## CHAPTER - I

## INTRODUCTION

### 1.1 Background of the Study

In the $21^{\text {st }}$ century, globalization has been the major issue for the every business organization. Today, business firm should compete with the domestic as well as international competitors in the market. Small wrong decision may cause a huge loss for the business organization. Therefore, every step should be taken very cautiously. Viewing this, the firm set different types of objectives and strategies and keen on getting those objectives by using the optimum available resources. One of those objectives is viewed as profit. Every now and then firm is looking for a satisfactory level of profit. Without profit firm cannot survive for a long period of time in this competitive market. Therefore, for competing and surviving in the market profit is required. Knowing the essence of the profit the concept of "profit planning and control" is developed in business organization. It is regarded as a basic technique of decision making. A well established and understood profit planning concept leads the organization to ultimate success and vice versa. That's why it is became effective tools for the organization to measure its operating efficiency and performance (Brown and Howard, 1969:27).

In simple term profit is the excess of revenue over cost of production. In other words it is difference between total income and expenditure. It is the primary and legitimate objective of a business. Profits to the management are the test of efficiency and a measurement of control. To the owners, measure of worth of their investment, to the creditors, the margin of safety, to the employees, a source of fringe benefits, to the government a measure of tax paying capacity and the basis of legislative action, to customers, a hint to demand for better quality and price cuts, to a bank, less burdensome source of finance and existence and finally to the country, profit are an index of economic progress. Thus if a bank fails to make profit capital invested is eroded and if this situation prolongs it ultimately ceases to exist (Charles, 1975:27).

The profit motive remains on the main springs of an enterprise and spur to efficiency. It is clearly the desire to make profit which inspires the search for more efficient methods, reduced unit costs, better organization and greater turnover. "A business firm is an organization designed to make profit and profit are the primary measures of its success, social criteria of business performance usually relate to quality of the desirability of the whole profit system, within that system profits are the valid test of the individual firm's performance" (Drucker, 1954:37).

Hence, it is clear that profit is very essential factor for all the organization. Profit is that building block which makes the organization much stronger. Thus, larger profit indicates that the organization is more efficient and profitable. To earn profit, it should be managed well. For the better management, a management required a proper planning.

Planning is deciding in advance about what to do, when to do and how to do something. In other words, it is a method of course of action to achieve a desired result and thinking out acts and purpose before hand. It starts from forecasting and determinants of future events and all other function are performed within the framework of planning. Proper planning opens the door for the organization to achieve its goals. Without it, it will have to face different odd situations and may not reach at their goal. Therefore, proper planning plays a key role in the organization. It is treated as a brain of the organization.
"Planning is the feed forward process to reduce uncertainty about the future. The planning process is based on the conviction that management can play its activities and condition that stage of the enterprise that determines its density" (Reginald and George, 1971:62).

After getting some knowledge about profit and planning, it is simple to understand the meaning of profit planning. Simply, it means acquiring the objectives of profit using a predetermine planning. Here, planning serves as a framework and all the function are performed within the boundary.
"Profit planning is a predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the subsequent evaluation of performance. Thus, it can be said that "Profit planning is a tool which may be used by the management in planning the future course of actions and controlling the actual performance"(Reginald and George, 1971:65).

Profit planning is a vital tool for the organization to achieve the profit goal in a definite period of time. It helps the organization to build up its empire. As a result, it became a measurement tool to measure the efficiency performance of the organization.

## Basic Elements of Profit Planning

The basic elements of profit planning are indicated as follows:

- The Profit Planning considers all activities and operations of an organization. It is prepared by different department inside the organization.
- It is expressed in financial term; in firm all activities covered by budget are related with funds. Budget is expressed in monetary value.
- It is plan for the firms operations and resources. The two aspects of every operation are revenue and expenses. The planning for resources will include planning assets and sources of funds.
- It is a future plan for specific period. Time dimension must be added to a budget. The budget estimate for some specific period.

The return of any banks basically depends upon its sound lending policy, lending procedure and investing its deposit in different securities and different sectors of market. A sound deposit mobilizing policy is not only prerequisite for bank profitability but also crucially significant for the promotion of commercial saving of backward country like Nepal (Joshi, 2004:2).

Liquidity refers to that state of position of a bank that pronounces its capacity to meet its entire obligation. It refers to the capacity of bank to pay cash against deposits. People deposit money at the bank in different accounts with the confidence that the bank will
repay their money when they need. To maintain such confidence of the depositors, the bank must keep this point in mind while investing its excess deposit in different securities at the time of lending. So that it can meet current or short - term obligation when they become due for payment (Baxley, 1987:38).

Bank should always know the purpose of loan demanded by a customer because if the borrower misuse the loan granted by the bank he will never able to repay interest and principal. In order to avoid such circumstances, loans should be allowed to the selected borrowers and it should demand all the essential detailed information about the scheme of project in which the bank is lending for. Bank must keep in mind the overall development plans of the nation and the credit policy of the concerned authority i.e. Central Bank (Joshi, 2004:35-37).

### 1.1.1 Brief Introduction of the Sample Bank

The brief introduction of the studied bank is as follows:

## Nepal Investment Bank Limited

Nepal Investment Bank Limited was the second and major joint venture bank in the country with the key points of representation in major places of the kingdom of Nepal. It was established on 28th February 1986 as a joint venture between Nepalese and French partners had the official name Nepal Indosuez Bank Ltd. The French partner (holding $50 \%$ of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, has acquired on April 2002 the 50\% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

Among the total share $50 \%$ of the total shares are owned by a group of companies, $20 \%$ by local Nepalese public and remaining by Rastriya Beema Sanstha and Rastriya Banijya

Bank in equal percentage. It has the largest number of branches among the private banks i.e. 41 branches. A team of qualified and highly experienced professionals manages the Bank.

NIBL has been awarded the prestigious "Bank of the Year 2008" by the London-based Financial Times Group's The Banker - making it the first Nepali Bank to win the award two times in three years. NIBL had also won "Bank of the Year 2005" and "Bank of the Year 2003" awards. NIBL was selected for this honor amongst the Nepali banks by meeting the stringent benchmark criteria set by The Banker. The Award is based on the growth and performance in terms of capital, assets, and return on equity and management quality.

NIBL is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with 41 branches and some specific counters in all major cities.

## Nabil Bank Limited

NABIL is the foreign first Joint Venture commercial bank incorporated in Nepal in July 1984 A.D. and listed in NEPSE in the year 1986 A.D. Initially, Dubai Bank Ltd invested $50 \%$ equity shares of Nabil Bank Ltd. Later on, DBL transfers its shares to Emirates Bank International Ltd (EBIL) Dubai. Thereafter, EBIL sold its entire stock to National bank Ltd, Bangladesh. Currently NABIL is operating its services with 47 branches in the various parts of the Nepal. NABIL has authorized, paid up the issued capital of Rs. 500,491.6544 million respectively. The shareholding pattern of NABIL involve 20\% share of Nepalese Promoters, 30\% share of General Public and 50\% share of Foreign Ownership.

Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business.

### 1.2 Statement of the Problem

Banks are the backbone of the economy. For the development of the economy the banks play crucial role. It creates an investment opportunity in the market and also helps to create development opportunity in the productive area. For the industrialization it works as a right hand. Therefore, banks play very crucial role. So, such factor should be taken very seriously and have to provide opportunity to invest in different sectors like industrial, trade, manufacturing etc. Besides, to survive banks need reasonable profit. Deposit mobilizing is most important factor for promoters, shareholders and managements. After 1984, several joint venture banks have been established in the country in a short period. Mushrooming of joint venture banks is the present situation of Nepalese financial system. There is high flow of money in the market but less viable and investible project. Most of the commercial banks are continuously benefiting to shareholders and returning them adequate profit. There are few sectors to make a profitable investment and the investors are always reluctant to risk. Several JVBs have been established in our country with in short period of time. Deposit mobilizing policy of JVBs may differ from each other but there is no optimum utilization of shareholder's fund to have greater return in any bank. Nepal Rastra Bank played important role to make commercial bank mobilize their deposit in good sector. For this purpose, NRB has imposed many rules and regulations so the bank can have sufficient liquidity and security.

The insufficient information on financial risk, interest rate risk, management risk, business risk, liquidity risk, default risk and purchasing risk, granting loan against insufficient deposit, overvalued of goods pledged, land and building mortgaged, risk averting decision regarding loan recovery and negligence in recovery of overdue loan are some of the basic lapses and the result of unsound investment policy sighted in the banks. Currently there are nine JVBs banks operating in Nepal. NABIL and NIBLL have been collecting comparatively enough deposit from the beginning. They make profit by making proper investment in the form of loan and advance and mobilize the funds on government securities and bond or others. Banks are the backbone of the economy. For the development of the economy the banks play crucial role. It creates an investment
opportunity in the market and also helps to create development opportunity in the productive area. Besides, to survive banks need reasonable profit. To get it, proper profit planning is required. Considering this, the study has tried to answer the following research questions:

- Does the bank enable to mobilize the deposit and other resources at optimum cost?
- What are the past profit trend?
- How is the banks performance in terms of operations, cost, and resources?
- How sound is the operational result in relation to their profit?


### 1.3 Objectives of the Study

The main objective of the study is to examine the profit planning and its impact on the performance of the banks. Thus the major objectives are as follows:

- To examine the contribution of deposit utilization in profitability
- To examine the performance of the bank in terms of operations, cost and resources
- To examine the interest spread position of the bank


### 1.4 Significance of the Study

This study provides important information for literature review to those students who like to do the research study on "Profit Planning." Besides, the management of the banks, shareholders, investors etc will also find this study noteworthy. This study has focused profit planning aspect of the two commercial banks and it has fully depended on secondary data. Profit planning is the important that we understand the management concept of profit. An economist will say that profit is rewards for entrepreneurship for risk taking. It has been analyzed leaving other area uncovered.

