{\bar{X}}$$

Where, σ = Standard deviation

100 times coefficient of SD is called coefficient of variation. It is denoted by C.V. thus,

$$\text{Coefficient of SD} = \frac{\sigma}{\bar{X}} \times 100$$

Pearson's Correlation Coefficient (r)

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

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.

Break Even Point Analysis

The point which breaks the total cost and the selling price evenly to show the level of output or sales at which there shall be neither profit nor loss, is regarded as break-even point. At this point, the income of the business exactly equals its expenditure.

$$\text{BEP in units} = \frac{\text{Fixed cost}}{\text{CMPU}} = \frac{\text{Fixed cost}}{\text{SPPU}-\text{VCPU}}$$

$$\text{BEP in amounts} = \frac{\text{fixed cost}}{\text{profit volume ratio}} = \frac{\text{F.C}}{\text{CMPU}} \times \text{SPPU}$$

Where contribution margin is derived by computing the deviation between selling price per unit and variable cost per unit. And the profit volume ratio is derived by dividing contribution margin per unit by selling price per unit. Breakeven point identifies the sales level to be achieved to get zero profit i.e. the company will earn no profit and suffer no loss or in other words the total revenue covers the total cost of the organization.

$$\text{Profit} = \text{Sales} - \text{variable Cost} - \text{fixed Cost}$$

$$\text{Sales} = \text{Profit} - \text{fixed cost} - \text{variable cost}$$

$$\text{Required sales to earn Desired Profit (in units)} = \frac{\text{Fixed cost} + \text{desired profit}}{\text{CMPU}}$$

$$\text{Required sales to earn Desired Profit (in amounts)} = \frac{\text{Fixed cost} + \text{desired profit}}{\frac{\text{P}}{\text{V}} \text{ratio}}$$

CHAPTER – IV

DATA PRESENTATION AND ANALYSIS

4.1 Introductions and Purpose

Profit planning is the formal expression of the enterprises plan, goals, objective stated in financial term for specific future period of time. It is one of the most important management tools that are used to develop effective performance and systematic approach for attaining desire goals. CVP analysis, a tool of PPC, can be most important device to utilize the cost with effective and efficient way. CVP analysis has become a powerful instrument in managerial decision-making especially in cost control and profit planning. The CVP analysis is a specific way of presenting and studying the interrelation between cost, volume and profit. The most valuable and crucial tool to show the true position of any organization is its past data. By analyzing the data, one can find out the core problems and limitations of the organizations. Therefore, this chapter focuses on presenting the data related to Soaltee Hotel's cost structure and their interpretation.

The main purpose of this research paper is to examine CVP analysis as a tool to measure the effectiveness of profit planning, present practices of CVP analysis and identify the area where CVP analysis could be applied to strengthen hotel industries. For this reason, SOALTEE HOTEL LIMITED has been selected randomly for the study and data analysis purpose. To accomplish the specified objective, this chapter will present and analyze different plans and aspects of the organization.

4.2 Revenue Plan of Soaltee Hotel Limited

The revenue plan is the foundation of profit planning and control in the context of Hotel Industry. It is the first plan or budget to be prepared. All other planning is based on it. The revenue planning process is a necessary part of PPC because it provides basic management decision about marketing and based

on those decisions, it is an organized approach for developing a comprehensive revenue plan. If the revenue plan is not realistic, most of all other part of overall profit plans is also not realistic.

Table 4.1
Total Budgeted and Actual Revenue/ Turnover

(Rs. in Millions)

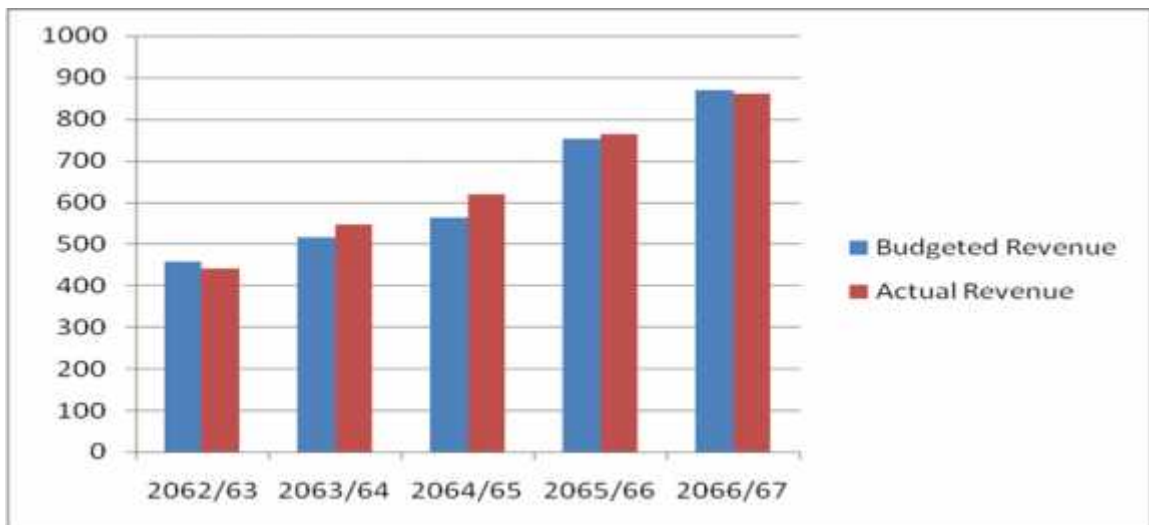
Fiscal Year	Budgeted Revenue	Actual Revenue	Revenue Deviations
2062/63	456	440	3.51(U)
2063/64	515	546	6.02(F)
2064/65	562	617	9.79(F)
2065/66	751	763	1.59(U)
2066/67	870	861	1.03(U)

(Source: Annual Report of SHI)

Revenue Plan Analysis

The attempt begins to present and analyze the Soaltee Hotel's previous budgeted revenue and actual revenue earned. The following table presents the budgeted and actual revenue and any deviations during the fiscal year 2062/63 to 2066/67. The above table disclosed that there is acceptable level of deviations between Budgeted and Actual revenue recording not more than 10%. Generally Budgeted revenue exceeds Actual revenue except in fiscal year 2063/64 and 2064/65 because management often set the annual revenue target lower than previous year based on trade cycle of their respective industry and the nation. Also low target can generally be easily achieved by employee but it cannot be guaranteed that their maximum capacity have been utilized in achieving the target. The volatile trend of budgeted revenue disclosed that management has prepared itself as per external environment especially political scenario and economic trend of hotel industry. In order to find how effectively management has dedicated itself on achieving the plan revenue, it can be best presented by the help of following graph. Out of the nature of variability of Budgeted revenue and Actual revenue of different years.

