

***A STUDY ON COST VOLUME PROFIT ANALYSIS OF HIMALAYAN
BANK LIMITED***

A THESIS

Submitted To

Office of the Dean

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Tribhuvan University

Submitted By

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In the Partial Fulfillment of the Requirement for the Degree of

Master of Business Studies (M.B.S.)

Kathmandu, Nepal

September, 2012

RECOMMENDATION

This is to certify that the Thesis
Submitted by

BISWAS SHRESTHA

Entitled:

***A STUDY ON COST VOLUME PROFIT ANALYSIS OF
HIMALAYAN BANK LIMITED***

*Has been prepared as approved by this Department in the prescribed format of
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And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the

Degree of Master's in Business studies (M.B.S.)

Viva-Voce Committee

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Member (Thesis Supervisor)

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DECLARATION

I, hereby, declare that the work reported in this thesis entitled “*A Study On Cost Volume Profit Analysis Of Himalayan Bank Limited*” submitted to office of the Dean, Faculty of Management, Tribhuvan University, is my original work done for the partial fulfillment of the requirement for the Masters of Business Studies (MBS) under the supervision of **Joginder Goet** of Shanker Dev Campus, Putalisadak, Kathmandu.

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TABLE OF CONTENTS

	Page No.
Recommendation	i
Viva–Voce Sheet	ii
Declaration	iii
Acknowledgement	iv
Table of Contents	v
List of Tables	ix
List of Figures	xi
Abbreviations	xii

CHAPTER - I

INTRODUCTION

1.1	Background of the Study	1
1.2	Profile of Himalayan Bank Limited	3
1.3	Statement of the Problem	5
1.4	Objective of the Study	5
1.5	Significance of the Study	6
1.6	Limitations of the Study	7
1.7	Organization of the Study	7

CHAPTER - II

REVIEW OF LITERATURE

2.1	Conceptual Framework	9
2.1.1	Cost Concept	9
2.1.2	Profit	11
2.1.3	Planning	12
2.1.4	Profit Planning	13
2.1.5	Process of Profit Planning	15
2.1.6	Cost Volume Profit Analysis	19
2.1.7	Use of CVP Analysis in Profit Planning	22
2.1.8	Applications of CVP Analysis	23

2.1.9	Approaches to CVP Analysis	24
2.1.9.1	Contribution Margin Approach	24
2.1.9.2	Cost and Revenue Equation Approach	25
2.1.9.3	Break Even Analysis	26
2.1.9.4	Margin of Safety	30
2.1.10	Sensitivity Analysis	31
2.1.11	Cost Structure	32
2.1.11.1	Variable Costs	32
2.1.11.2	Fixed Cost	33
2.1.11.3	Semi Variable Cost	34
2.2	Review of Journal and Articles	35
2.3	Review of Previous Research Work	38
2.4	Research Gap	42

CHAPTER - III

RESEARCH METHODOLOGY

3.1	Research Design	44
3.2	Population and Sample	45
3.3	Nature and Sources of Data	45
3.4	Method of Data Collection	46
3.5	Data Analysis Tools	46
3.5.1	Financial Ratios Analysis	46
3.5.1.1	Net Profit Margin	47
3.5.1.2	Return on Total Assets	47
3.5.1.3	Return on Equity	47
3.5.1.4	Operating Efficiency Ratio	48
3.5.2	Accounting Analysis	48
3.5.2.1	Contribution Margin	48
3.5.2.2	Profit Volume Ratio	53
3.5.2.3	Break Even Point	48
3.5.2.4	Break Even Ratio	49

3.5.2.5	Margin of Safety	49
3.5.2.6	Margin of Safety Ratio	49
3.5.3	Statistical Analysis	49
3.5.3.1	Arithmetic Mean or Average	49
3.5.3.2	Standard Deviation	50
3.5.3.3	Coefficient of Correlation	50
3.5.3.4	Least Square Linear Trend Analysis	51
3.5.3.5	Assessment of the Sample Correlation Coefficient	52
3.6	Data Analysis Technique	52
3.6.1	Tabular Presentation	52
3.6.2	Diagrammatic Representation	53
3.6.3	Graphical Presentation	53

CHAPTER - IV

PRESENTATION & ANALYSIS OF DATA

4.1	Analysis of Income of HBL	54
4.1.1	Income from Interest	54
4.1.2	Income from Commission and Discount	55
4.1.3	Sundry Income	56
4.1.4	FOREX Income/Loss	58
4.2	Analysis of Expenses of HBL	59
4.2.1	Interest Expenses	59
4.2.2	Personnel/Employee Expenses	60
4.2.3	Operating Expenses	61
4.3	Contribution Margin Analysis	65
4.4	Profit Volume Ratio	66
4.5	Break Even Point (BEP)	67
4.6	Margin of Safety (MOS)	68
4.7	Profitability Analysis of HBL	69
4.7.1	Net Profit Margin Ratio	70
4.7.2	Return on Total Assets Ratio	70

4.7.3	Return on Equity	71
4.7.4	Operating Efficiency Ratio	72
4.8	Correlation Analysis	72
4.8.1	Correlation between Total Cost & Profit	73
4.8.2	Correlation between Income & Profit	74
4.9	Trend Analysis	74
4.9.1	Trend Analysis of Income	75
4.9.2	Trend Analysis of Net Profit	76
4.10	Major Findings	78

CHAPTER - V

SUMMARY CONCLUSIONS & RECOMMENDATIONS

5.1	Summary	81
5.2	Conclusions	83
5.3	Recommendations	84

BIBLIOGRAPHY	85-87
---------------------	--------------

APPENDICES	88-92
-------------------	--------------

LIST OF TABLES

	Page No.
Table: 4.1: Item-wise Income from Interest	54
Table: 4.2: Item-wise Income from Discount and Commission	56
Table: 4.3: Sundry Income/ Other Operating Income	57
Table: 4.4: FOREX Income/Exchange Fluctuation Gain/Loss	58
Table: 4.5: Interest Expenses	59
Table: 4.6: Personnel Expenses	60
Table: 4.7: Operating Expenses	61
Table: 4.8: Income Statement of HBL	63
Table: 4.9: Contribution Margin	65
Table: 4.10: CM Ratio/PV Ratio	66
Table: 4.11: BEP Income	67
Table: 4.12: Margin of Safety	68
Table: 4.13: Net Profit Margin Ratio	70
Table: 4.14: Return on Total Assets Ratio	71
Table: 4.15: Return on Equity Ratio	71
Table: 4.16: Operating Efficiency Ratio	71
Table: 4.17: Relationship between Total Cost & Net Profit	73
Table: 4.18: Relationship between Income & Net Profit	74
Table: 4.19: Actual Value and Trend Value of Income	75
Table: 4.19: Actual Value and Trend Value of Net Profit	77