### 1.5 Limitation of the Study

No research works are free of some shortcomings or limitations. So this research study also has some limitations. The main limitations are mentioned below:

- Only the deposit utilization and performance of the two banks have been analyzed leaving other area uncovered.
- The study covers the analysis of only five years data from 2005/2006 to 2009/2010.
- The study basically depends on secondary data.
- Time and resources constraints may limit the area covered by the study.


### 1.6 Organization of the Study

This study is broadly divided into five different chapters. The title and brief sketch of each chapter is as follows:

## Chapter I: Introduction

It contains introduction of the study where it includes background of the study, statement of the problem, objective of the study, significance of the study, limitation and organization of the study.

## Chapter II: Review of Literature

It incorporates theoretical Framework and review of the articles, journals and past researches and other empirical studies conducted inside and outside the country.

## Chapter III: Research Methodology

It explains the methodology used in research to arrive at the results in the context of arriving at the objective of the study. It therefore basically deals with the nature and sources of data, research design, method of the data collection and statistical tools and techniques used in analysis of the data.

## Chapter IV: Presentation and Analysis of Data

It deals with data presentation and analysis of data. It helps to make proper findings and recommendation.

## Chapter V: Summary, Conclusions and Recommendations

It covers summary, conclusions and recommendations of the study followed by appendices and bibliographical references.

## CHAPTER - II

## REVIEW OF LITERATURE

### 2.1 Conceptual Framework

Profit is the key factor for every business organization. The organization success or failure depends on the amount of profit the firms generate from its operation or services. The organization cannot operate for a long period of time without profit. Profits fulfill the other purpose of the firms such as expansion, competition, favoring the shareholder's etc. Thus, in general profit is the measure of success of a firm. That's why every firm is interested in earning profit from its mobilization of resources in optimum cost (Batty, 1982:32).

According to Oxford dictionary profits means:

- Financial gains
- Amount of money gained in business especially the difference between the amounts earned and the amount spent
- Advantage of benefits gained from something
"Usually, profits don't just happen. Profits are managed. Before we can make an intelligent approach to the managerial process of profit planning, it is important that we understand the management concept of profit. An economist will say that profit is reward for entrepreneurship-for risk taking. A labor leader might say that it is a measure of how efficiently labor has produced and that it provides a base for negotiating a wage increase. An investor will view it as a gauge of the return on his or her money. An internal revenue agent might regard it as the base for determining income taxes. The accountant will define it simply as the excess of a firm's revenue over the expense of producing revenue in a given fiscal period". (Kaplan and Atkinson, 1998:67). Using the accountants measuring stick, management thinks of profit as:
- A tangible expression of the goals it has set for the firm
- A measure of the performance toward the achievement of its goals.
- A means of maintaining the health, growth and continuity of the company.

The word 'Profit' implies as comparison of the operation of business between two specific dates, which are usually separated by an interval of one year. No company can survive long period without profit. Profit is the ultimate measure of its effectiveness and in a capitalist society, there is no future for a private enterprise, which always incurs loss. Profit is the primary objectives of a business in view of the heavy investment which is necessary or the success of most enterprises, profit in the accounting sense tends to become a long-term objective which measures not only the success of a product but also of the development of the market for it (Saxena and Vashist, 1995:125).

Therefore, profit is a major factor in relate to its existence. It became a yardstick to measure the performance of the firm.

### 2.1.1 Approaches of Profits

## Traditional Approach

The traditional approach of profits is related to maximization. This approach assumes that firm goal is to maximize the profit and is a discretionary behavior. "Profit is the measurement of the business firms overall performance. A business firm can claim it to be successful if it can maintain maximum profit to justify the worth of the return on investment. This helps business firm to save from shortage of funds and provides best opportunities to under take the expansion of assets to enlarge business.

The term profit maximization is deep suited in economic theory, Kaplan and Atkinson express "It provides yardstick by which economic performance can be judged. It leads to efficient allocation of resources. It ensures maximum social welfare (Kaplan and Atkinson, 1998:23-27).

Profit maximization objective can be justified as below:

- Under the conditions of free competition businessmen pursuing their own-self interests also serve the interest of society. It is also assumed that when individual
firm pursues the interest of maximizing profits, society's resources \& efficiently utilized.
- Firms adopt those ventures which increase profit and unprofitable activities are dropped.
- The firm by pursuing its objective of profit maximization also maximizes socioeconomic welfare of society.

However, it has been criticized on

- It fails to maximize the owners' economic welfare.
- It ignores psychic income
- It is not clear that the maximization of profit is of short or long run.


## Modern Approach

Now-days, business scenario is completely different than year before. A firm processes number of objectives. Profit maximization model has been replaced. As a time goes on different theory about profit has been introduced. Boumal introduces "Sales Maximization Model" and believe that firm objective is to maximize the sales. Finding that a firm does not have complete and perfect knowledge about maximization, economist like R.A. Gordon, H.A. Simon and J. Margolis, assert that the firm tends to become "Deliberative" rather than "maximizing", that the firms aim at satisfactory rather than the maximum level of profit (Garrison, 1985:54).

### 2.1.2 Functions of Profit

According to Garrison, Profit Serves three main purposes:

- Profit may not be the most perfect measure of business efficiency, but it is probably the least imperfect measure of the general efficiency of a firm. It measures the effectiveness of business strategy and the efficiency of business tactics. An increasing level of profit, other things remaining the same, is an indicator of sound and successful business operations.
- Profit is the premium that covers the costs of staying in business replacement, obsolescence, market and technical risk and uncertainty. The management must
generate sufficient profit to cover these operational costs. In other words, profit is a business income to meet business expenditure.
- Profit ensures the supply of future capital for expansion, innovation and reconstruction. The part of the profit which is retained is a means of internal finance for the business firm. The part of it which is distributed to the shareholders as returns on their investments reflects the soundness of business and may become a means of inducing new shareholders i.e. of financing indirectly external capital for the firm (Garrison, 1985:57).


### 2.1.3 Planning

The decision making process starts with planning. It is the design of a desired future state of an entity and of the effective ways of bringing it about. "Planning is the first essence of management and all other functions are performed within the framework of planning. Planning means deciding in advance what is to be done in future. Planning starts from forecasting and predetermination of future events. Planning is the whole concept of any business organization. Without proper and effective planning, no firm can accomplish its predetermined goals and objectives. Hence, it is a life blood of any organization which makes them efficiently run towards the competitive environment. Planning is a techniques where by the use-pattern of resources is carried out (Garrison, 1985:57).
"Planning is the feed forward process to reduce uncertainty about the future. The planning process is based on the conviction that management can plan its activities and condition that state of the enterprise that determines its density (Garrison, 1985:59).

According to Kaplan and Atkinson, (1998) - "Planning is an intellectual process, the conscious determination of courses of action, the basing of decisions on purpose, facts, and considered estimates."

Planning is the primary function of management. It is the base for other managerial functions such as organizing, directing and controlling the organization. Planning involves setting goals, establishing a course of action, implementing the action plans, and
attaining the goals. Therefore, the organizations reach on top if it has effective planning and vice-versa. In the absence of planning manager do not even have the direction, sense of purpose, and activity plan. This ultimately affects the organization and its future existence. In conclusion, planning is a continuous process. It should be revised, reformulated according to the business conditions. It is done to fulfill the gap existing between the present state and the desired future state (Hilton, 1997:36-37.

### 2.1.4 Planning System

It is a subsystem of the overall management system of an organization. The planning system includes three basic elements i.e. input, process, and output. Information, equipment, manpower and financial resources are the basic requirement of any planning. Thus, they are the inputs of the planning system and are interdependent. These factors provide the base for the processing of planning activities. The 'process' section includes information collection, information processing, environmental scanning, forecasting, and analysis of internal forces. At last, goals, strategies, policies, procedures and budget are the outputs of the planning system. These three elements act together to formulate goals and plans of the organization (Saxena and Vashistl, 1995:37).

### 2.1.5 Methods of Planning

Generally, three methods of planning are in the operation. They are:

- Top-Down Planning
- Bottom-Up Planning
- Management By Objective


### 2.1.5.1 Top-Down Planning

In this planning method, the head-office of an organization develops and provides guide lines. It includes business definition, mission, statement, economic objectives, social objectives, financial assumptions, content of the plan, and other special issue. This guideline is followed by the lower-level manager and prepares schedules of activities to meet these goals. This method is also known as centralized planning.

### 2.1.5.2 Bottom-up Planning

In this planning method, the lower-level management plays key role in the development of the planning. They inform top management what they expect to do. There is a great deal of discussion between the superior and the subordinate regarding the goal fixation and plan formulation. After the opinions of the bottom line come up to the top management then, these factors are discussed, analyzed and compared with the vision and mission of the firm. Lastly, compromises and adjustments are made and the organization's plans are finalized.

### 2.1.5.3 Management by Objectives

This method was suggested by Batty in 1982. The core idea of MBO is managerial planning and control. The process of managers and operatives setting goals together was designed to give operatives a sense of ownership. This motivates them to get the goal. Today, the firm used this approach in modified fore. The value of MBO is that it communicates the mission, goals, and objectives of the organization to the lower levels. The lower level managers work out their plans and targets in consultation with their subordinates. Then, the results are sent to higher levels for consideration. This allows employees to participate in planning and controlling of their own work. As a result, employees participate in planning and controlling of their own work. As a result, employees are motivated and gave $100 \%$ commitment to their work. MBO encourages self management and control through participation and commitment.

MBO can be considered as a cycle. This cycle consists of four phase. They are setting goals as first phase. Developing action plans as a second phase and periodic review and performance evaluation as third and final phase (Batty, 1982:63-65).

In practice firm uses suitable planning method as their requirement. But in general combination of top-down and bottom-up is in practice.