Figure 4.1
Budgeted and Actual Revenue Analysis



(Source: Table 1)

The above graph discloses that the deviation between budgeted and actual revenue is minimal. Generally budgeted revenue exceeds the actual revenue except in fiscal year 2063/64 and 2064/65. To reveal the variability of budgeted revenue and actual revenue of different years, it is necessary to compute the Arithmetic mean, Standard Deviation with Coefficient of Variation, Correlation Coefficient, and Probable Error (r).

Table 4.2
Summary of Statistical Calculation

Details	Budgeted Revenue(X)	Actual Revenue (Y)
	(Rs. In million)	(Rs. In Million)
Mean	630.8	645.4
Standard deviation	77.03	150.45
Coefficient of Variation (C.V)	12.21%	23.31%

The above table 4.2 exhibits the value of statistical tools namely, the co-efficient of variation of Budgeted revenue (C.V.x) and co-efficient of variation Actual revenue (C.V.y). A distribution with lesser C.V is considered to be more

homogeneous or uniform or less variable and vice versa. The above table reveals that the Budgeted revenue are more volatile or deviated year by year because the coefficient of variation (C.V) of the Budgeted revenue exceeds the co-efficient of variation of the Actual revenue(C.V), which also indicate the over estimation of planner. Another statistical tools correlation of coefficient was used to analyze the degree of relationship or association between the budgeted revenue and actual revenue. To find out the correlation between Budgeted revenue and Actual revenue figure, the Karl Pearson's co-efficient correlation was used. By calculating 'r' it measures the relationship between Budgeted and Actual revenue. There is close relationship (Approximately perfect positive Correlation) between Budgeted revenue and Actual revenue because the value of 'r' is.0668.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 revenue. For this purpose the Actual revenue must be assumed to be dependent variables and budgeted revenue as independent.

Table: 4.3
Revenue Analysis

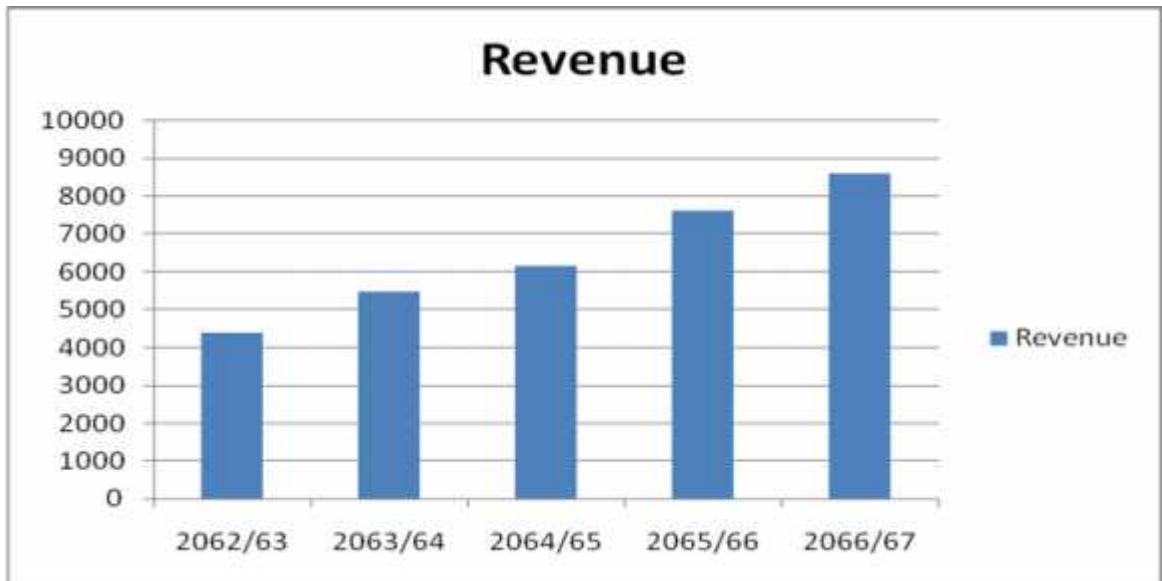
(Rs. In Lakh)

Year	Revenue
2062/63	4397
2063/64	5474
2064/65	6172
2065/66	7631
2066/67	8607

(Source: Annual Report of SHI)

Figure: 4.2
Revenue Analysis

(Rs. In Lakh)



(Source: Table 3)

The above figure reveals that total revenue has been volatile over the five years period. In the base year 2062/63 the actual revenue was Rs.4397 (Lac). Similarly it increased by 24.49%, 40.39%, 73.55% and 95.75 respectively in the fiscal year 2063/64, 2064/65 and 2065/66 and 2066/67.

4.3 Profit Analysis

Profit is the difference between revenue and expenses over a period of time. Profit is the ultimate 'output' of a company, and it will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of the company in term of profits. The profitability ratios are calculated to measure the operating efficiency of the company besides management of the company, creditors and owners are also interested in the profitability of the firm. Creditors want to get interest and repayment of the principal regularly. Owners want to get a required rate of return on their investment. This is possible only when the company earn enough profits.

Table: 4.4
Profit and Loss Analysis

(Rs. In Lakhs)

Fiscal year	Profit and loss
2062/63	(203)
2063/34	229
2064/65	550
2065/66	977
2066/67	1228

(Source: Annual Report of SHI)

Figure 4.3
Profit and Loss Analysis

(Rs. In Lakh)



(Source: Table 4.4)

The above figure 4.3 disclosed about the profit and loss of the Soaltee Hotel Limited. In the fiscal year 2062/63 it suffered a loss of Rs. 203 (Lakhs). After the base year the profit was increased with 213% at 2063/64 by 371%. In same trend in fiscal year 2064/65, 2065/66 and 2066/67 there is profit of 550 (lakhs), 977 (Lakhs) and 1228 (Lakhs) which shows that there is improvement in tourism sector.

In order to examine the nature of variability of actual revenue of different years, the arithmetic means, standard deviation, and coefficient of variation have presented in table.