LIST OF FIGURES

	Page No.
Figure: 2.1: Graphic Approach of BEP Analysis	28
Figure: 2.2: Variable Costs	33
Figure: 2.3: Fixed Costs	34
Figure: 2.4: Semi Variable Cost	35
Figure: 4.1: Trend of Total Interest Income	55
Figure: 4.2: Trend of Total Interest Income	56
Figure: 4.3: Trend of Sundry Income	57
Figure: 4.4: Trend of FOREX Income/Exchange Fluctuation Gain/Loss	58
Figure: 4.5: Trend of Interest Expenses	59
Figure: 4.6: Trend of Personnel Expenses	61
Figure: 4.7: Trend of Operating Expenses	62
Figure: 4.8: Trend of Operating Profit & Net Profit	64
Figure: 4.9: Trend of Fixed Cost & Variable Cost	64
Figure: 4.10: Position of Income, VC & CM	65
Figure: 4.11: Trend of P/V Ratio	66
Figure: 4.12: Position of Total Income & BEP	67
Figure: 4.13: Trend of Margin of Safety	68
Figure: 4.14: Trend of BE Ratio and MOS Ratio	69
Figure: 4.15: Trend Line of Income	76
Figure: 4.16: Trend Line of Income	77

ABBREVIATIONS

%	Percentage
&	And
A. D	Anno Domini
A/C	Account
B. S.	Bikram Sambat
BEP	Break Even Point
C. V.	Coefficient of Variation
CM	Contribution Margin
CVP	Cost Volume Profit
F/Y	Fiscal Year
FC	Fixed Cost
GDP	Gross Domestic Product
HBL	Himalayan Bank
MBA	Masters' of Business Administration
MBS	Masters' of Business Studies
MOS	Margin of Safety
NP	Net Profit
NPMR	Net Profit Margin ratio
P/V	Profit Volume
PPC	Profit Planning and Control
ROE	Return on Equity
ROI	Return on Investment
ROTA	Return on Total Assets
S.D	Standard Deviation
SDC	Shankar Dev Campus
VC	Variable Cost

CHAPTER – I

INTRODUCTION

1.1 Background of the Study

The growth of banking in Nepal is not so long in comparison with other developed or developing countries. Nepal had to wait for long time to come to the present banking system. The development of any country cannot be imagined without economic activities. The development of the banking system is one of the grounds for economic development so we should take a bank as strong means for economic development. The development of the bank is interwoven with the development of a person a society and a nation. It is impossible to fulfill the needs without bank whether it is inside the nation or in foreign country whether it is individual development or business and whether it is the people or the government. Therefore, to solve the problem relating to economic development of banking system is necessary.

Banks launched its operations with marketing concept i.e. customer is the king of the market they started knocking the doors of the customer. A customer is the most important visitor on our premises. He does not depend on us. We are dependent on our business. He is a part of it. We are doing him a favor by serving him. He is doing us a favor by giving us an opportunity to do so.

Profit planning involves two aspects; profit and planning. Profit is the primary objective of business. It is necessary for survival and growth of any business entity but profit does not just happen or improve. They are managed. Profit is the primary measurement of business success in any economy, if firm is not able to earn profit than it fails to hold the capital for long period. When business firm can not hold capital, it can not secure and retain other sources, such as manpower, materials and machine etc. In other words the more profitable firms/enterprises are more attractive to the holders of the available capital. These firms can attract capital,

which they need to buy the other resources. Here key is that capital and other resources are scarce they are allocated to the profit makers in roughly descending order of their profit potential.

There are several different interpretations of the term 'profit'. According to an economist, profit is the reward for entrepreneurship for risk taking. Leader of labor might say that profit is a measure of how efficiently labor has produced and that it provides a base for negotiation a wage increase. An investor will view it as a gauge of the return on his/her money. An internal revenue agent might regard it as a base for determining income taxes. An accountant will explain it simply as the excess of firm's revenue over expenditure of producing revenue in a given fiscal year.

Similarly Planning is the first essence of management and all other functions are performed with in the framework of planning, planning means deciding in advance what is to be done in future? Planning starts from forecasting and predetermination of future event. Planning is the whole concept of any business organization. No firm can achieve its predetermined goal and objectives in the absence of proper plan. Hence, it is life blood of any organization which makes efficiently run towards the competitive environment. It is a method of thinking out acts beforehand. Planning is the foundation of profit realization and a plan is a projected course of action. Management is the process of planning, organizing, directing, decision- making and controlling. In modern day profit planning is taken as an important technique of decision-making. It is also regarded as a way of management and is given the name profit planning programmers; profit planning is a part of overall planning process of an organization.

Cost volume profit analysis serves as a powerful tool in the hands of management for profit planning. The systematic relationship between cost volume and profit is shown by cost volume and profit analysis. It is analytical tool for analyzing the relationship among cost, profit and sales or production volume. Mainly there are three elements: cost, sales volume and profit in CVP analysis.

Cost volume profit (CVP) analysis examines behavior of total revenues, total costs, and operating income as charges occur in the output level, the selling price, the variable cost per unit, and the fixed costs of a product. Cost volume profit analysis is a systematic method of examining the relationship between changes in activity and changes in total sales revenue, expenses and net profit. As a model of these relationships, CVP analysis simplifies the real-world conditions that a firm will face.

Cost Volume profit analysis is a management accounting tool to show the function of the selling price of product, demand, variable costs, fixed costs, taxes, etc. The whole picture of profit planning is associated with cost volume profit is and costs in relation to sales at which the firm's revenues and total costs will be exactly equal or the net income will be zero.

Cost-volume-profit analysis is a systematic method of examining the relationship between changes in activity (i.e. output) and changes in total sales revenue, expenses and net profit. As a model of these relationships CVP analysis simplifies the real-world conditions that a firm will face. CVP analysis is a management accounting tool to show the relationship between the elements of profit planning. Profit planning is the function of the selling price of product, demands variable costs, fixed cost, taxes etc. The whole picture of profit planning is associated with cost-volume-profit interrelationships. A popular technique to study cost- volume-profit relationship is break even analysis. Break-even analysis is concerned with the study of revenues and costs in relation to sales at which the firm's revenues and total costs will be exactly equal or the net income will be zero. It is a "no profit no loss" situation. This point is a corner-stone of profit planning.