### 2.1.6 Planning Process

The Planning process involves four fundamental steps:

- Establishing enterprise objectives
- Determining short-range objectives or operational goals
- Developing strategies, and
- Formulating budgets or Profit plans


## Objectives

Objectives are the statements of broad and long range desired state or positions of the enterprise in the future. They represent the purposes to which the efforts of the enterprise will be focused and are directional and motivational in nature. It is general the qualitative expressions of the desired future states.

## Goals

It represents the operational specification of the broad objectives with time and quantity dimensions. It is a quantified target which is achieved in definite time period.

## Strategies

It makes the way to achieve the objectives and goals. It is a crucial factor without proper strategies it is only a day dreaming for the organization in achieving the goals and objectives.

## Profit plans or Budget

It is the final step of the profit planning process. It needs intellectual ideas. The formalization of the objectives goals and strategies for operational purposes is known as profit planning or budgeting. A profit plan or budget is the formal expression of the enterprise's plans and objectives, stated in financial term for a specified future period of time. It is called the profit plan (or the budget) because it explicitly states the goals in terms of time expectations and expected financial result for each major segment of the entity (Hilton, 1997:45-52).

### 2.1.6.1 Types of Planning

Business plans can be classified as strategic, tactical and operational planning from the view of managerial hierarchy, similarly, long range and short range planning from the view of time period and at last standing plan and single-use plan from the frequency of use.

### 2.1.6.2 Managerial Hierarchy

### 2.1.6.3 Strategic Planning

Strategic planning is the process of determining the basic objectives of an organization and deciding the strategies and policies to achieve these objectives. According to Anthony, "Strategic Planning is the process of deciding on objectives of the organization, on changes in these objectives, on the resources used to attain these objectives, and on the policies that are to govern the acquisition, use and disposition of these resources. Strategic planning thus is the careful, deliberate, systematic taking of decisions which affect or are intended to affect the organization as a whole over long term goals and strategies. For making the decisions top mangers involve in scanning the environmental opportunities and threats and make the suitable decisions (Ojha, 2003:25).

### 2.1.6.4 Tactical Planning

It is that type of planning which translate broad strategic goals and plans into specific goals and plans. It focuses on functional areas of the organization. Strategic plan is broad in nature so to implement them tactical plan is needed. Therefore, tactical plan makes the foundation for the strategic planning.

Tactical plans are developed by middle manager and have responsibilities to determine the specified details of targets, resource utilization, and time frames. Tactical plans focus on the major actions that a unit must take to fulfill its parts of the strategic plan.

### 2.1.6.5 Operational Planning

Planning is the primary function of management. It is the base for other managerial functions such as organizing, directing and controlling the organization. Planning involves setting goals, establishing a course of action, implementing the action plans, and attaining the goals. Therefore, the organizations reach on top if it has effective planning and vice-versa. In the absence of planning manager do not even have the direction, sense of purpose, and activity plan. This ultimately affects the organization and its future existence. In conclusion, planning is a continuous process. It should be revised, reformulated according to the business conditions. It is done to fulfill the gap existing between the present state and the desired future state (Hilton, 1997:36-37.

### 2.1.6.6 Time Period

### 2.1.6.7 Long Range and Short range Planning

Long range planning is more important for broad and long living organization. This plan has a life span of more than one year. Basically, its range is varying according to its importance such as 1 to 5 years, 5 to 10 years.
"The long range planning is the continuous process of making present entrepreneurial (risk taking) decision systematically and with the best possible organizing the efforts need to carry out these decision and measuring the result of these decisions against the expectations through organized systematic feed while short term planning is that types of planning which covers only one year period and are less formal and detailed than long range planning. It basically done for what the organization is doing in that short period. It aims to find out the changing conditions in the external environment (Saxena and Vashist, 1995:35).

### 2.1.6.8 Frequency

### 2.1.6.9 Standing Plans and Single use Plans

Standing plans are used in situations in which programmed decision making is appropriate. It is developed to guide employees in handling situations that are likely to recur and become routine. When the same situation occurs other time, managers develop
policies, rules and operating procedures to control the way employees perform their task. Policy, procedure and rule are the example of this plan.

Single use plans are developed to handle non programmed decision making. These are only used once. This plan is developed to handle non-programmed decision making in unusual situation. After once use, they are either discarded or revised. They remain valid for a certain period of time until their purpose is accomplished. Programs, projects and budges are the examples of this plan (Garrison, 1985:27-31).

### 2.1.7 Forecasting Vs Planning

Forecasting and planning is not the same thing. Forecasting is an integral part of planning and decision making.

Planning is the primary function of management. It is the base for other managerial functions such as organizing, directing and controlling the organization. Planning involves setting goals, establishing a course of action, implementing the action plans, and attaining the goals. Therefore, the organizations reach on top if it has effective planning and vice-versa. In the absence of planning manager do not even have the direction, sense of purpose, and activity plan. This ultimately affects the organization and its future existence. In conclusion, planning is a continuous process. It should be revised, reformulated according to the business conditions. It is done to fulfill the gap existing between the present state and the desired future state (Hilton, 1997:36-37).

### 2.1.8 Profit Planning

It is said that an organization should be managed effectively and efficiently. Management is said to be efficient if it achieve the objectives at minimum efforts and costs. Thus, management is the coordination and control of the total organization efforts to achieve the enterprise objectives. In other to attain long range management efficiency and effectiveness, management must chart its course in advance. The management process includes decision making which is facilitated by various techniques, procedures and by utilizing the individual and group efforts in a coordinated and rational way. One
systematic approach to facilitate the effective management performance is profit planning and control. It is an integral part of management. The financial manager has a particular interest in profit planning and control because it helps to regulate flows of funds which it is concern (Hilton, 1997:33-35).

Simply when the planning procedure begins to achieve the profit objectives it is then regarded as profit planning.
"Profit planning is a predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the subsequent evaluation of performance. This can say that profit planning is a tool which may be used by the management in planning the future course of actions and controlling the actual performance" (Hilton, 1997).
"Profit planning is a part of an overall process and is an area in which finance function plays major role. It is now an important responsibility of financial manager while activities of these shorts require an accounting background. They also are hearing up on the knowledge of business principles economic statistics and mathematics. Hence profit planning represents an overall plan of preparation cover a definite period of time and formulates the planning decision of management. It consists of the operation budget, the financial budget and appropriation budget" (Brown, 1969:51-56).

Recently the use of cost volume analysis is very much in practice as a profit planning. It is became a basis for financial planning and control model. It is a device for determining the point at which sales will just cover costs.
"Profit planning through volume of cost analysis, however is a modern concept of management planning tools designed primarily for industrial enterprises. It involves a study of what a business cost and expenses should be and will be at different level of what a business cost and expenses should be and will be at different level of operations
and it includes a study of the resultant effect upon profit due to this changing relationship between volume and cost."
"Profit planning may go to wrong directions in the absence of control mechanism. It became meaningless without the control mechanism. Therefore, control mechanism is very crucial for the profit planning. It generally guides the planning system and makes aware the management that where the planning is heading towards. It suggests them time to time for the changing, remaking and reformulating the plan if required. They are interrelated. When there is a planning there stood control. One may not be effective without other. Plans merely remain on paper without measures to ensure accomplishments while control is ineffective without goals to achieve set out under the plans. Knowing the essence of control in profit planning, through concept of profit planning and control is presented (Chamberlin, 1991:17-21).

The dictionary meaning of control is

- Have a power or authority over some body or something
- Regulate something
- Management, guidance, restriction
- Standard of comparison for checking the results of the experiment
"The term comprehensive profit planning and control is defined as a systematic and formalized approach for performing significant phase of the management planning and control function. Specially, it involves:
- The development and application of broad and long range objectives of the enterprise
- The specification of enterprises goals
- a long range profit plan developed in broad terms responsibility (divisions, products, project etc)
- A systematic periodic performance reports detailed by responsibilities and
- Follow up procedures.
"A profit planning and control program can be one of the more effective communication net works in an enterprise. Communication for effective planning and control requires both the executive and the subordinate have the same understanding of responsibilities, ensure a degree of understanding not otherwise possible. Full and open reporting in performance reports that fouls on assigned responsibilities likewise enhances the degree of communication essential to sound management" (Brown, 1969:25).


### 2.1.8.1 Fundamental Concepts of Profit Planning

The fundamental concepts of PPC includes the under using activities or tasks that must generally be carried out to attain maximum use fullness from PPC. These fundaments are:

- Managerial involvement and commitment
- Organization adaptation
- Responsibility accounting
- Full communication
- Realistic expectations
- Activity costing
- Behavioral view point
- Management control using PPC
- Follow up
- Management by exception


## a. Managerial Involvement and Commitment

Managerial support, confidence, participation and performance orientation includes managerial involvement. All level of management especially top level management should engage them to comprehensive PPC.

Involvement in PPC means to understand, to select, to devote, to support by all its departments and to evaluate the performance of the PPC.

Managerial involvement of comprehensive profit planning and control, program is directly related to the confidence of management and its known ability to influence the
future program and convincement with the idea of setting goal in advance. Materials involvement also deals with the idea of direct participation of the lower staff on the program but the ultimate decision should come from the top level.

Modern concept of PPC program has emphasized on managerial involvement. Because modern business believes on the principle of attaining set objectives or goals rather than earning short run more monitory profit (Brown, 1969:43-47).

## b. Organization Adaptation

A success of the profit planning and control program depends upon the sound organizational structure and also on a clear cut designation of the lines of authority and responsibilities of all the departments of enterprises. The responsibility of each department managers should be well clarified. Sometimes indirect relationship of responsibility also plays great role in an organization. So, it is advisable to clarify well coordinate all round responsibility between the departments.

For easy and effective control some time the organizational structure are different functional sub units. These are known as responsibility center. They include functional area like cost, profit and investment center.