Table 4.5
Summary of Statistical Calculation of Profit and loss:

(Rs. In lakhs)

Particulars	Sales (X)
Mean	\bar{X} = Rs 556.2
Standard Deviation (S.D.)	σ_x = Rs 512.2
Coefficient of Variation (C.V.)	CV _x =92.08%

From the above table there are summary of statistical calculation of profit and loss. This table indicates that arithmetic means of profit is 556.2 and standard deviation is 512.2. Similarly, the coefficient of variation is 92.08%, which shows that actual profit is more fluctuation.

Table: 4.6
Total Cost Analysis

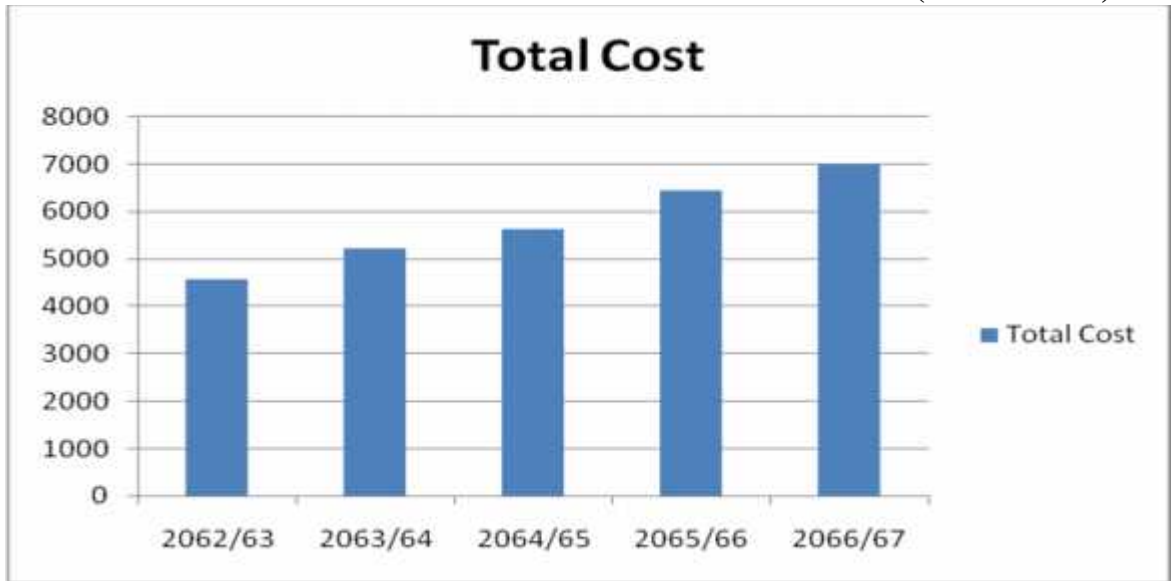
(Rs. In Lakh)

Year	Total Cost
2062/63	4582
2063/64	5228
2064/65	5631
2065/66	6458
2066/67	6992

(Source: Annual Report of SHI)

Figure 4.4
Total Cost Analysis

(Rs. In Lakh)



(Source: Table 4.6)

The above figure 4.9 disclosed that total cost of the Soaltee Hotel limited was in the base year 2062/63 was Rs.4582 (Lakh). Total cost keep on increasing in every year in compare to base year by 14%, 23%, 41% and 53% in the fiscal year 2063/64, 2064/65, 2065/66 and 2066/67 respectively.

In order to examine the nature of variability of actual revenue of different years, the arithmetic means, standard deviation, and coefficient of variation have presented in table

Table 4.7
Summary of Statistical Calculation of Total cost:

(Rs. In lakhs)

Particulars	Sales (X)
Mean	\bar{X} = Rs 5778.2
Standard Deviation (S.D.)	σ_x = Rs 859
Coefficient of Variation (C.V.)	CV _x =14.86%

4.4 Relationship between Sales, Fixed Cost, and Variable Cost:

As per the basic assumption of CVP analysis, the relation between the sales and variable cost are directly proportional which means the increment in the amount of sales revenue, increment of variable cost is more likely. It should be proportionate in fact if the perfect relationship is there between variable cost and sales revenue. However, sometimes it is very difficult to figure out which one of the expenses bears fixed quality or variable quality making the analysis challenging. Expenses that cannot be categorized as purely fixed or variable are termed as semi variable or mixed cost. Semi-variable costs contain both variable and fixed costs elements. Classification of costs into variable and fixed is very important to plan and control costs. It helps to determine the volume of operation required to maintain the desired profitability. In Soaltee Hotel Limited, account classification method is popular, so cost is classified on the basis of knowledge and experience of accountant of Hotel's cost and activities. Due to the lack of information about the reliable activities level, classification of semi variable costs by using scientific methods would be not easy. Here the Administrative and Other expenses of Soaltee Hotel were classified on the basis of information provided by the company. The administrative and other expenses include salary and employee's cost, rent, repair and maintenance, fuel and power, communication expenses, miscellaneous etc.

Table 4.8
Sales, Fixed Cost and Variable Cost

	(Rs. Lakhs)				
Year	2062/2063	2063/2064	2064/2065	2065/2066	2066/2067
Sales	4397	5457	6172	7582	8607
%Change in Sales	-	19	28.75	42	48.9
Variable Cost	2300	2697	3215	4210	4608
%Change in Variable Cost	-	14.27	39.54	45.36	50
Fixed Cost	2282	2531	2416	2247	2384
% Change in Fixed Cost	-	9.83	5.5	(1.55)	4.3
Variable Cost/ Sales in %	52.3	49.4	52	55.5	53.5
Fixed Cost/Sales in %	51.9	46.3	39.14	29.63	27.7

(Source: Annual Report of SHI)