1.2 Profile of Himalayan Bank Limited

Himalayan Bank was established in 2049 B.S. by a few distinguished business personalities of Nepal in partnership with Employees provident fund and Habib Bank Limited, one of the largest commercial bank of Pakistan. It is the first bank

of Nepal whose maximum shares are hold by the Nepalese private sector. Besides commercial banking services, the bank also offers industrial and merchant banking services. Bank was established with authorized capital Rs. 120 million, issued capital Rs.60 million and paid up capital Rs.30 million. In which, Nepali founder invested 51% share. Habib Bank of Pakistan invested 20% share. Employee provident fund invested 14% shares and remaining 15 % shares issued for public. With its head and corporate office at Thamel, Kathmandu, the bank has 33 branches. Thirteen of its branches are located inside the Kathmandu Valley while the rest are spread across the nation (Please note that Kathmandu Valley comprises Kathmandu, lalitpur and Bhaktapur Districts. Besides, a branch looking exclusively at electronic cards and related products, is based in Patan, Lalitpur.

HBL has always been committed to providing a quality service to its valued customers' will a personal touch. All customers are treated with at most courtesy as valued clients. The Bank, wherever possible, offers tailor made facilities to its clients, based on the unique needs and requirements of different clients. To further extend the reliable and efficient services to its valued customers, HBL has adopted the latest banking technology. This has not only helped the bank to constantly improve its service level but has also prepared the bank for future adaptation to new technology. The Bank already to customers and will be introducing more services like these in the near future.

HBL is committed to be a Bank where "The power to Lead."

Mission of the HBL is to become the preferred provider of financial service in the country. Vision of the bank is to become a leading bank of the country by providing premium product and service and then ensuring attractive and substantial return for the stakeholders. An objective of the bank is to become the bank of first choice.

1.3 Statement of the Problem

Cost- volume profit analysis is a vital technique that provides supplementary information for profit planning. Industry and agriculture need of the country are crucial importance for Nepal. It can be visualized that the banking development in Nepal is got in its impact stage. So we have to go still a long way to developing and applying the break even analysis, we have assumed that all cost can be classified into fixed and variable, components. If one fails to identify the cost as fixed and variable, the application of cost volume profit analysis becomes almost impossible. The present study will try to analyze and examine the profitable, break even profit liquidity and debt management in this bank. Without prepare cost volume analysis of any business cannot run in right way. They cannot achieve their objectives. In this study, following issues are to be deal for the purpose of this study.

- Is HBL practicing CVP analysis tools and techniques to carryout planning, decision-making and controlling?
- What are the major difficulties in applying CVP tools?
- In which area do banks apply CVP analysis?
- Which part of CVP (BEP, MOS, CM) is mostly Practiced?
- How are the profit planning is associated with cost volume profit interrelation?

1.4 Objective of study

The major objective of present study is to highlight the cost volume profit analysis and its effectiveness in HBL. The present research will try to fulfill the following objectives.

- To analyze cost-volume-profit trend of HBL.
- To analyze the financial position of HBL.
- To study the present application of CVP analysis in HBL.

- To analyze the CVP and its impact in profitability of HBL.
- To provide appropriate suggestions.

1.5 Significance of the Study

Cost-volume-profit analysis is regarded as the life analysis is regarded as the life blood for any enterprise because it is needed for sustaining the enterprise in day operation. If the business cannot maintain cost-volume profit analysis, it is likely to become insolvent and may even push into bankruptcy. Goal of cost-volume-profit analysis manage the cost and profit of business. Survey indicates that the largest portion of most accounting manager time is devoted to the day to internal operations of the day to which fall under the heading of cost-volume-profit analysis. Very few studies have been performed on the accounting performance of HBL. Different researchers have written their dissertations on cost-volume-profit analysis, however almost all of them are related to accounting sectors and does not address the real situation of service sector public enterprises like HBL. It is thus clear that no. full-fledged academic research study on cost-volume-profit analysis of HBL has been carried out. The present study, therefore, bridges this long felt gap in the field or research. This is only a beginning and it could be further developed continued research in this field.

- This study will be useful for potential managers, accountant, policy maker and planners
- It examines the application of CVP analysis in the company.
- It provides information on the application of the tools under profit planning in difference circumstantiate.
- This study provides necessary recommendation to the related department of the company.
- It will also provide the literature to the researcher, who wants to carry on further research in this field.

1.6 Limitations of the Study

Although there are several commercial banks in Nepal but the study has been confined to Himalayan Bank Limited. Only the main limitation of the study is as follows.

- The study concerns the analysis of only 5 years data from 2063/064 to 2067/068.
- The study is only concentrated in cost volume profit analysis and its accounting performance of the HBL.
- The study is based on secondary data. Therefore, the accuracy of the result depends on the accuracy of the data provided by the HBL.
- The Study follows limited tools such as correlation of coefficient, break-even point and profit planning.

1.7 Organization of the study

The whole study is divided into five main chapters.

Chapter I: Introduction

It includes general background of the study, introduction of the organization, statement of the problem, objective of the study, significance of the study, limitations of the study and organization of the study.

Chapter II: Conceptual Framework & Review of Literature

This chapter presents conceptual framework, review of related material like previous thesis, browser, booklets, journals, articles and report, magazines etc. will be done.

Chapter III: Research Methodology

This chapter deals with research methodology to be adopted for the study to satisfy the objectives of the study. It consists of introduction, research design, sample and population, sources of data, data collection procedure, methods and tools of data analysis.

Chapter IV: Presentation and Analysis of Data

This chapter is most important and plays vital role in this study. This chapter deals with presentation, analysis and interpretation of data as required by the objectives stated in this study. These collected data have been analyzed and interpreted by the help of various statistical and accounting tools and techniques.

Chapter V: Summary, Conclusions and Recommendations

This chapter presents of the brief summary of whole research report and conclusions. It's also provides some useful suggestion and recommendations to concerned parties.

Similarly, at the front part of the study table of contents, recommendation sheet, viva voice sheet, acknowledgement, list of table and figure and abbreviation are presented and bibliography and appendices are presented at the end of the study.