Normally organizational involvement includes:

- Delegation of authority and responsibility to each functional sub units.
- Sub-divide the whole organization in to different functional sub units.
- Each sub units should prepare its own periodic plan.
- Based upon plan prepared by sub units a master plan is to be prepared by higher management.


## c. Responsibility Accounting

Planning is base on historical data. These can be supplied by the accounting section and control is done by evaluating the actual data and planned data. Therefore, accounting system of any enterprises should be build around the responsibility structure of organization of functional sub units. Therefore, PPC requires responsibility accounting.

## d. Full Communication

Communication can be defined as "An interchange of thought or information to bring about a mutual understanding between two or more parties."

Communication can be either of dialogue massages or understanding form working together. Although most of the management invest least importance on communication but it is the most important thing for any organization observation and control. Most of the organization faces lot of problem due to bad communication systems (Garrison,1985).

## e. Realistic Expectation

PPC must be base on realistic approach or estimation rather than irrational, optimism or conservatism. The care with which budget goals and objectives are set for such items as sales, production, cash flow and so on determines the success of PPC program. Therefore, PPC includes realistic approach with time dimension and external and internal environment.

## f. Activity Costing

"Responsibility accounting system generally accumulates costs by department and product costing system associate costs with units of product or services organization also frequently finds it useful to associate costs with activities. By decomposing an organizations production process into discrete set of activities and then associating costs with each of those activities. Moreover, by systematically identifying the activities through out the organizations managers can identify redundant activities"(Brown, 1969:21-42)

## g. Management Control Using PPC

The primary purpose of control is to ensure attainment of the objective, goals and standards of the enterprises. Control has many facts such as direct observation, oral expression, policies and procedures reports of actual results and performance reports. PPC focuses on performance reporting and devaluation of performance to determine the caused of both high and low performance. The essential features of PPC performance reports are as follows (Batty, 1982:47).

- Performances classified by assigned responsibilities
- Controllable and non controllable items and designated
- Timely reports are issued

Emphasis is given to a comparison actual result and planned results, the performance results should be designed the responsible manager and show actual results.

## h. Behavioral View Point

"Planning is the primary function of management. It is the base for other managerial functions such as organizing, directing and controlling the organization. Planning involves setting goals, establishing a course of action, implementing the action plans, and attaining the goals. Therefore, the organizations reach on top if it has effective planning and vice-versa. In the absence of planning manager do not even have the direction, sense of purpose, and activity plan. This ultimately affects the organization and its future existence. In conclusion, planning is a continuous process. It should be revised, reformulated according to the business conditions. It is done to fulfill the gap existing between the present state and the desired future state (Hilton, 1997:36-37.

## i. Follow up

Follow up is an important part of PPC. It distinguishes between cause and effect. It includes:

- To correct the action of substandard performance in a constructive manner.
- To recognize and transfer the knowledge of outstanding performance to others
- To provide a basis for better planning and control in the future.


## j. Management by Exception

"A comprehensive PPC program facilitates in many ways, underlying there is the measurement of actual performance against planned objectives goals and standards and the reporting if the at measurement in performance reports. This measurement and reporting extends to all areas of operations and to all responsibility centers in the enterprises. It involves reporting of actual results, budgets or planned results and the difference between the two.

This type of reporting represents an effective application of the well recognized management exception principle. The exception principle holds that the manager should concentrate primarily on the exception principle or unusual items that appear in daily, weekly and monthly reports, thereby living sufficient managerial time for overall policy and planning considerations. It is the "out of line" that needs immediate managerial attention to determining causes and to take corrective action. The items that are not out of line need not utilize expensive management time. However, they shall trigger "rewards" in appropriate ways. To implement the exception principle, techniques, procedures must be adopted to call the manager attention to the out of control items performance reports because, they include a comparison of actual results with plans by areas of responsibility, emphasize in a relevant ways performance variation" (Welsch, 1999:51).

### 2.1.8.2 Budgeting: A Systematic Approach to Profit Planning

"A budget is a comprehensive and coordinated plan, expressed in financial terms, for the operations and resources of an enterprise for some specific period in the future."
"Budgeting is primarily attention directing because it helps mangers to focus on operating or financial problems early enough for effective planning or action."

It is the only comprehensive approach to managing so far developed that, if utilized with sophistications and good judgment, fully recognizes the dominant role of the manager and provides a framework for implementing such fundamental aspects of scientific management as management by objectives, effective, communication, participative management, dynamic control, continuous, feedback, responsibility accounting, management by exception, and managerial flexibility."

The major purpose of the budget is

- To state the firm's expectations (goals) in clear, formal terms to avoid confusion and to facilitate their attainability.
- To communicate expectations to all concerned with the management of the firm so that they are understood, supported and implemented.
- To provide a detailed plan of action for reducing uncertainty and for the proper direction of individual and group efforts to achieve goals.
- To coordinate the activities and efforts in such a way that the use of resources in maximized.
- To provide a means of measuring and controlling the performance of individuals and units and to supply information on the basis of which the necessary corrective action can be taken.

In conclusion budgeting is important for every business organization. It is definitely be a very major element in profit planning. Without budget profit planning may be shadowed. It presents full information about the financial situation and helps to formulate planning prior to the operation (Kaplan and Atkinson, 1998:55-57).

### 2.1.9 Budget: As a Control Device

As stated earlier that the major purpose of budgeting is to provide a bench mark for controlling performance of managers and their subordinates. Control is sought to be achieved by comparing actual performance with budgeted performance and taking an action to correct the budget variance. The budgetary control process involves following steps.

- Realistic budgets or plans are prepared to provide direction to carry out business operations.
- Actual performance for each area of responsibility in measured.
- Actual performance is compared with budgeted performance to identify significant deviations or variances.
- As a feedback mechanism, reports are prepared to inform management about deviations from budgets.
- Corrective action is initiated to ensure that future performance is in accordance with budgets. Action may involve motivating people to implement policies modifying
certain policies, retraining employees or changing the manufacturing methods. The budgets will have to be revised if the deviation is due to incorrectly set budget.

The principle of management by exception should be applied while enforcing control through budgets. No action is required if actual performance meet with the budgets. Management attention should be focused only on exceptional or significant deviations. To determine significant deviations, control limits that represent the range of normal deviations from budget should be developed (Saxena and Vashist, 1995:71-75).

### 2.1.10 Break Even Analysis

The break even analysis is the most widely known form of CVP analysis. Therefore, both the terms are used interchangeably. Break even analysis is a logical extension of management costing. It is based on the principle of classifying the operating expenses into fixed and variable. Nowadays, it has become a powerful instrument in the hands of policy maker to maximize profits. It is a managerial technique to check the effect of change in the level of production due to various reasons.

Planning is the primary function of management. It is the base for other managerial functions such as organizing, directing and controlling the organization. Planning involves setting goals, establishing a course of action, implementing the action plans, and attaining the goals. Therefore, the organizations reach on top if it has effective planning and vice-versa. In the absence of planning manager do not even have the direction, sense of purpose, and activity plan. This ultimately affects the organization and its future existence. In conclusion, planning is a continuous process. It should be revised, reformulated according to the business conditions. It is done to fulfill the gap existing between the present state and the desired future state (Hilton, 1997:36-37.

### 2.1.11 Cost Volume Profit Analysis (CVP)

It is an analytical technique for studying the relationship between volume, cost (fixed and variable) prices and profits. It is taken as a device to measure usefulness of profit planning of the firm. In fact, the entire field of profit planning has become associated
with the CVP inter-relationships. It should be kept in mind that the formal PPC involves the use of budgets and other forecasts, whereas CVP analysis provides an overview of the PPC and helps to evaluate the purpose and reasonableness of such budgets and forecasts. CVP helps firms to determine the minimum sales volume to avoid losses and the sales volume at which the profit goal will be achieved. Further more, it helps management to find out most profitable combination of cost and volume. Therefore CVP analysis is used by management to predict and evaluate the implications of its short run decisions about fixed costs, variable costs, volume and selling price for its profit plans on a continuous basis.

CVP analysis is made to find out the following

- What would be the cost of production under different circumstance?
- What has to be volume of production?
- What profit can be earned?
- What is the difference between the selling price and cost of production?


### 2.1.11.1 Importance of CVP Analysis

"Planning controlling and decision making are the essential management functions CVPA helps the manager to plan for profit to control cost \& make decision". "It helps (Munakarmi, 2003:401-402):

- To determine the break even point in terms of unit or sales value.
- To ascertain the margin of safety.
- To estimate profits or losses at various level of output.
- To assess the likely effect of management decisions such as an increase or decrease in selling price adoption of new method of production to reduce direct labor cost and increase output.
- To help management to find the most profitable combination of costs and volume.
- 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.

Generally CVPA provides information regarding" (Munakarmi, 2003:402).

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


### 2.1.11.2 Application of Cost Volume Profit Analysis

"Cost volume profit analysis is applied specially for break even analysis and profit planning. Profit planning is fundamental part of overall management function. Profit planning can be done only when the management has the information about the cost of product fixed \& variable and selling price of the product. The most important factors that affect the planning for profit are costs fixed \& variable \& volume of sales CVP analysis can be applied in the following respects" (Dangol, 2004:120).

- It helps in fixation of selling price.
- It is helpful in cost control
- It also assists the management in understanding the behaviors of cost \& helps in budgeting control.
- It helps in determining the level of output where all the costs can be met.
- It assists the management in profit planning.
- It also assists the management in performance evaluation for the purpose of management control.

It helps very much in making managerial decisions such as make or buy a part, drop or continue a department or product line, accept or reject a special order, selection of profitable product mix etc.