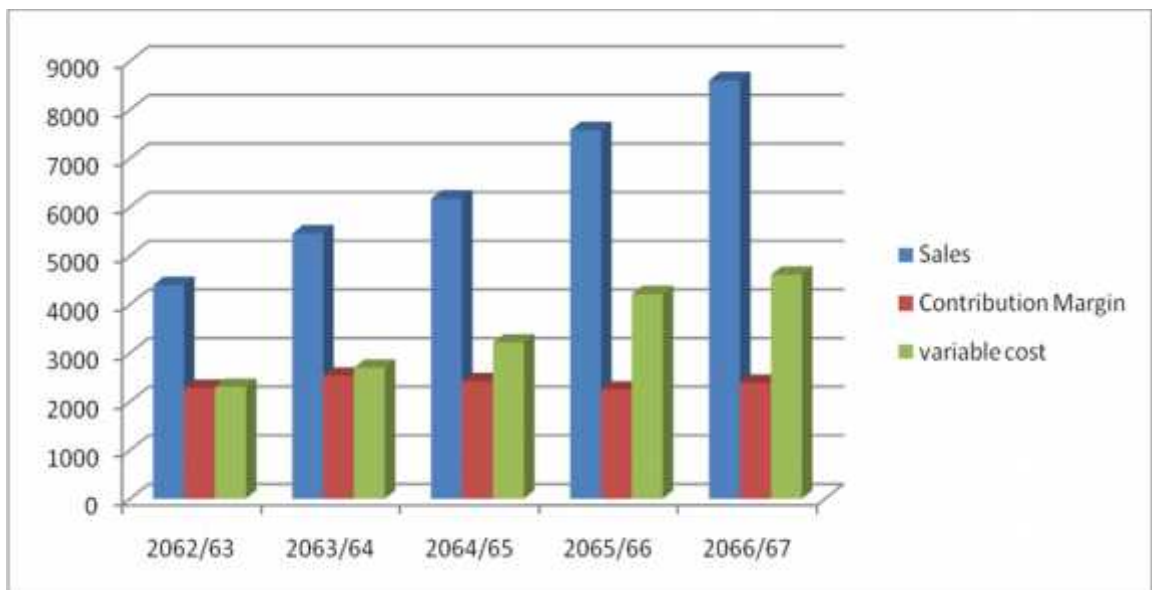
The relationship between sales, fixed costs and variable costs has shown by above table. The table does have cleared the relationship between sales with variable cost and sales with fixed cost. The percentage of variable cost with sales in fiscal year 2062/2063, 2063/2064, 2064/2065, 2065/2066 and 2066/2067 are 52.3%, 49.4%, 52%, 55.5%, and 53.5% respectively. In fiscal year 2065/2066, percentage of variable cost with sales is maximum i.e. 55.5%. It is decreased in fiscal year 2062/2063 i.e. 49.4%, which is minimum percentage of variable cost with sales. The highest variable cost with sales indicates that, the company bears maximum variable cost. And the lowest variable cost with sales indicates that, the company bears minimum variable cost.

The percentage with fixed cost with sales in fiscal year 2062/2063, 2063/2064, 2064/2065, 2065/2066 and 2066/2067 are 51.9%, 46.3%, 39.14%, 29.63% and 27.7% respectively. The highest percentage of fixed cost with sales is in fiscal year 2062/2063, in this year the company bears more fixed expenses. And the percentage of fixed cost with sales in fiscal year 2066/2067 is 27.7%. It shows that, in this year the company bears less fixed cost than in other years. In this way, the company improves their profitability position for the year.

Figure 4.5

Sales, Fixed cost and Variable cost

(In Rs. Lakhs)



(Source: Table 4.8)

4.5 Contribution Margin Analysis

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

$$\text{Contribution margin} = \text{Sales} - \text{Variable Cost}$$

$$\text{Or contribution margin} = \text{Fixed Cost} + \text{Profit}$$

The contribution margin is computed using a special type of income statement that has been reformatted to group together a business's fixed costs and variable costs. The contribution margin of Soltee Hotel P. Ltd is given below.

Table 4.9
Contribution Margin

(In Rs. Lakhs)

Year	2062/2063	2063/2064	2064/2065	2065/2066	2066/2067
Sales	4397	5457	6172	7582	8607
Variable cost	2300	2697	3215	4210	4608
Contribution margin = Sales – VC	2097	2760	2957	3372	3999
PV Ratio = Sales/VC (in %)	46.8	50.6	49.9	44.8	46.5
% Change in PV ratio		7.5	6.3	(4.5)	(.006)

(Source: Annual Report of SHI)

The contribution margin from above table in fiscal year 2062/2063, 2063/2064, 2064/2065, 2065/2066 and 2066/2067 are Rs2097, Rs2760, Rs2957, Rs3372 and Rs3999 respectively. The highest contribution margin is in fiscal year 2066/2067 i.e. Rs 3999. It shows that company has made better performance.

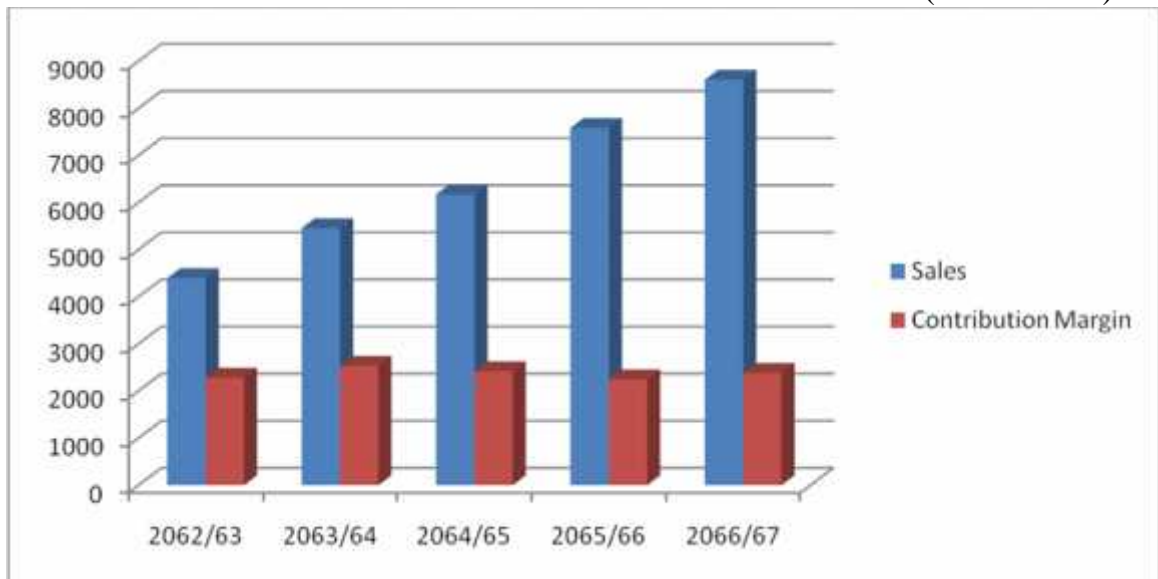
Similarly, the lowest contribution margin is in fiscal year 2062/2063 i.e. Rs2097. It shows that, company has made bad profitability position.