CHAPTER – II

CONCEPTUAL FRAMEWORK & REVIEW OF LITERATURE

In order to make a research on the subject some other literature should also be reviewed. Review of the literature is supported to revise the eminent literature related to the study. Main purpose of literature review is to find out the works done in the subject on the areas of research. Some possible study and conceptual prospective available in this respect have been reviewed. Various books, articles, journals, bulletins, reports, news statement, research study published by various institutions and some thesis etc. are the bases for preparing it. Some philosophers, writers or researchers have given the contribution for preparing it.

2.1 Conceptual Framework

2.1.1 Cost Concept

2.2 Review of Books

2.3 Review of Previous Research Work

2.4 Research Gap

Most of the past research studies about profit planning or CVP Analysis basically related with any manufacturing company or industries. It is hardly done in the field of banking sector. The research could find very few numbers of studies related to commercial bank i.e. Himalayan Bank Ltd. Such study pointed out still CVP is not practiced and recommend implementing effectively for profit planning. Some research was done on CVP analysis as an important tool of PPC relating to HBL. Some dissertation focused on PPC of commercial banks would be found but in different faculty.

This study shall be a new one in its field as no study has been done so far particularly in Himalayan Bank Ltd. This study has tried to indicate the role of CVP analysis & its effectiveness for making profit. This study shows the financial position of Himalayan Bank Ltd. Now a day, various banks are practicing CVP to measure profit and to measure competitiveness and performance in the time of globalization. So, this study have played important role to fulfill the gap between previous studies. It shows how CVP analysis is important tool of PPC to improve the performance of bank.

CHAPTER - III

RESEARCH METHODOLOGY

Research is the process of a systematic and in-depth study or search of any particular topic, subject or area of investigation backed by the collection, compilation, presentation and interpretation of the relevant details or data. It is a careful search or inquiry into any subject matter, which is an endeavourer to discover or find out valuable facts, which will be use full for further application or utilization. The research that involves the discovery of new techniques, a modification of old concepts or a knocking off an existing theories, concepts and techniques. It may develop a hypothesis and test it by establishing relationship between different variables and identify the means for problem solving.

Research methodology is a systematic way to solve the research problem. In other words research methodology describes the methods and process applied in the entire aspect of the study. It may be understand as a science of studying how research is dines scientifically. It help to analyze, examine and interpret various aspects of research works such as sales, cost and other aspects of CVP analysis, related to effective tools of profit planning. The objective of this study will be to analyze the CVP analysis of HBL and thereby forward some measures to improve the situation.

3.1 Research Design

Research design means defining procedures and techniques which guide to study and propound ways for research work. It is an analytical as well as descriptive approach to achieve the objectives. It is the arrangement of condition for collection and analysis of data relevance to the study purpose with economy in procedure. In order to make type of research, this fulfills the objectives of the study.

The research design is an organized approach and not a collection of loose unrelated parts. It is an integrated system that guides the researcher in formatting,

implementing and controlling the study. Useful research design can product the answers to the proposed research questions. The research design is thus an integrated frame that guides the researcher in planning and executing the research works.

Data and information are the lifeblood or major portion of any study. This study would be attempted to show the relationship among cost, volume, profit and various functional budgets for solving the problems that has accrued in HBL. Cost-volume and profit analysis of HBL is presented and analyzed by descriptive research design and analytical method. A study design is the arrangement of the conditions for collection and analyze of data in manner that aims to combine relevance to the study purpose with the economy in producer. These studies will an intensive based on analysis of the past financial performance. To fulfill the objective of the study mainly secondary data will be used and study design will be descriptive as well as analytical.

3.2 Population and Sample

There are 32 commercial banks in Nepal according to NRB. Out of these, HBL is selected to CVP analyze. The annual financial report is the population of the study. It is quite difficult to adopt the whole population in this study, sample of the 5 years financial statements are take for the study. The sample of the study comprises financial statement, balance sheet and profit & loss a/c of HBL.

3.3 Nature and Source of Data

For the purpose of this study, data are collected mainly from the secondary source. The secondary data are based on the second hand information. Secondary data were gathered much more quickly than primary. Secondary source are bulletins and newspapers of selected banks, annual reports, official document, reference material collected from library.

3.4 Method of Data Collection

It indicates the sources of data and how they collected. In this study data are collected through published sources. They were collected from the correspondent offices and their respective websites. The annual reports of HBL, NRB publications, the data regarding the profile of HBL and other related documents were collected from internet websites. Unpublished master's thesis, books, research papers, articles, journals have been collected mainly from Centre Library of Tribhuvan university, library of Shanker Dev Campus and NRB Magazines and newspapers were from concerned authorities.

After collecting data, as necessarily required, they were separated and analyzed presentation and analysis of the collected data is the main theme of the research work. Collected data were first presented in systematic manner in tabular forms and then analyzed by applying different accounting, financial and statistical tools to achieve the research objectives. Besides these, some graph, charts and tables have been presented to analyze and interpret the finding of the study.

3.5 Data Analysis Tools

Various accounting, financial and statistical tools will be used to complete the research study such as breakeven point, profit volume ratio, margin of safety, ratio analysis, coefficient of correlation and hypothesis for presentation purpose, different types of tables, charts, figures and graphs are used as per necessary.

3.5.1 Financial Ratios Analysis

Financial analysis is the process of identifying the financial strengths and weaknesses of the organization by properly establishing relationships between the items of the balance sheet and the profit and loss account. Ratio analysis is a powerful tool of financial analysis. A ratio is designed as “the indicated quotient of two mathematical expressions” and as “the relationship between two or more things”. In financial analysis, ratio is used as a benchmark for evaluating the

financial position and performance of a firm. Several ratios, calculated from the accounting data, can be grouped into various classes according to the financial activity and function to be evaluated.