### 2.1.12 Development of Profit Plan

Development of profit plan in commercial bank begins with the preparation of various functional budgets. These budgets are in fact the picture of various activities of the bank to be performed during a particular period of time. Therefore, the functional budgets of a bank are activity based such as budget for deposit collection, budget for lending and investment, budget for non-fund based business, budgets for expenditures and revenues.

The development of profit plans process involves managerial decisions and ideally high level of management participation. The following are the budget which is developed in a bank while making a profit plan.

- Resources Mobilization Plan or Budget
- Resources Deployment Plan or Budget
- Planning for Non Funded Business Activities
- Expenditure Planning
- Revenue Planning


### 2.1.21.1 Resources Mobilization Plan or Budget

Resources mobilization plan is regarded as a basic foundation of planning in a bank because all other planning is based on it. One of the major resources of a bank is customer deposits. Bank collects huge amount from customer deposit. With the wise use of it, bank can generate profit. The activities like lending and investment are very much depend on this source. Therefore, deposit mobilization is the primary function of a bank which has major contribution in the total resources of the bank. In terms of cost, the bank customer's deposits are of two kinds,

- Interest free deposits i.e. current deposits, margin deposits etc.
- Interest bearing deposit i.e. saving deposits, fixed deposits, call deposits etc.

The interest free deposits are cost free but are generally volatile in nature. This type of deposit can be withdrawn without restriction from the bank thus cannot be invested in to higher income yielding assets. But interest bearing deposits involve cost of deposit. There retention ratio with the bank are much better so they can be put to high income yielding assets having longer tenure. Therefore a proper mix of cost free and costly deposits corresponding to short term and longer term deposits are to be maintained by the bank in its deposit mix in order to minimize its average cost of deposit. At the same time having comfortable mix of income yielding assists the cost of deposit of banks is also affected by the prevailing deposit interest rate of other banks in the market.

Budget for deposit mobilization during a particular year is set in advance with the view of optimizing the cost of deposit and the some are allocated to the different branches of the banks. Such allocations may be regarded as the tactical plan for deposit mobilization of the banks.

The other resources of banks are borrowing from other banks and capital fund. It is not a regular activity of a bank. It is done to meet temporary requirement of liquidity. Among the capital fund the equity capital is formed generally on time during operation of the bank. The central bank may time to time instruct the bank to enhance the paid up capital to improve the capital adequacy of the bank which may affect the profit earning capacity. This is also affected by the general reserve of the bank. According to commercial banking act 2031 bank should maintain at least $20 \%$ of the net profit as general reserve until the amount gets double the paid up capital.

### 2.1.12.2 Resources Deployment Plan or Budget

Resources deployment planning starts from assessment of nature of resources to be mobilized. It means that the available resources are allocated on the basis of the nature of the asset. Brown (1969) expressed, "The fundamental criterion must be followed in allocating fund for acquiring different types of assets. That is turnover rate of different sources of supply of fund determines the appropriate maturity of the assets acquired through fund utilization for instance while relatively stable fund like saving deposits,
fixed deposits and paid up capital could be to buy long term high yielding securities demand deposit which are more volatile could be used to acquire relatively liquid assets like cash money at call and short notice on which little or no return is made by the bank."

A bank should make the planning for deployment of its resources in such a way that it ensures requires liquidity as well as optimize the yield on the fund of bank. Therefore, banks resources deployment process involves following:

- Deployment in liquid assets
- Deployment in lower income yielding assets
- Deployment in higher yielding assets

Funds kept as cash in vault and as balance with NRB and other banks in current account are the most liquid assets of the bank. Normally, banks have to maintain certain fixed percentage of their deposit liability in this form as directed by the central bank form time to time. There is no yield in the fund deployed as liquid assets.

Deployment for lower income yielding assets are generally planning the fund in short term securities treasury bills etc provides reasonable liquidity as well as yield some return.

Bank can earn more money as interest income from the resources deployed to loan advances and bills discounting. Banks make its lending budgets in advance as per their lending policies. Lending targets are fixed at various sectors of economy. The targets are allocated to the branches which are generally operated as separate profit centers.

### 2.1.12.3 Planning for Non-Funded Business Activities

Banks also involve in those activities from where they can generate reasonable income without funding. This type of activities is regarded as non-funded business activities. Letter of credit and bank quartette insurance business is the example of these types of business. In this business bank under took payment liabilities which are contingent in nature and charge certain percentage of commission on such transaction to their client
who are using these facilities. The bank fixes annual target for such business and those are allocated to the branches of the bank.

### 2.1.12.4 Expenditure Planning

The expenditure planning is very important in the perspective from profit. When the cost is minimized at that time automatically profit is maximized. Therefore, cost should be minimized to earn optimum profit. The bank should control following types of expenses:

- Interest expenses
- Personnel expenses
- Administration expenses
- Expenses meeting the loss in exchange fluctuation
- Non-operating expenses
- Expenses for provision for loan loss
- Expenses for provision for staff bonus
- Expenses for provision of income tax


### 2.1.12.5 Revenue Planning

Revenue is generated from the income yielding activities. Therefore, while preparing the resources deployment plan and non funded business plan, the bank should make the estimate the estimate the revenue in advance during the period for which the plan is developed. Bank should concentrate in following items:

- Interest income
- Commission and discount
- Dividend
- Other income
- Foreign exchange income
- Non-operating income


### 2.2 Review of Related Studies

This sub-section is concern with the previous research work done by the different scholars more specially; the chapter includes the conceptual framework, review of foreign research and review of Nepalese research.

### 2.2.1 Review of Articles

Profit planning and Control played the vital role in overall profitability management which provides the guideline for the achievement of organizational goals and objectives. Various studied has been conducted for the behavior of Profit planning. Regarding this various empirical studies have been conducting related area of profit planning. There are many researchers carried out by different research in this topic.

The profit planning in the context of particularly commercial banks seems to be a new subject of study for research and analysis. So far this researcher could found some studies that have been made in this topic. Here are reviewed thesis some are manufacturing sector and some are related with financial sector which can help us to understand about their objectives, used statistical tools and major findings about this topic.

Number of research studies has been done internationally on Profit Planning. Some of them are as follows:

Chamberlain (1991) describes in his research report that "profit planning refers to the organization's techniques and procedures where by long and short range plans are formulated, considered and approved responsibility for execution is delegated, flexibility to meet changing condition is provided, progress in working the plan, deviations in operation are analyzed and corrective action required to reach the desired objective is taken. A profit plan is an advance decision of expected achievement based on the most efficient operating standards in effect or in prospect at the time it is established against which actual accomplishment is regularly compared. The primary aim of the profit plan is to assist in assuring the procurement of the profits plan and to provide a guide for assisting in establishing the financial control polices including fixed assets additions
inventories and cash position. The adoption of correctly constructed profit plan provisions provides opportunity for a regular and systematic analysis of incurred or anticipated expenses organized future planning, fixing of responsibilities and stimulation of effort. In short it provides a tool for mere effective supervision of individual operations and practical administration of the business as a whole".

Wiley John (1991, Chapter 11)." Budgeting and Profit Planning: Special Studies - Part 17" In this study writer has written often a budget manager can develop a better budget when he has a more perfect understanding of the resources he controls. This includes understanding the cause and effect nature of various activities, controllable and uncontrollable variables, variable and fixed cost relationships, and market economics. Examples of items that are popularly studied, include-The effect of advertising on sales. How product demand is affected by seasonality, environmental factors, or particular leading economic indicators. How the layout of work centers the shop floor affects work-in-process inventory levels. Developing an improved understanding of these items is not something that is generally considered to be part of the budgeting process. However, the results of studying these areas can greatly improve the accuracy and usefulness of the budget, not to mention the manager's grasp of underlying business process. For example, knowing how advertising affects sales can help determine a worthwhile level of advertising expenses, for a given sales budget. Special analyses such as these are usually performed outside the budgeting cycle when sufficient time is available. Sometimes the effort required to conduct a special study of this nature can be significant. Moreover, special expertise may be required to manage the technical aspect of the study. The techniques applied usually come from a field of study called Operations Research and involve an understanding of mathematical processes such as statistics, Monte Carlo simulation, regression, correlation analysis, and linear programming. But many times the simpler techniques tend to be the most popular. For example, a simple spreadsheet and a personal computer typically serve as the primary tool for the data evaluation in a special study. Often the general ledger system's only role here is to serve as the repository for available financial data and not as a tool for data evaluation.

Michelon (1998) "A budgeted Income Statement, and a Budgeted Balance Sheet." In short, it represents a comprehensive expression of management's plans for the future and how these plans are to be accomplished. Difference Between Planning and Control: The term planning and control are often confused, and occasionally these terms are used in such a way as to suggest that they mean the same thing. Actually, planning and control are two quite different concepts. Planning involves developing objects and preparing various budgets to achieve those budgets. Control involves the steps taken by management to increase the likelihood that the objectives set down at the planning stage are attained and that all parts of the organization are working together toward that goal. To be completely effective, a good budgeting system must provide for both planning a control. Good planning without control is time wasting.

Richards (2010) "Succession Planning Case Study: Sale Price Profit" . A key outcome of the Effective Succession Planning process is ensuring you receive your desired sale price for the business at exit. The achievement of your desired sale price will ensure that your retirement assets and retirement income will continue to meet the requirements of your desired standard of living. It is vital therefore to understand the role of sale price income and sale price profit in this equation. When determining business value as a multiple of profit, it is important to ensure the profit figure used presents the best perspective of the business. It goes without saying that the higher the figure, the better the price.

Guang-liang (2011) "The Multinational Group Profit Planning Based on Minimization of tax Burden". While making profit plan, the multinational corporations often reduces the profits of enterprises with heavy taxation burden according to taxation burden of subsidiaries, and transfer the reduced profits to the enterprises in which the taxation burden is light. This simple complementary approach to profit planning is not only constrained by the restriction of the volume of business between subsidiaries and the cost of transferring profits, but also more importantly is constrained by restricting factors such as tax authority's anti-avoiding taxation so that the resulting effect of profit planning is not excellent. On the basis of analyzing spatial profit planning, multinational corporations make a decision considering the objectives and restrictions of tax minimization, establishing a non-linear programming model, solving the optimal limit of profit-shifting
and determining the optimal tax planning program. Taking Lenovo Group for example, inspects the validity of the model.