The above table 4.3 showed the contribution margin ratio of Soltee Hotel Limited for the five years period. The profit volume ratio was 46.8%, 50.6%, 49.9%, 44.8% and 46.5% for the fiscal year 2062/2063, 2063/2064, 2064/2065, 2065/2066 and 2066/2067 respectively. The highest profit volume ratio is in fiscal year 2063/2064 and the lowest profit volume ratio in fiscal year 2065/2066. An increased in the contribution margin means increases in profit only because fixed costs were assumed to be constant at all levels of production. This ratio would remain constant at different levels of production since variable costs as of proportion to sales remains constant at various levels. Management should try to increase the value of the ratio by reducing the variable costs or by increasing the selling price.

The multiple bar-diagrams for the Sales and Contribution margin presented below:

Figure 4.6
Sales and Contribution Margin

(In Rs Lakhs)

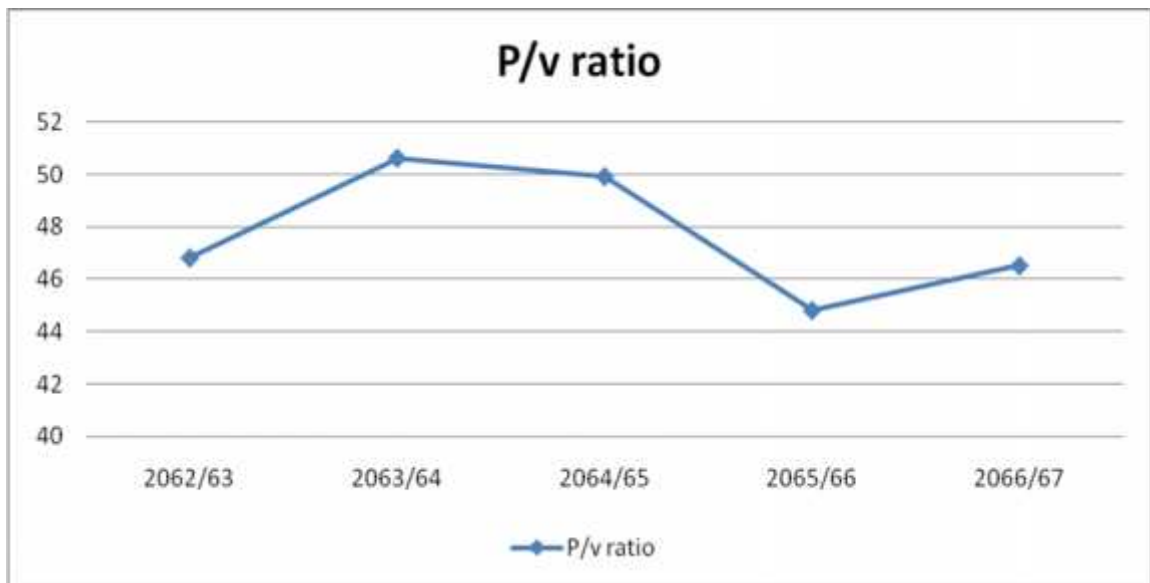


(Source: Table 4.9)

We have known the relationship between Sales and Contribution margin from above figure which is derived by table 4.3. The figure shows clearly the relation between sales and contribution margin. In fiscal year 2064/2065, sales and contribution margin both are high. It indicates that, this year the company has made more profit than other years. The contribution margin gives the actual profitability position of the company. The high contribution margin indicates better performance and low contribution margin indicates bad performance of the companies. It also can be cleared from profit volume ratio's figure which is presented following figure:

Figure 4.7
Profit Volume Ratio

(In Rs Lakhs)



(Source: Table 4.9)

In fiscal year 2063/2064, the PV ratio is high i.e. 50.6% but after that year the PV ratio is decreasing. In fiscal year 2065/66 the PV ratio is maximum low but fiscal year 2063/2066, it is maximum high. The PV ratio indicates that, how the company has made their profitability position. High PV ratio gives more profit and low PV ratio gives less profit to the companies. Therefore, it plays important role for companies.

4.6 Break Even Analysis

The point of sales which breaks the total cost is called break even sales. The breakeven point can be identified by using the following formula:

$$\text{Break even point in amount} = \frac{\text{Fixed Cost}}{\text{p.v Ratio}}$$

Table 4.10
Break-Even Point

	(In Rs Lakhs)				
Year	2062/2063	2063/2064	2064/2065	2065/2066	2066/2067
Sales	4397	5457	6172	7582	8607
Variable cost	2300	2697	3215	4210	4608
Fixed Cost	2282	2531	2416	2247	2384
Contribution margin = Sales-Variable cost	2097	2760	2957	3372	3999
PV Ratio = Sales/CM	46.8	50.6	49.9	44.8	46.5
BEP = Fixed cost/PV Ratio	4876	5002	4841	5015.6	5126.9
% Change in BEP	-	2.5	(.007)	2.78	4.89

(Source: Annual Report of SHI)

From the above table we can be cleared that, the company increasing their fixed cost because the percentage of break-even BEP is in increasing trend. The break-even point is Rs4878, Rs5002, Rs4841, Rs5015.6 and Rs5126.9 for the fiscal year 2062/2063, 2063/2064, 2064/2065, 2065/2066 and 2066/2067 respectively. The company has minimized their fixed cost in further year. It shows that company is making better performance onward.

The figure of break-even point can be presented below:

Figure 4.8
Break-Even Sales

(In Rs Lakhs)



(Source: Table 4.10)

Table 4.11
Actual sales and Break-Even sales

(In Rs.Lakhs)

Fiscal year	Actual Sales	BEP Sales	BEP Sales on actual sales(%)
2062/63	4397	4876	1.11
2063/64	5457	5002	91.66
2064/65	6172	4841	78.43
2065/66	7582	5015.6	66.15
2066/67	8607	5126.9	59.56