3.5.1.1 Net Profit Margin: - The ratio signifies the effectiveness of expenses management and cost control and gives the direction to the management for service pricing policies. It means how much of total revenue has been declared as net profit after all the charges are over up. The higher ratio means the management has been able to control its operational costs and maintain efficiency.

$$\text{Net Profit Margin} = \frac{\text{Net Profit After Tax}}{\text{Total Operating Income}}$$

3.5.1.2 Return on Total Assets (ROTA):- The ratio is a primary indicator of managerial efficiency. It indicates how efficiently the assets were utilized by the bank. The ratio measures how far the management has utilized all the assets of the bank for profit generating activities. Higher ROTA indicates higher efficiency in the utilization of the total assets and vice versa.

$$\text{Return on Total Assets (ROTA)} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

3.5.1.3 Return on Equity (ROE):- Equity refers to the owner's claim of a bank. The excess amount of total asset over outsiders liabilities is known as shareholder's equity. It is also known as net worth. This ratio measure how prudently the management has employed shareholder's fund keeping the interest of shareholders and maximize their net worth. It is the measurement of the rate of return available to the bank's shareholders. The ratio provides the company to deliver a good return on equity. This ratio is calculated by dividing net profit by total equity capital.

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit After Tax}}{\text{Shareholder Equity}}$$

3.5.1.4 Operating Efficiency Ratio: - To maximize profitability and the value of the shareholder's investments in the bank, bank management must maintain efficiency in their operations. This usually means reducing their operating expenses and increasing the productivity of their employees. Since banks are to pay huge amount of the interest costs for their funds, they like to reduce non-interest costs especially, staff costs, wages and overhead costs. Lower the ratio means greater the success of management.

$$\text{Operating Efficiency Ratio} = \frac{\text{Total Operating Expenses}}{\text{Total Operating Income}}$$

3.5.2 Accounting Analysis

3.5.2.1 Contribution Margin: - The difference between production amount and variable cost is known as the contribution margin. In other words, fixed cost plus the amount of profit is equivalent to contribution margin. Contribution margin can be expressed by

$$\text{Contribution margin} = \text{production volume (Sales)} - \text{variable cost}$$

3.5.2.2 Profit Volume Ratio: - It establishes a relationship between the contribution and production volume. The factors profit and volume are interconnected and dependent with each other. Profit depends upon contribution margin and production. It can be expressed by;

$$\text{Profit volume ratio} = \frac{\text{Contribution Margin}}{\text{Production or Sales}}$$

3.5.2.3 Break Even Point:- The point which breaks the total costs and selling price evenly to show the level of output or production, at which there shall be neither profit nor loss, is regarded as break-even point. Through contribution margin approach, break-even point can be expressed by;

$$\text{Break even point in Rs.} = \frac{\text{Fixed Cost}}{\text{PV Ratio}}$$

3.5.2.4 Break Even Ratio: - Total sales revenue consists two parts: Break even sales and Margin of Safety. The proportion of Break even sales is BE Ratio.

$$\text{Actual Sales} = \text{Break Even Sales} + \text{Margin of Safety}$$

$$\text{BE Ratio} = \frac{\text{BE Sales}}{\text{Actual Sales}}$$

3.5.2.5 Margin of Safety (MOS): - It is the difference between the actual sales revenue and the break even sales revenue. It can be expressed by;

$$\text{Margin of Safety} = \text{Actual Production} - \text{Break Even Production}$$

3.5.2.6 Margin of Safety Ratio: - The proportion of Margin of Safety sales is MOS Ratio. The contribution margin obtained from Margin of safety is operating profit for company. MOS Ratio shows the part of profit earning sales volume of the company.

$$\text{MOS Ratio} = \frac{\text{MOS Sales}}{\text{Actual Sales}}$$

3.5.3 Statistical Analysis

Statistical tools are used to analyze the relationship between two or more variables and to find how these variables are related. In this study, following statistical tools are used.

3.5.3.1 Arithmetic Mean or Average: - The mean or average value is a single value within the range of the data that is used to represent all the values in the series. Since an average is somewhere within the range of the data, it is also called a measure of central value. It is calculated by;

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

Where,

\bar{X}	=	Arithmetic Mean
$\sum X$	=	Sum of values of all items, and,
N	=	Number of items

3.5.3.2 Standard Deviation: - The standard deviation is the measure that is most often used to describe variability in data distributions. It can be thought of as a rough measure of the average amount by which observations deviate on either side of the mean. Denoted by Greek letter's (read as sigma), standard deviation is extremely useful for judging the representatives of the mean. Standard deviation is calculated as;

$$\text{Standard deviation}(\sigma) = \sqrt{\frac{\sum(X-\bar{x})^2}{N}}$$

Where,

σ	=	Standard deviation
$\sum(X - \bar{x})^2$	=	Sum of squares of the deviations measured from arithmetic average.
N	=	Number of items

3.5.3.3 Coefficient of Correlation: - Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between two sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always lying between +1 and -1. The formula for the calculation of coefficient of correlation between X and Y is given below.

$$r = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

Where,

$$\begin{aligned} r &= \text{Correlation coefficient} \\ \sum x_1 &= X_1 - \bar{X}_1 \\ \sum x_2 &= X_2 - \bar{X}_2 \end{aligned}$$

Under this topic, Karl Pearson's correlation coefficient is used to measure the degree of relationship between the following variables.

The interpretation of calculated value of correlation coefficient by following way.

- If $r = 0$, then there is no correlation between variables.
- If $r > 0$, then there is positive correlation between variables.
- If $r < 0$, then there is negative relation between variables.
- If $r = +1$, then there is perfect positive correlation.
- If $r = -1$, then there is perfect negative correlation.

3.5.3.4 Least Square Linear Trend Analysis: - Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly. The future trend is forecasted by using the following formula.

$$Y = a + bx$$

Where,

Y = the dependent variable

a = the origin i. e. arithmetic mean

b = the slope coefficient i. e. rate of change

X = the independent variable

3.5.3.5 Assessment of the Sample Correlation Coefficient: - For this study, t-test for significance of an observed and sample correlation coefficient is used.

Set up Hypothesis

Null hypothesis (H_0); $\rho = 0$ i.e. There is no correlation between the considered variables.

Alternative Hypothesis (H_1); $\rho \neq 0$ i.e. There is significant correlation between the considered variables.

Test statistic under H_0 ;

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

Where,

r = Sample correlation between two variables

r^2 = Sample correlation Coefficient

n = No of Pair of observations

Level of significance: Level of significance $\alpha = 5\%$

Critical Value: Tabulated or critical value of t at α % level of significance for (n - 2) degree of freedom obtain from 't' tables.

Decision: If calculated 't' is less than or equal to tabulated value of 't' it falls in the accepted region and the null hypothesis is accepted and if calculated 't' is greater than tabulated 't' null hypothesis is rejected.