Walker (2011) "Walker and Company Profit Plan Decision". The objectives of the study is to illustrate the importance of the assumptions embedded in a profit plan, to familiarize students with various sources of business information to learn how to use a profit plan to test key business decisions Case Synopsis the case portrays a series of profit planning decisions in a family-owned publishing company. The case is written by and about the same individual, Ramsey Walker, a young, recent business school graduate. The case begins with a quick overview of Walker \& Company's (Walker) history. Case Theory and Background Companies use profit plans for several reasons: To translate the strategy of the business into a detailed plan to create value. This helps managers quantify trade-offs and provides a framework for analysis for a variety of strategic decisions. To evaluate whether sufficient resources are available to implement the intended strategy. This highlights the importance of the cash flow for small companies, to create a foundation to link economic goals with leading indicators of strategy implementation, to enable benchmarking with competitors and identify areas for efficiency gains, to aid in internal communication, coordination and education. An interactive profit planning process sets up a motivational contract with managers and increases their knowledge of the business. There are three interrelated analyses that are required for profit planning: (a) the profit "wheel"; (b) the cash wheel; and (c) return on equity (ROE) wheel. All profit plans can change, as managers' assumptions about the future and understanding of cause and effect relationships change. Sequence of Analysis Part A. Complete a profit plan for the children's book line what assumptions are made and identify which of these is critical to your analysis? Part B. Based on your analysis; prepare an agenda of the top three action items that Ramsey should discuss with George Gibson and Ted Rosenfeld during their upcoming meeting. Part A. Complete a profit plan for the children's book line What assumptions are made and which of these critical of these assumptions are critical to your

### 2.2.2 Review of Thesis

Thapa (2004) has conducted the research work on the "Profit Planning in Nepal Electricity Authority" for the partial fulfillment of MBS submitted to Shanker Dev Campus, Tribhuvan University. The study has covered a five years of period from FY 2055/56 to 2059/60.

The objectives are:

- To analyze the trend of Profit planning.
- To compare between production and sales plan.
- To examine the variation between production plan and actual production.

Major findings:

- NEA prepares both tactical and strategic profit plan but strategic plan is confined only to the top level executives.
- NEA sales revenue is in increasing trend during the study period.
- Operating costs have not been controlled effectively during the study period.
- NEA is not succeeding to achieve break even point in sales volume.
- NEA has not utilized its available capacity satisfactorily.
- NEA has not maintained sound liquidity during the study period.
- The net profit ration of NEA does not indicate the sound position of profit. NEA is bearing loss in next running years.
- NEA has not prepared plan and program for agriculture sector's consumption as well as not adopted the practice of preparing monthly budget which is necessary for planning \& control.
- There is lack of proper co-ordination between various directorates in regard of the goals, objectives and strategies.
- NEA has not considered demand determinates such as family income, price of electricity, connection charges, cost of alternatives available, cost of auto generation of electricity and reliability of NEA service while forecasting demand.
- All the expenses, such as manufacturing administrative and selling and distribution arc not separated systematically. Authority has combined all expenses together and named it "Operation and maintenance expenditure budget" like wise, operation and
maintenance expenditure is very high due to the higher amount of fixed cost and interest on long-term loan.

Rijal (2005) has conducted a research on "Cost Volume Profit Analysis a 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 tool in manufacturing industry and to analyze the CVP and it s impact in profit planning. For the practical fulfillment of MBS submitted to Shanker Dev Campus, Tribhuvan University, Rijal has analyzed the five years financial statement and has pointed out various objectives and findings:

The objectives are:

- To analyze the cost -volume -profit for the company.
- To compare between production and sales plan.
- To examine the variation between production plan and actual production.

The major findings are:

- 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 \& computer fees, deprecation interest, provident fund \& subsidies)
- Company has no any plan to reduce cost. There is lack of effective cost control programs or techniques.
- The profit trend of the company is not satisfactory. As compared to profit, proportion is very low with fluctuated trend.
- The company has no detailed of any systematic expenses plan. The fixed cost, variable cost, mixed expenses plan are the necessary elements for profit planning \& control.
- The company has no effective inventory policy. The inventory management, row material handling and controlling system are not efficient and 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.

Tiwari (2006) has submitted a research on "Profit Planning in Commercial Bank with a Case of Standard Chartered Bank Ltd." He has covered five years period from 2001/02 to 2005/06.

The objectives are:

- To analyze the profit planning tools for the bank.
- To analyze the cost -volume -profit for the bank.
- To segregate the costs of bank into fixed and variable costs and unit variable cost.

Major Findings are:

- Standard Chartered Bank Ltd concludes that the bank is keeping minimum number of employees but highly qualified for maintain the job. Bank is investing in NGOs and schools as well.
- The main sources of bank is customer deposit and loan advances and bill purchasing hold the highest outlet of resources deployment.
- There is no significant relationship between budgeted and actual LABP.
- There is no continuity in letter of credit amounts.
- It is increase or decrease in every year.
- The bank is in liquidity position and BEP suggest that it is in earning zone.
- The analysis of cash flow statement shows the bank has strong position in market.

Subedi (2007) has submitted a research on "A Comparative Study on Profit Planning of Nepal Bangladesh Bank and Everest Bank Ltd". The objectives are:

- To analyze the trend of Profit planning.
- To compare between deposit and loan and advance plan.
- To examine the variation between deposit and credit.

Major findings of the study are:
Subedi has pointed out various finding based on the analysis of data and information. He concludes that NBB has higher total revenue and total cost than NIBL. In result, profit is found higher in NBB. As for volume of loan and advance it is increasing every year in both banks. Deposit of both the bank is also increasing. The trend analysis result shows that the same amount of fluctuation of loan and advance of NBB is higher than that of NIBL.

Kharel (2008) has conducted a research on " Profit Planning of Commercial Banks in Nepal : A comparative study of Everest Bank limited, Nabil Bank limited, and Bank of Kathmandu Limited".

The main objectives of the study are:

- To find out the relationship between total investment, loan and advances, deposit , net profit and outside assets.
- To identify the investment priority sectors of Commercial Banks.
- To assess the impact of investment on profitability.
- To analyze and forecast the trend and structure of deposit utilization and its projection for five years of commercial banks.


## Major Findings:

- The liquidity position of NIBL is comparatively better than that of Nabil and Bok. In spite of the current ratio is average among the other two banks EBL has maintained the cash and bank balance to meet the customers demand.
- EBL has invested highest sectors like government securities than BOK and lesser portion than that of Nabil.
- From the analysis of assets management ratio it can be found that EBL is in better position as compared to that of Nabil and Bok.
- EBL has invested the highest portion of total working fund on government securities as compared to Nabil and BOK.
- Due to more efficient loan policy, Nabil suffers less from loan loss provision.
- BOK has higher investment on shares and debentures to total working fund ratio.
- The interest earned to total outside assets and return on total working fund ration of EBL is lowest of all.
- The return on loan and advances ratio and return on assets of EBL is lowest of all. The ratio suggests that the earning capacity of the banks loan and advances is satisfactory.
- The total interest paid to working fund ratio is less than the interest earned to total working fund ratio. So it is profitable position as it is getting higher return that is interest cost.
- The degree of risk is average on EBL. The credit risk ratio is higher than the compared banks. However the lowest C.V of credit ratio and average C.V of liquidity risk ratio and capital ratio over the study period provided for the assurance of consistency of the degree of risk.
- EBL has showing its good performance by increasing the total deposit loan and advances and investment in profitable sectors interested earnings by providing loan to clients.
- The trend of the total investment, total deposit loan and advances and net profit of EBL shows better position than that of Nabil and BOK.

Bajgai (2009) has conducted on " Profit Planning in Commercial Bank: A Case Study of Nepal Investment Bank Limited" :

Main objectives of the study are as follows:

- To focus the current profit planning premises adopted and its effectiveness in NIBL.
- To study the variance of budgeted and actual achievements.
- Te analyzes the growth of the business of the bank over the period.
- To provide suggestion and recommendations for improvements of the overall profitability of the bank.

Major findings are:-

- The bank is conscious about the human resources due to rapid growth and advent new branches. Develop skills to employees to empower them to provide excellent customer services banks supports to employees further advanced courses. Currently there are 622 employees over the 22 branches of NIBL and bank has aim to rise up to 50 branches with in the year 2010 A.D.
- The Bank is awarded "Bank of the year 2003, 2005, and 2008 "by the Londonbased Financial Times Group's, The Banker.
- The bank has awarded by "Best Presented Accounts Award -2006" by the institute of Charted Accountants of Nepal (ICAN)
- The bank has 2000 Million of authorized capital and the purposed amendment of authorized capital of bank is NRs 4000 million for the purpose of bonus share and issue of right share.
- The bank has $88 \%$ average contribution of customer deposit in the resources mobilization as per the data F/Y 2060/61 to 2064/065 and uses the other resources of $12 \%$ in average.
- NIBL is well performing in the deposit collection sector. Budgeted figure is higher than the actual deposit. The researcher have find (r) is 0.9977 and PE is 0.0014 . The figure of ' $r$ ' shows that there is positive perfect correlation between budgeted deposit and actual deposit. The relation of PE with r is $\mathrm{r}>6 \mathrm{PE}$, it is significant so the actual deposit going on same direction. The relationship between budgeted and actual amount deposit remains same the amount of deposit in F/Y 2065/066 will be RS 42599150 thousand stated by the regression line.