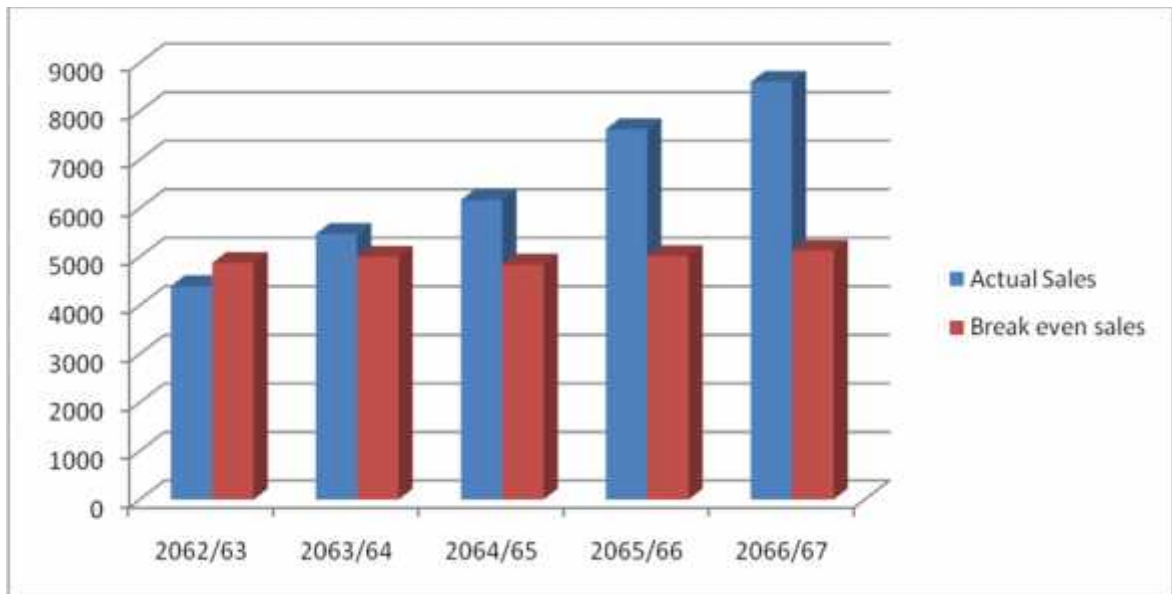
(Source: Annual Report of SHI)

The above table presents the proportion of BEP sales on actual sales. There is fluctuation between Actual sales and BEP sales. In fiscal year 2062/2063, BEP sales is more than actual sales. In this period the company bears losses. Otherwise The Company's BEP sales are less than actual sales. In fiscal year 2066/2067, actual sales are much more than BEP sales i.e. 59.56% BEP sales of actual sales. In this period the company has minimized the fixed cost and got more profit.

The graphical representation of same is given below in the multiple bar diagram which is explanatory to its viewers.

Figure 4.9
Actual Sales and BEP Sales

(In Rs Lakhs)



(Source: Table 4.11)

We can be cleared from above figure about the proportion between actual sales and BEP sales of the company. It presents that; if actual sales are less than BEP sales the company bears loss. We can see the figure in fiscal year 20062/2063, the actual sales are less than BEP sales. It indicates that the company can't make their profitability position in those years. But in other year the actual sales are greater than BEP sales. So, the company can make their profitability position onward year.

In order to find out the nature of variability, we can calculate different type of statistical tools like arithmetic mean, standard deviation, coefficient of Variance (C.V.)

Table 4.12

Summary of Statistical Calculation of Actual Sales and BEP Sales

In Rs. Lakhs

Particulars	Actual Sales (X)	BE Sales (Y)
Mean	$\bar{X} = \text{Rs } 6443$	$\bar{Y} = \text{Rs } 4972$
Standard Deviation (S.D.)	$\sigma_x = \text{Rs } 1497.46$	$\sigma_y = \text{Rs } 103$
Coefficient of Variation (C.V.)	$CV_x = 23.23\%$	$CV_y = 2.071\%$

This table indicates that arithmetic means of actual sales is higher than the BEP sales and standard deviation of actual sales is also higher than BEP sales. Similarly, the coefficient of variation is also higher than BEP sales, which shows that actual sales are more than the BEP sales. On this way actual sales is in the nature of higher variability than the BEP sales.

4.7 Margin of Safety Analysis

Margin of safety is the excess of budgeted or actual sales over the break-even sales volume. In other words, it is the different between the budgeted or actual sales revenue and the break-even sales revenue. 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 while 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 will be). 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 sales volume or reducing variables costs by bringing improvement in the manufacturing process. Margin of safety can be ascertained by using the following formula

$$\text{Margin of safety} = \text{Actual sales value} - \text{Break-even sales value}$$

$$\text{Margin of safety (in amount)} = \frac{\text{Profit}}{\text{profit volume ratio}}$$

$$\text{Margin of safety (in units)} = \frac{\text{profit}}{\text{unit contribution margin}}$$

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

$$\text{Margin of safety Ratio} = \frac{\text{Actual Sales} - \text{Break even Sales}}{\text{Actual sales}}$$

Table 4.13

Profitability analysis from the F/Y 2062/63 to 2066/67

(Rs. In Lakh)

Year	2062/2063	2063/2064	2064/2065	2065/2066	2066/2067
Sales	4397	5457	6172	7582	8607
Variable cost	2300	2697	3215	4210	4608
Fixed Cost	2282	2531	2416	2247	2384
Contribution margin = Sales-Variable cost	2097	2760	2957	3372	3999
PV Ratio = Sales/CM	46.8	50.6	49.9	44.8	46.5
BEP = Fixed cost/PV Ratio	4876	5002	4841	5015.6	5126.9
Margin of Safety	(479)	455	1128	2615	3480
MOS ratio (%)	(11.89)	8.33	18.28	34.27	40.43

(Source: Annual Report of SHI)

Contribution Margin or P/V ratio was increased in the fiscal year 2063/64 and 2064/65 but it was decreased in fiscal year 2065/66 and 2066/67. The C.M ratio decreased on account of increase in VC ratio except in the fiscal year 2062/63 because CM ratio and VC ratio have inverse relationship. Whenever actual sales decreased variable cost ratio had been increased in that fiscal year.

So the main reason for increased variable cost ratio might be the diseconomies of scale in the operating cost of the Soaltee Hotel Limited.

Fixed cost is in increasing trend in compare in base year. Fixed cost increased from 2282 in base year 2062/63 to 2531 in 2063/64 and 2416 in 2064/65 but after it decrease in fiscal year 2065/66 and again it increased in fiscal year 2066/67. From this it reveals that fixed costs are becoming uncontrollable by the management and it has been detrimental to the firm's profitability. The main reason for decreased in fixed cost in the fiscal year 2062/63 was due to reduction in the depreciation cost. Also, whenever actual sales increased fixed cost ratio had been improved in that fiscal year.