3.6 Data Analysis Technique

3.6.1 Tabular Presentation: - Tabular presentation is used to summarize the raw data in a compact form so as to facilitate behavior overall situation of the capital market. The tabular presentation has provided a basis for further analysis and interpretation of the collected data from primary and secondary sources.

3.6.2 Diagrammatic Representation: - The diagrammatic presentation is used in certain portion of the study where the other forms of statistical analysis are unable to present better interpretation. The simple pie chart is used for the purpose of diagrammatic representation in the study in order to project the relationship between the variables under study.

3.6.3 Graphical Presentation: - As it is said that the wandering of a line is more powerful in its effect on the mind than a tabulated statement; graphical presentation tool is also utilized for representing statistical facts and information. It is also utilized where the nature of data is such that it represents the trend of occurrence over the period of time. It is also applied to the situation where large mass of data is to be dealt with proper degree of accuracy.

CHAPTER - IV

PRESENTATION AND ANALYSIS OF DATA

This chapter deals with the presentation, analysis and interpretation of relevant data and information of planning system and budgeting procedure in a commercial bank with the specific context of Himalayan Bank Ltd. To accomplish these objectives, the various functional budgets analyze and related data are presented in a systematic way in tabular forms and graph charts. The main purpose of analyzing the data is to change it from an unprocessed form to an understandable presentation. The analysis of data consists of organizing, tabulating and performing statistical analysis (Wolff & Pant, 2004: 64).

4.1 Analysis of Income of HBL

4.1.1 Income from Interest

4.1.2 Income from Commission and Discount

4.1.3 Sundry Income

4.1.4 FOREX Income/Loss

4.2 Analysis of Expenses of HBL

4.2.1 Interest Expenses

4.2.2 Personnel/Employee Expenses

4.2.3 Operating Expenses

4.3 Contribution Margin Analysis

4.4 Profit Volume Ratio (PV Ratio)

4.5 Break Even Point (BEP)

4.6 Margin of Safety (MOS)

4.7 Profitability Analysis of HBL

4.7.1 Net Profit Margin Ratio (NPMR)

4.7.2 Return on Total Assets Ratio

4.7.3 Return on Equity (ROE)

4.7.4 Operating Efficiency Ratio

4.8 Correlation Analysis

4.8.1 Correlation between Total Cost & Profit

4.8.2 Correlation between Income & Profit

4.9 Trend Analysis

4.9.1 Trend Analysis of Income

4.9.2 Trend Analysis of Net Profit

4.10 Major Findings

- The total income from interest is Rs. 1775.63 in FY 063/64, Rs.1963.68 in FY 064/65, Rs.2342.21 in FY 065/66, Rs. 3148.61 in FY 066/67 and Rs. 4318.13 in FY 2067/068.
- The total income from discount and commission are 192.23, 202.89, 284.31, 270.26 and 350.35 million for the FY 2063/064, 2064/065, 2065/066, 2066/067 and 2067/068 respectively.
- The sundry income in FY 063/64 is Rs. 40.34 million the next year 064/65 it increase to Rs 62.11 and again it decreases in 065/66 to Rs 46.34 then

066/67 increase to Rs. 112.34 and in the FY 2067/068 it is increase to Rs. 120.51.

- Forex gain is in fluctuating trend. In the FY 063/64, it is Rs.151.64 and in the FY 064/65 it is decrease to Rs192.6.64. In the FY 065/66 it is increase Rs. 249.98 and in the FY 066/67 it is decrease to Rs 249.98 and in the FY 067/68 it is increase to Rs. 195.52.
- The total interest expenses are in increasing trend. In the FY 063/64, it is Rs. 767.41 in FY 064/65 Rs 823.74, in FY 065/66, it is Rs. 934.78, in 066/67, it is increase Rs1553.53 and in the FY 2067/068, it is Rs. 2424.8 million.
- Personnel expense is in increasing trend every year. It shows that the expenses is Rs. 273.47, 307.54, 360.98, 414.99 and 517.56 million in the fiscal year 2063/064, 2064/065, 2065/066, 2066/067 and 2067/068 respectively.
- Operating expenses are in increasing trend every year. The expenses are Rs. 341.56. 344.82, 398.32, 471.10 and 582.21 for the fiscal year 2063/064, 2064/065, 2065/066, 2066/067 and 2067/068 respectively.
- All the variables of income statement like operating income, variable cost, fixed cost, operating profit and net profit are in increasing trend.
- The contribution margin of the FY 063/64 , 064/65, 065/66, 066/67 & 2067/68 is Rs. 1106.24, 1237.7, 1531.52, 1694.24 and 2051.95 million respectively.
- Margin of safety are increasing they are Rs. 1045.78, 1236.31, 1595.89, 2043 and 2648.12 million for the year 2063/064, 2064/065, 2065/ 066, 2066/067 and 2067/068 respectively.

- The net profit margin ratios are in fluctuating trend over the study period. The average ratio is 23.39 % and the standard deviation is 6.26%.
- The average return on total assets ratio is 1.65% and the standard deviation is 0.31%. The ratio is increasing trend except the fiscal year 2066/067.
- Return on equity ratios are in decreasing trend except the fiscal year 2064/065. The average ratio is 21.90% and the standard deviation is 4.13% respectively.
- Operating ratios of the company is decreasing up to the fiscal year 2065/066 after that it is increasing. The average ratio of the bank is 69.52% and the standard deviation is 3.967%.
- Correlation analysis shows that the positive relationship between total cost and net profit. The coefficient of determination shows that 40.20% of the variation in the dependent variable (i.e. net profit) is explained by the independent variable (i.e. total cost). There is insignificant relationship between the total cost and net profit.
- There is positive correlation between income and net profit. The value of coefficient of determination shows that 41.41% of the total variation in dependent variable (Net Profit) is explained by independent variable (Income). The relationship between income and net profit is insignificant.
- The trend line of income of HBL is increasing with time it shows that the income increasing by Rs. 3297.58 million every year.
- The trend line of net profit of HBL is increasing with time it shows that the net profit increasing by Rs. 67.94 million every year.

CHAPTER- V

SUMMARY, CONCLUSIONS & RECOMMENDATIONS

This is the final chapter of this thesis, which has been divided into summary, conclusion and recommendations. In this chapter, we examine the processed data to come into new concluding upon the CVP analysis of Himalayan Bank Ltd. It also aims to give forth some suggestion that must be helpful for further enhancement of the operation of Himalayan Bank Limited.