Sharmila, Rai (2010). "A Managerial Tool of Profit Planning and Control (With Reference to Himalayan Distillery Company Limited)".
Main objective

- To examine the practice of PPC in Nepalese manufacturing organizations.
- To examine the private contribution require meeting with BIMESTEC, W.T.O and other regional co-operations and treaties.
- To recommend the findings during research investigation.


## Major Finding

- The variance of $3.04 \%$ in the fiscal year $2007 / 08$ and $3.78 \%$ in the fiscal year 2008/09 verified that HDL was efficient in controlling expenses.
- None of the current ratios of HDL had met the standard ratio of $2: 1$. It can be concluded that HDL was not in the position to meet its current obligations and was finding great difficulties while paying bills.
- There is no separate department for planning purposes. The top level executives set up the specific goals and strategy.


### 2.3 Research Gap

Most of the previous research on this topic has been related to the profit planning system of manufacturing organization. However, the research done on the non-manufacturing organization such as banks are also very focus on the profit planning system and its practices in the respective bank. So far all the dissertations have conclude that there is no proper planning system and recommend for the effective implementation of profit planning system in the concerned organization.

This study will be a new one in this field. This study has tried to explore the profit trend and the allocation of resources in profit making and budgeting role in the effective formulation and implementation of profit planning. Finally, the study concludes with the various findings and recommendations. So this study will also be fruitful to those interested person parties, scholars, students, teachers, businessman and government for academically as well as policy perspectives

## CHAPTER - III

## RESEARCH METHODOLOGY

The main purpose of this chapter is to discuss the research methodology such as research design, population and sample. Data collection technique and analytical tools of the research study. It is widely accepted that research is simply the process of arriving at dependable solution to problem through the planned and systematic collection, analysis and interpretation of data. It is important tools for advancement of knowledge and accomplishment of purpose, thus research methodology is a way to systematically solve the research problem. It may understand as science of study how research is done scientifically" (Kothari, 1990 / Shakya 2008: 57). Research methodology, as a vital part of research study, describes the various sequential steps to be adopted by researcher in studying research problem along with the logical behind them.

This study has intense relation with application of planning and control in a commercial bank with a specific reference to Nepal Investment Bank and Nabil Bank regarding the objectives to analyze, examine and interpret the application of profit planning in the Bank. The Research methodology includes, research design, population and sample, data collection procedures and Tools and Techniques Used. . For our purpose the following steps provides useful procedural guidelines so far as research methodology is concerned

### 3.1 Research Design

A research design is simply the framework or plan for a study that guides the collection and analysis of data. "Research design is the plan structure and strategy of investigations conceived so as to obtain answers to research questions and to control variance" (Wolf and Pant, 2005:25). Various functional budgets and other related information and statement of the bank are the major materials of this study. Therefore, descriptive as well as analytical research design has been used. This study is a case study in nature. A true research design is basically concerned with various steps to collect the data for analysis and draw a relevant conclusion. Recommendation is another important aspect of design
strategy. The research design allows the researchers to take an appropriate measure and direction towards the predetermined goals and objectives. A research design is the arrangement of conditions for the collection and analysis of data in a manner to combine relevance to the research purpose with economy in procedure. Research design is the plan, structure and strategy of investigation imagines obtaining answers to research questions and controlling various things. This study is an examination and evaluation of budget process in profit planning program of Nepal Investment Bank and Nabil Bank. Various functional budgets and other related accounting information's and statement of Bank are the materials to analyze and evaluate the profit planning system of the Bank. Descriptive as well as analytical research designs have been adopted in this research. This is a case study research.

### 3.2 Population and Sample

Thirty One banks are in the operations but as the study concern with comparing the profit planning of two banks, as sample Nabil Bank and Nepal Investment Bank Ltd are taken using judgmental sampling method. The data presented in this study are secondary type. The annual reports of the concerned banks are the major sources of data for the study.

Annual reports of the banks are collected from the concerned bank, especially from their websites. Some of data are collected from central library at T.U as well as some data are obtained from the websites Nepal Stock Exchange (http://www.nepalstock.com), website of NIBL (www.nibl.org.com) and website of and website of NABIL Bank(www.nabilbank.com).

### 3.3 Analysis of Data

Data collected from various sources are managed, analyzed using various financial and statistical tools. Interpretation and explanations of results are made wherever necessary. Financial tools mainly ration analysis are used. Statistical tools used in this study are trend analysis, correlation analysis.

### 3.4 Period of the Study

This study covers the time period of 5 years for the purpose of trend analysis and the time period of one year for the purpose of short range profit plan analysis. Long range trends are taken from fiscal year 2004/05 to 2009/10. For short range plan the data are taken from F/Y 2009/10. Because there are two time dimension in profit planning i.e. long term and short term.

### 3.5 Tools and Techniques Used

For the research study various tools and techniques are being used. They are as follows:

### 3.5.1 Financial and Accounting Tools

## a) Ratio Analysis

"The relationship between two accounting figure, expressed mathematically is known as financial ratio (or simply as a ratio)"- I.M.Pandey. The technique of ratio analysis is a part of the whole process of analysis of financial statements of any business of industrial concern especially to take output and credit decision. The technique of ration analysis is of a considerable significance in studying the financial stability, profitability and the quality of the management of the business and industrial concern. Ration can be expressed in the ratio is used in this study are as follows:-

## b) Cost Volume Profit Analysis

"Planning controlling and decision making are the essential management functions Cost Volume Profit Analysis helps the manager to plan for profit to control cost \& make decision". "Cost volume profit analysis is applied specially for break even analysis and profit planning. Profit planning is fundamental part of overall management function. Profit planning can be done only when the management has the information about the cost of product fixed \& variable and selling price of the product. The most important factors that affect the planning for profit are costs fixed \& variable \& volume of sales

### 3.5.2 Statistical and Mathematical Tools

Statistical tools are mathematical measure of various variables, which help to estimate or predict of unknown value of one variable with help of other known variable. Similarly it helps to measure interrelationship of various variables. Following tools are used to analyze the date:-

## - Performance Measures

Performance measures reflect strategic, operating and financing decisions. Strategies involve critically important decision areas such as choice of product market areas which the firm conducts its operations whether to emphasize cost reduction or product differentiation, whether to focus on selected product areas or seek to cover a broad range of potential buyers etc.

## - Arithmetic Mean Average

The central values that represent the characteristics of the whole distribution or the values around which all items of the distribution tend to concentrate are called average. Arithmetic mean or arithmetic average is one of the important statistical measures of average. The arithmetic mean of a given set of observation is their sum divided by the number of observation.
Arithmetic Mean Average $=\quad \frac{\text { Sum of the observations }}{\text { Number of observation }}$

## - Trend Analysis

Trend analysis reflects the dynamic place of movements of phenomenon over a period of the time. This analysis simply finds out the increasing or decreasing trend of any particular item. It helps on forecasting so that proper strategy can be implemented to improve the situation.

The least squares method of trend analysis has been used to measure the trend behaviors of the banks. The data of last five years i.e. from 2004/05 to 2009/10 has been used to
measure the trend analysis. The straight line of analysis of data is represented by the following formula.
$Y=a+b x$

Where,
$\mathrm{a}=\frac{\sum \mathrm{Y}}{\mathrm{N}}$ and $\mathrm{b}=\frac{\sum \mathrm{XY}}{\sum \mathrm{X}^{2}}$

Here ' Y ' is used to designate the trend values to distinguish them from actual ' Y ' values; ' a ' is the intercept or the computed trend figure of the ' Y ' variable. when $\mathrm{X}=0$, ' b ' represents the stop of trend line of the amount of change in ' Y ' variable that is associated with a change of one unit in ' X ' variable. The ' X ' variable in time series represents times. While analyzing, trend, correlation between time ' X ' and other related variable is also calculated.

The significant of relationship (correlation) has been measured by using probable error (PE) and six time probable error 6 PE . Also to determine the co-efficient of $\mathrm{r}, \mathrm{r}^{2}$ has been calculated.

## - Correlation of Coefficient

Correlation analysis is a statistical tool. It is used to find the relationship between variables. If two quantities vary in such a way that movement in one are accompanied by movements in the other these quantities are correlated. It shows the effect on other variable due to the change in one variable. The degree of relationship between the variables under consideration is measured through the correlation analysis. Thus correlation is statistical device, which helps us in analysis the co-variation of two or more variables. Karl Pearson's Coefficient of correlation is widely used in practice. The Pearson's coefficient of correlation is widely used in practice. The Person's Coefficient of correlation is denoted by the symbol " r ". For the correlation analysis, in this study Karl Pearson correlation coefficient is used and it is computed by following direct method formula.
$r_{(X, Y)}=\frac{N \sum X Y-\sum X \sum Y}{\sqrt{N \sum X^{2}-\left(\sum X\right)^{2}} \sqrt{N \sum Y^{2}-\left(\sum Y\right)^{2}}}$

Where,
$r_{(x, y)}$ indicates correlation coefficient of two variables. The correlation coefficient always lies between +1 and -1 . It is perfectly correlated when $r$ is +1 , no correlation when $r=0$ and negative correlation when $r=-1$.

The other test is probable error of correlation coefficient. The probable error determines the reliability of an observed correlation coefficient. It is obtain by
P.E. $(\mathrm{r})=0.6745 \times \frac{1-r^{2}}{\sqrt{N}}$

Where,

$$
\begin{aligned}
& \mathrm{r}=\text { correlation coefficient between given variables } \\
& \mathrm{N}=\text { numbers of pairs of observation }
\end{aligned}
$$

- If $r$ < P.E, it is insignificant i.e. there is no evidence of correlation
- If $\mathrm{r}>6$ P.E, it is significant
- If P. E <r $<6$ P.E nothing can be concluded


### 3.5.3 Graphical Presentation

- Pie Chart
- Line Diagram
- Bar Diagram


## CHAPTER - IV PRESENTATION AND ANALYSIS OF DATA

This is the major part of the study and includes analysis of data and their presentation. This chapter helps researcher to reach into conclusion. Besides, it helps to make proper findings and recommendation.