Simply BEP in Rs. means fixed cost divided by CM ratio. The above table disclosed that CM ratio decreased and fixed cost is increased in the fiscal year from 2066/67 as a result BEP sales in revenue is increased in the fiscal year 2063/64 to 2066/67. But in the fiscal year 2065/66 both fixed cost and CM ratio decreased as a result BEP decreased.

Actual sales are highly volatile during the period of study. There is positive MOS i.e. no margin of safety because in the fiscal year Actual sales exceed the BEP sales, except fiscal year 2062/63.

4.8 Risk Management Operating leverage

Leverage decision is meant to substitute variable costs by the fixed cists. To create a degree of operating leverage means the employment of higher amount of fixed costs, which eventually increase the break-even point also, so a high degree of operating leverage makes good time better and bad time worse. So, a risk taker may prefer a high DOL but a risk averter prefers a small DOL.

$$\text{Degree of operating leverage} = \frac{\text{Contribution margin (CM)}}{\text{Net operating income (EBIT)}}$$

Degree of operating leverage of Soltee hotel Limited during five year period up to 2066/67 is presented below.

Table 4.14
Computation of DOL

(Rs. In Lakh)

Year	2062/2063	2063/2064	2064/2065	2065/2066	2066/2067
Sales	4397	5457	6172	7582	8607
Less: Variable cost	2300	2697	3215	4210	4608
Contribution margin = Sales- Variable cost	2097	2760	2957	3372	3999
Less: fixed cost	2282	2531	2416	2247	2384
EBIT	(185)	229	541	1125	1615
DOL in times	11.34	12.05	5.47	3	2.48

(Source: Annual Report of SHL)

The above table shows the DOL of Soltee hotel limited during five year period. The company has DOL of 11.34 times in FY 2063/63. The company has DOL of 3 times in FY 2065/66. That means profit is increased by 3 more times than sales increased and vice versa. The company has 5.47 times in 2064/65. The company has the highest DOL of 12.05 times in 2063/64 which may very good. In increase in sales and very bad for decreased in sales. Again it is decrease to 2.48 times in 2066/67.

4.9 Major Findings

On the basis of various types of analysis, observation and informal conversation, the following major findings can be drawn,

-) Soaltee Hotel's revenue achievement is higher than sales target in the fiscal year 2063/64 and 2065/66. The correlation between target and actual sales is positive. It reveals that the company is able to meet its

goal as specified in annual report. The company tried to apply effective environmental focused technique. It is able to both budgeted and actual sales revenue.

-) The Company's profit is in increasing level from fiscal year 2063/64 which shows that there is improvement in the company.
-) Cost Increase from the base year continually.
-) The cost of Soaltee Hotel limited was classified into fixed and variable. There was no practice of identifying semi-variable cost and their segregation into variable and fixed was done by using scientific method.
-) The proportions of variable cost were slightly higher than fixed cost in total cost structure, which normally indicated normal risk.
-) Variable cost volume of Soaltee Hotel Limited was nearly 52.66% on average. It means that the contribution margin of the company is about 47.34% of total sales.
-) In Profitability analysis; Contribution Margin or P/V ratio was increased in the fiscal year 2063/64 and 2064/65 but it was decreased in fiscal year 2065/66 and 2066/67.
-) Company's CM ratio decreased. So a rupee increases in sales, where it was slightly improved.
-) Break Even Points has been in increasing level except in fiscal year 2063/64 due to decrease in contribution margin and increase in fixed cost.
-) The company has MOS, after fiscal year 2063/64 as actual Sales exceeds the Break even sales during the study period.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Management effectively achieves organizational objectives through efficient use of scarce resources in a dynamic environment. Future is uncertain which creates risk and to reduce risk, the reliable technique is good management. CVP analysis is an analytical technique for studying the relationship between volume, costs, prices, and profit, which helps to manage future cost and profit. Profit planning is a management technique and it is a written plan that covers all aspects of the business operation for specific period. CVP analysis is a device used to determine the usefulness of profit planning process of the firm. In fact, the entire field of profit planning has become associated with the CVP inter relationship. Therefore, CVP analysis is such a tool of management accounting which helps for the profit planning and costs controlling (PPC) area that operate as a device by the managers of the company. With the help of CVP analysis Soaltee hotel limited can estimate the total costs, profits and sales volumes, not only this but it also helps risk measurement of the losses/profits by analysis the BEP sales. However entire field of the profit planning which is one of the main objectives of the every business organization has been associated with CVP analysis tool inter-related.

The main objective of the present study is to examine cost-volume-profit analysis as a tool to measure effectiveness of profit planning of Soaltee Hotel Limited. So, this study was undertaken to evaluate CVP analysis of the company. It has observed that Soaltee Hotel Limited has succeeded in living up to the expectation of VIP tourist and main hospitality service provided by the company. As per the nature of the study, the secondary data with descriptive and analytical approach for sales analysis, Cost Analysis, Profitability Analysis, Contribution Margin Analysis, P/V Ratio Analysis, BEP Analysis

and CVP Analysis under uncertainty, etc are used. And to support the study, primary data were also collected informally from the staff of the company.

From the analysis, the CVP analysis shows that the company has low contribution, loss P/V ratio, high BEP and negative margin of safety which later on it was in increasing level which shows that there is improvement in company and able to meet the profit. The sensitivity test of CVP analysis shows that increase in costs (i.e. variable and fixed cost) increases the BEP and when the cost decreases the BEP also decreases. But the profit increases by more times than sales increase due to its huge fixed cost. Company's profit conditions are not good due to failure in controlling excessive fixed costing in few years but they are able to control the fixed cost due to which they are able to gain profit. Lack of detail information on scientific cost analysis and extra cost burden and loss of the company are the main reason behind not practicing effectively and efficiently profit planning tools like CVP Analysis.

5.2 Conclusions

Different types of profit planning tools, which are used in the academic field and in multinational companies of developed nation, are not found applied by Soaltee Hotel Limited. CVP analysis is not effectively applied by Soaltee Hotel Limited, because of no implementation of scientific method of segregating cost into fixed and variable, which is the hardcore of CVP Analysis. The company has not implemented costing and cost classification policy. 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, Soaltee Hotel Limited has not been able to use efficiently and effectively CVP analysis and make the realistic budget.