5.1 Summary

Every business organization set up with certain objective of providing services to people and earns profit as income whether that is productive or non- productive. But it is not a joke to fulfill that objective easily in this competitive world of business. As globalization take place it became tougher to sustain in market. So, they not only just try and see the result also do hard work and provide many facilities to secure from loss. Hence they need to think about future course of action in such a way so hat they can accomplish their business objectives. In order to make profit it is necessary to check business capacity, activities, utilization of resources and if there is any part to reduce cast because little reduction in expenses can make profit in income. Hence, profit planning tools helps to assist in analyzing the situation. Therefore, proper planning & controlling is important to survive & lead the company successfully. Organization cannot achieve its goal without proper planning and implementation. People invest huge amount of money in the business to earn profit. But future is uncertain that creates risk. Therefore, it is necessary to make good management to reduce such risk. For this various management tools can be utilized. CVP analysis is one of the tool to analyze the technique for examining the relationship between change in activity, change in total income revenue, expenses & net profit which helps to manage future cost & profit. CVP analysis is the powerful & helpful tool for managerial decision making, cost control & profit planning. Profit is primary a measuring rod of

success of business enterprises. It is a basic test of the performance of any business concern. CVP analysis is one of the tool uses in organization for analyzing profit. CVP analyzing is a way of quick answer a number of important questions about profitability of a bank's service. Profitability is a deviation of the term profit, which explains the ability to make a profit. The main objective of this study is to examine the practice of CVP analysis and its effectiveness in commercial bank. Himalayan Bank Ltd represent as one of the commercial bank leading in the country. In this study mostly secondary data have been used & informal conversation for other information. The data are tabulated whenever necessary.

Profit planning of the companies and firms has become very important and necessary tools for both deficit and surplus units of the growing financial markets of our country Nepal. So, profit plan is the lifeblood of every organization, which not only keeps it alive but also assures the future and creates the soundness on it. PPC means the development of objectives, which motivates the organization to achieve the objectives effectively and efficiently. It is one of the most important mechanisms for planning and controlling business operations. The effective operation of a business concern resulting into the excess of income over the expenditure fully depends upon as to what extent the management follows proper planning, effective coordination and dynamic control.

The main objective of the present research is to examine the use of cost-volume-profit analysis to plan the profit. So, this study is undertaken to evaluate CVP analysis of the company. As per the nature of the study, the secondary data have been used. This study covers 5 fiscal years data from FY 2063/63 to 2067/68. This study is divided into five chapters, which consist (1). Introduction (2) Conceptual framework & literature Review (3) Research & Methodology (4) Presentation & Analysis of Data and (5) Summary, Conclusions & Recommendations.

5.2 Conclusions

Management can effectively achieve organizational objectives through the efficient use of scarce available resources in a changing environment of business. Future is uncertain which creates risk and only the good management can reduce it. CVP analysis is an analytical technique for studying the relationship between volume, costs and profit which helps manage future costs and profit. Profit planning is management technique and it is a written plan in all aspect of business operation for definite future period. CVP analysis is a technique used to determine the usefulness and effectiveness of profit planning process of the organization. In fact, the entire field of profit of profit planning has become associated with the CVP inter relationship.

On the basis of different analysis the following conclusion has been derived.

- CVP analysis has not practiced yet.
- Costs are not segregated into fixed & variable.
- HBL has been successful in mobilizing their total assets on loans and advances for the purpose of income generation.
- HBL is successful to mobilize its total assets on purchase of shares & debentures of other companies to generate incomes
- All the level of management is not involved in profit planning & decision making.
- MOS is very higher than BEP income. It means well performance of Bank.
- Income from interest is in increasing trend.
- Sundry income is also increasing each year.
- Interest expenses are also increasing each year.
- Net profit increases every year i.e. It is profit making bank.

5.3 Recommendations

Nepal has become the member of WTO. Hence, globalization in market takes place. Competitions become tough for each other various international banks set up their branches that create competitions & need to provide high quality service to people to sustain in the market. Application of CVP analysis with advanced profit planning and control tools can help to achieve bank goal in strong competition. Based on the major findings of the study following recommendations suggest to improve the management of the bank.

- Cost should be segregated into fixed and variable.
- All level of management team should be involved in profit planning and decision making.
- CVP analysis should be practiced.
- BEP analysis should be done while planning.
- Himalayan Bank Ltd should recruit skilled manpower and provide equal opportunity to every people, not based on relationship of staff.
- Himalayan Bank Ltd should invest in research and development to carry new technology and invent new product.
- Himalayan Bank Ltd should reduce its service charge.
- Himalayan Bank Ltd should increase interest rate providing in deposits to lure people.
- This study carries a lot of limitation. So, a more comprehensive study need to be carried from the concerned authorities and the further researches to reach a more authentic conclusion depicting the picture of the banks.

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www.pksal.com

Appendix – I

Calculation for Mean Value, & Correlation between Total Cost & Net Profit of HBL

Year	TC (X ₁)	NP (X ₂)	x ₁ =X ₁ - \bar{x}_1	x ₂ =X ₂ - \bar{x}_2	x ₁ · x ₂	x ₁ ²	x ₂ ²
2063/064	1381.2	491.84	-710.13	-165.05	117205.87	504287.46	27240.84
2064/065	1460.28	635.88	-631.05	-21.01	13257.14	398226.63	441.34
2065/066	1694.07	752.84	-397.26	95.95	-38118.08	157817.10	9206.79
2066/067	2406.51	508.77	315.18	-148.12	-46683.54	99337.17	21938.94
2067/068	3514.6	895.11	1423.27	238.22	339053.75	2025691.80	56749.72
N₁ = 5	∑ X₁	∑ X₂			∑ x₁·x₂ =	∑ x₁²=	∑ x₂²=
N₂ = 5	=10456.66	=3284.44			384715.14	3185360.15	115577.63

For Total Cost,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{10456.66}{5} = 2091.33$$

For Net Profit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{3284.44}{5} = 656.89$$

Correlation between Total Cost & Net Profit,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{384715.14}{\sqrt{3185360.15 \times 115577.63}} = 0.634$$

$$r^2 = 0.634^2 = 0.402 \text{ Or, } 40.2\%$$

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{0.634}{\sqrt{1-0.634^2}} \times \sqrt{5-2} = 1.42$$

Appendix – II

Calculation for Mean Value, & Correlation between Income or Total Revenue & Net Profit of HBL