As the little variation in sales target and actual sales proves that the Sales planning of the company is scientific. Profit pattern of the company shows that the company is ineffective in the profit planning and its implementation. The

cost structure of SoalteeHotel Limited discloses appropriate variable cost and fixed cost so this cost structure indicates the normal risk because its fixed cost are normal and it will bear normal loss as rapidly as sales falls off. The CVP analysis exhibits that the variable cost ratio is decreasing which means the company's CM ratio is increasing more than the sales increases. BEP of the company has decreased and its main reason is due to increase in CM ratio and fluctuation in fixed cost. As the higher BE sales, the business of the company is in high operating risk, and so further investment in this condition is not safe. The "what- if" analysis shows that the changes in either sales 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 negative so a percentage decrease in sales can lead to the company to collapse but company is able to recovered that and able to maintained positive MOS which shows that actual sales is higher that BEP sales . The fixed cost of the company is rapidly increasing however, the management of the Hotel failed to control the fixed cost to survive in long run. The company's aim seems to cover the market share rather than to obtain reasonable profit and cost management. The profitability of maximizing the sales is not more possible under this circumstance unless management has revised their cost during decision making process while considering risk calculation for achieving objective.

The company has unfavorable variance between budgeted sales and actual sales. In some case budgeted sales found lower than actual sales and vice versa. This shows that the sales plans are not made on realistic basis. There is no systematic and scientific sales plan.

Variable cost of the company is in fluctuating and increasing trend. The slope of variable cost is upward and downward irregularly.

The fixed cost of the company is also in fluctuating and increasing trend. Major portion of the fixed cost represents administrative expenses and others are interest, depreciation, deferred expenditure, employee's housing and bonus.

The company has no details of systematic expenses plan. The fixed, variable and mixed expenses plan is the necessary elements for profit planning and control.

Margin of Safety is negative only in fiscal year 2062/63 which indicates positive side of the company. Margin of safety is the sales from which the company can generate profit.

5.3 Recommendations

On the basis of the study of CVP analysis as a tool to measure effectiveness of PPC of Soaltee Hotel Limited, it seems necessary to make CVP analysis effective. Nepal is stepping towards globalization with membership of WTO. Nepalese companies should integrate with the global environment with best fit managerial strategies. As the competition is very high in the context of liberalization, every company should give attention on cost minimization rather than profit maximization. For this, CVP analysis tools can be great help. Thus, the following recommendations can be endorsed based on the finding of research study:

-) Cost planning and controlling should focus on the relationship between cost and benefits rather than incurring cost in order to heighten revenue.
-) Classification of cost into variable and fixed as well as controllable and no controllable should be made within specific framework of responsibility centre and time.
-) Expenses planning & controlling should focus on the relationship between expenditure and benefits derived from those expenditure.
-) Soaltee Hotel Limited should consider BEP analysis while preparing revenue plan, operation plan and setting price of its services.
-) Separate cost control department should be established for the effective management of cost.

-) As Soaltee Hotel Limited is service providing company, more emphasis should be given on reducing the variable cost ratio which means try to focus on cost- minimization.
-) The company must increase revenue in order to generate more profit, because high fixed cost can make a huge loss and also high operating risk.
-) New market channel should be identified for more profit.
-) Systematic and periodicals performance reports should be strictly followed to trace poor performance and take corrective action immediately and timely.
-) Profits, sales and costs should be analyzed by preparing budgeting or planning with actual performance within a periodic term such as monthly, quarterly, semi quarterly, half yearly, yearly etc. which will help to improve the profit planning and controlling of the company.
-) This can considerably contribute to increase in profitability of Soaltee Hotel Limited. All decision makers ought to be fully aware of and understand the cost structure of their operation; otherwise CVP analysis will provide meaningless information.
-) Company should add new scheme, facilities and services. Market studies on demand and pricing should be carried out and loss-oriented costs should be identified and controlled.
-) A systematic approach should be made toward comprehensive profit planning tool like CVP analysis. This can considerably contribute to the increase in profitability of Soaltee Hotel Limited.

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APPENDIX 1
PROFIT AND LOSS ACCOUNT
FOR THE YEAR ENDED ASHAD 32, 2067 (JULY 16, 2010)

Rs. In '000

Particulars	2067/66	2066/67
Sales	808940	711854
Consumption of food, Provisions and beverages	136386	110607
	-----	-----
Gross Profit	672554	601247
Other Income	49209	44421
	-----	-----
Total	511084	645668
Administrative and other expenses	460275	446360
Management fees	25034	21129
	-----	-----
Profit/(Loss) from operation	236454	178179
Interest	8789	12847
Depreciation	40699	40814
Exchange Gain/(Loss)	1194	(1780)
Dividend income	-	(4863)
Deferred expenditure	1236	1236
Profit/Loss on sale of Fixed Assets	(2547)	(203)
Employees' Housing	9354	6507
Bonus	16157	11239
	-----	-----
Profit/(Loss) after Taxation	161572	112390
Payment of account of prior year taxation	57883	23412
Balance of profits brought forward	163069	85168
	-----	-----
Profit available for appropriation	266758	174146
Appropriation	-----	-----
Proposed Dividend	19939	11077
Balance carried over to Balance Sheet	246819	163069

APPENDIX 2
Balance Sheet of Soaltee Hotel Company Limited
AS AT JULY 16, 2010 (ASHAD 32, 2067)

	As at July 16, 2010	(Rs. in Lakh) As at July 16, 2009
<u>CAPITAL AND LIABILITIES</u>		
Capital & Reserve		
Share Capital	11,48,01	9,56,68
Reserve & Retained Earning	<u>30,53,06</u>	<u>22,15,56</u>
	42,01,07	31,72,24
<u>Medium & Long Term Loan</u>		
Secure	<u>6,00,67</u>	<u>8,09,035</u>
Total	40,01,74	39,81,59
ASSETS		
Fixed Assets	429921	409171
Capital Work in Progress	66243	9799
Welfare tax asset	25810	17133
Movable assets	2974	4210
Investment	19967	19967
<u>CURRENT ASSETS, LOANS AND ADVANCES</u>		
Inventories	53995	43086
Sundry Debtors	134089	114013
Cash and Bank Balance	65764	41408
Prepaid, Advance, Loan & Deposits	<u>95397</u>	<u>48660</u>
	349245	267167
Less: Current Liabilities		
Current Liabilities	205931	208194
Proposed Dividend	19939	11077
Provision	<u>188116</u>	<u>110017</u>
	413986	329288
Net Current Asset	(64741)	(62121)
Total	<u>480174</u>	<u>398159</u>
Contingent Liabilities	<u>87768</u>	<u>26424</u>