Year	Income (X ₁)	NP (X ₂)	x ₁ =X ₁ - \bar{x}_1	x ₂ =X ₂ - \bar{x}_2	x ₁ · x ₂	x ₁ ²	x ₂ ²
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2063/064	33519.1	491.84	-6176.50	-165.05	1019418.97	38149152.25	27240.84
2064/065	36175.5	635.88	-3520.10	-21.01	73950.26	12391104.01	441.34
2065/066	39330.1	752.84	-365.50	95.95	-35070.46	133590.25	9206.79
2066/067	42717.1	508.77	3021.50	-148.12	-447538.54	9129462.25	21938.94
2067/068	46736.2	895.11	7040.60	238.22	1677225.81	49570048.36	56749.72
N₁ = 5	∑ X₁ =	∑ X₂ =			∑ x₁·x₂ =	∑ x₁² =	∑ x₂² =
N₂ = 5	198478	3284.44			2287986.05	109373357.12	115577.63

For Income,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{198478}{5} = 39695.6$$

For Net Profit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{3284.44}{5} = 656.89$$

Correlation between Total Cost & Net Profit,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{2287986.05}{\sqrt{109373357.12 \times 115577.63}} = 0.6435$$

$$r^2 = 0.6435^2 = 0.4141 \text{ Or, } 41.41\%$$

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{0.6435}{\sqrt{1-0.6435^2}} \times \sqrt{5-2} = 1.45$$

Appendix - III

Trend Analysis of Income or Total Revenue of HBL

The trend line $Y = a + bX$ ----- (A)

Let's assume that middle year be 3, then $X = t - 3$

Year	t	Income (Y)	X= t-3	XY	X ²
2063/064	1	33519.1	-2	-67038.2	4
2064/065	2	36175.5	-1	-36175.5	1

2065/066	3	39330.1	0	0	0
2066/067	4	42717.1	1	42717.1	1
2067/068	5	46736.2	2	93472.4	4
Total		$\sum y = 198478$	$\sum X = 0$	$\sum xy = 32975.8$	$\sum x^2 = 10$

Since, $\sum X = 0$

The two normal equations obtained from the above equations will be

$$\sum Y = na \quad \text{----- (i)}$$

$$\sum XY = b\sum X^2 \quad \text{----- (ii)}$$

Since, n = number of years under study = 5, the value of 'a' and 'b' can be calculated by solving equation (i) and (ii).

From equation (i)

$$\sum Y = na$$

$$\text{Or, } 198478 = 5 \times a$$

$$\text{Or, } a = 39695.6$$

Again, from equation (ii)

$$\sum XY = b\sum X^2$$

$$\text{Or, } 32975.8 = b \times 10$$

$$\text{Or, } b = 3297.58$$

Now, putting the value of 'a' and 'b' in the equation of trend line (A),

$$Y = a + bX$$

$$\text{Or, } Y = 39695.6 + 3297.58X$$

Calculation of Trend Values

Year	X	Actual Income	Income (Y) = $39695.6 + 3297.58 X$
2063/64	-2	33519.1	$39695.6 + 3297.58 \times (-2) = 33100.44$
2064/65	-1	36175.5	$39695.6 + 3297.58 \times (-1) = 36398.02$
2065/66	0	39330.1	$39695.6 + 3297.58 \times 0 = 39695.6$
2066/67	1	42717.1	$39695.6 + 3297.58 \times 1 = 42993.18$
2067/68	2	46736.2	$39695.6 + 3297.58 \times 2 = 46290.76$
2068/69	3	-	$39695.6 + 3297.58 \times 3 = 49588.34$

2069/70	4	-	$39695.6 + 3297.58 \times 4 = 52885.92$
2070/71	5	-	$39695.6 + 3297.58 \times 5 = 56183.5$
2071/72	6	-	$39695.6 + 3297.58 \times 6 = 59481.08$
2072/73	7	-	$39695.6 + 3297.58 \times 7 = 62778.66$

Appendix - IV

Trend Analysis of Profit of HBL

The trend line $Y = a + bX$ ----- (A)

Let's assume that middle year be 3, then $X = t - 3$

Year	t	NP(Y)	X= t-3	XY	X ²
2062/063	1	491.84	-2	-983.68	4
2063/064	2	635.88	-1	-635.88	1
2064/065	3	752.84	0	0	0
2065/066	4	508.77	1	508.77	1
2066/067	5	895.11	2	1790.22	4
Total		$\Sigma y = 3284.44$	$\Sigma X = 0$	$\Sigma xy = 679.43$	$\Sigma x^2 = 10$

Since, $\Sigma X = 0$

The two normal equations obtained from the above equations will be

$$\Sigma Y = na \quad \text{----- (i)}$$

$$\Sigma XY = b\Sigma X^2 \quad \text{----- (ii)}$$

Since, n = number of years under study = 5, the value of 'a' and 'b' can be calculated by solving equation (i) and (ii).

From equation (i)

$$\Sigma Y = na$$

$$\text{Or, } 3284.44 = 5 \times a$$

$$\text{Or, } a = 656.89$$

Again, from equation (ii)

$$\Sigma XY = b\Sigma X^2$$

$$\text{Or, } 679.43 = b \times 10$$

$$\text{Or, } b = 67.94$$

Now, putting the value of 'a' and 'b' in the equation of trend line (A),

$$Y = a + bX$$

$$\text{Or, } Y = 656.89 + 67.94X$$

Calculation of Trend Values

Year	X	Actual Profit	Profit (Y) = 656.89 + 67.94 X
2063/64	-2	491.84	$656.89 + 67.94 \times (-2) = 521.01$
2064/65	-1	635.88	$656.89 + 67.94 \times (-1) = 588.95$
2065/66	0	752.84	$656.89 + 67.94 \times 0 = 656.89$
2066/67	1	508.77	$656.89 + 67.94 \times 1 = 724.83$
2067/68	2	893.11	$656.89 + 67.94 \times 2 = 792.77$
2068/69	3	-	$656.89 + 67.94 \times 3 = 860.71$
2069/70	4	-	$656.89 + 67.94 \times 4 = 928.65$
2070/71	5	-	$656.89 + 67.94 \times 5 = 996.59$
2071/72	6	-	$656.89 + 67.94 \times 6 = 1064.53$
2072/73	7	-	$656.89 + 67.94 \times 7 = 1132.47$