### 4.1. Performance Measures

Performance measures reflect strategic, operating and financing decisions. Strategies involve critically important decision areas such as choice of product market areas which the firm conducts its operations whether to emphasize cost reduction or product differentiation, weather to focus on selected product areas or seek to cover a broad range of potential buyers etc.

For the study, performance measures are analyzed in two groups:

- Profitability ratios
- Valuation measures


### 4.1.1. Profitability Ratio

Every firm needs to earn profit for the survival. Without profit firm cannot operates its function smoothly and it is very hard to exit in the market. Therefore, creditors, owners and management of the firm all are interested in profitability of the firm. So, this ratio is used to measure the operating efficiency of the firm. The ratio came up with the result weather to retain, enlarge or decrease the investment or share of particular firm for the owner.

In this study, following ratios are used to measure the profitability ratio:

- Net profit margin
- Return on Asset
- Return on Equity
- Interest Earned to Total Assets
- Return on Total Deposit


### 4.1.1.1. Net Profit Margin

This ratio establishes relationship between the net profit and gross income of banks. The result indicates managerial efficiency in reducing operating cost. This ratio is calculated by dividing net income as shown below:

Net Profit Margin $=\frac{\text { Net Income }}{\text { Gross Earning }}$

Here, net income is obtain after deducting operating expenses, interest expenses and personnel expenses and non operating expenses along with provision such as tax, staff bonus and loan loss. Higher profitability ratio is preferable and indicates the higher efficiency of the bank.

Table 4.1
Net Profit Margin for NIBL and NABIL
(Rs. in Million)

| Fiscal Year | NPAT |  | Gross Income |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 351.00 | 416.24 | 948.00 | 1178.48 | 37.02 | 35.32 |
| $2006 / 2007$ | 501.00 | 455.32 | 1258.53 | 1415.80 | 39.81 | 32.16 |
| $2007 / 2008$ | 697.00 | 746.50 | 1665.86 | 2515.16 | 41.84 | 29.68 |
| $2008 / 2009$ | 900.62 | 1031.05 | 2110.23 | 3373.85 | 42.68 | 30.56 |
| $2009 / 2010$ | 1265.95 | 1138.57 | 2734.93 | 4722.39 | 46.29 | 24.11 |
|  |  |  |  | Total | 207.64 | 151.83 |
|  |  |  |  | Average | 41.53 | 30.37 |

Source: Annual Report of NIBL and NABIL, (www.nibl.com.np, www.nabilbank.com)

Table No. 4.1 shows the ratio of NIBL is in increasing trend after fiscal year 2005/06 up to fiscal year 2009/10. The highest ratio is $46.29 \%$ and lies in the final year of the study period and lowest ratio $37.02 \%$ lies in the FY 2005/06. The average ratio is $41.53 \%$. In the other hand, table shows that the ratio of NABIL is in fluctuating trend throughout the study period. It begins with $35.32 \%$ in the first year and ends with $24.11 \%$ in the final year. The average ratio is $30.37 \%$. This reveals that the average ratio of NIBL is greater by $11.16 \%$. The ratio is fluctuating trend, which indicated that profit throughout the
study period was not uniform. It was due lack of investment opportunity in the country because of internal conflict and political instability in the country.

Figure 4.1
Net Profit Margin for NIBL and NABIL


Source: Annual Report of NIBL and NABIL, (www.nibl.com.np, www.nabilbank.com)
Figure 4.1 shows that the ratio of NIBL's Net profit margin is higher than NABIL mort rend after fiscal year 2005/06 up to fiscal year 2009/10. The highest ratio is $46.29 \%$ and lies in the final year of the study period and lowest ratio $37.02 \%$ lies in the FY 2005/06 of NIBL, on the other hand, figure shows that the ratio of NABIL is in fluctuating trend throughout the study period. It begins with $35.32 \%$ in the first year and ends with $24.11 \%$ in the final year. It indicates that profitability position of NIBL is stronger than NABIL and earning sound profit with its effective operation.

### 4.1.1.2. Return on Assets (ROA)

This ratio measures the earning capacity of the bank by utilizing available resources i.e. total asset. This ratio is calculated by dividing net profit after tax by total asset as shown below.
Return on Assets $=\frac{\text { NPAT }}{\text { Total Assets }} \times 100$

## Table 4.2

## Return on Assets of NIBL and NABIL

(Rs. in Million)

| Fiscal <br> Year | NPAT |  | Total Assets |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 351.00 | 416.24 | 21330.00 | 12886.69 | 1.65 | 3.22 |
| $2006 / 2007$ | 501.00 | 455.32 | 27591.00 | 16739.71 | 1.81 | 2.71 |
| $2007 / 2008$ | 697.00 | 746.50 | 38873.00 | 32176.72 | 1.79 | 2.32 |
| $2008 / 2009$ | 900.62 | 1031.05 | 53010.80 | 40433.33 | 1.70 | 2.55 |
| $2009 / 2010$ | 1265.95 | 1138.57 | 57305.41 | 48040.92 | 2.21 | 2.37 |
|  |  |  |  | Total | 9.16 | 13.17 |
|  |  |  |  | Average | 1.83 | 2.63 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)
From the table no. 4.2 it is clear that both the bank ratios are fluctuating. The highest ratio $2.21 \%$ lies in the final year and lowest $1.65 \%$ lies in the FY 2005/06 for NIBL where as it stood $3.22 \%$ and $2.32 \%$ for the NABIL in the year 2005/06 and 2007/08 respectively. The average ratio of NIBL is $1.83 \%$ and $2.63 \%$ respectively.

Figure 4.2
Return on Assets of NIBL and NABIL


Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

Figure 4.2 shows Return on Assets is higher in NABIL than NIBL. The higher average of NABIL reveals that there is efficient utilization of total asset than NIBL. It means that it is earning a satisfactory level of return from assets as compare to NIBL.

### 4.1.1.3 Return on Equity or Net Worth

The return on equity measures the book return to the owners of the firm. It is a bottom line ratio "in that sense." ROE is obtained from the following formula:

$$
\text { Return on Equity }=\frac{\text { NPAT }}{\text { Shareholders equity or Net Worth }} \times 100
$$

Here, the shareholders equity includes common share capital, share premium, reserve and surplus less accumulated losses. This ratio is important from the view point of owners. The owner knows that how much earning is available to them. Therefore, higher ratio is desirable.

## Table 4.3

Return on Equity for NIBL and NABIL
(Rs. in Million)

| Fiscal Year | NPAT |  | Net Worth |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 351.00 | 416.24 | 1415.00 | 1314.19 | 24.81 | 31.67 |
| $2006 / 2007$ | 501.00 | 455.32 | 1878.00 | 1481.68 | 26.67 | 30.73 |
| $2007 / 2008$ | 697.00 | 746.50 | 2686.00 | 2437.20 | 25.95 | 30.62 |
| $2008 / 2009$ | 900.62 | 1031.05 | 4996.57 | 3130.20 | 18.02 | 32.93 |
| $2009 / 2010$ | 1265.95 | 1138.57 | 5672.71 | 3834.80 | 22.32 | 29.69 |
|  |  |  |  | Total | 117.77 | 155.64 |
|  |  |  |  | Average | 23.55 | 31.13 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

From the table 4.3 it is known that the ratio of NIBL is in fluctuating trend throughout the study. It is in increasing and decreasing trend throughout the study period. It happens so due to the fluctuating in net profit. As for the highest ratio it is $26.67 \%$ and lowest $18.02 \%$ lies in the FY 2007/08 and 2008/09 respectively. The average ratio of NIBL is
$23.55 \%$. As for NABIL the ratio is decreasing except in the FY 2008/09. The highest ratio is $32.93 \%$ and lowest is $29.69 \%$ which lies in the FY 2008/09 and 2009/10 respectively. The average ratio of NABIL is $31.13 \%$. This is greater by $7.58 \%$ than NIBL.

Figure 4.3
Return on Equity for NIBL


Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

Figure 4.3 indicates that the availability of return to equity holders is high in NABIL than NIBL. It means that profitability position is higher in NABIL. Therefore, NABIL is a profitable venture for the investor.

### 4.1.1.4. Interest Earned to Total Asset Ratio

This ratio reflects the extent to which the bank is successful in mobilizing its total assets to generate high income as interest. A high ratio is preferable and indicates high earning power of the bank on its assets employed and vice-versa. This ratio is calculated by using following formula:

Interest Earned
Interest Earned to Total Asset Ratio $=\square \times 100$
Total Asset

## Table 4.4

## Interest earned to Total Assets for NIBL and NABIL

(Rs. In Million)

| Fiscal Year | Interest Earned |  | Total Assets |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 520.17 | 1310.00 | 21330.00 | 12886.69 | 2.44 | 10.17 |
| $2006 / 2007$ | 657.24 | 1587.76 | 27591.00 | 16739.71 | 2.38 | 9.48 |
| $2007 / 2008$ | 719.30 | 1943.96 | 38873.00 | 32176.72 | 1.85 | 6.04 |
| $2008 / 2009$ | 3267.94 | 2798.49 | 53010.80 | 40433.33 | 6.16 | 6.92 |
| $2009 / 2010$ | 4653.52 | 4047.73 | 57305.41 | 48040.92 | 8.12 | 8.42 |
|  |  |  |  | Total | 20.95 | 41.03 |
|  |  |  |  | Average | 4.19 | 8.21 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)
From the table 4.4 it is clear that both the bank ratios are fluctuating. The ratio of NIBL is in downwards trend till FY 2007/08 but it increases in FY 2008/09 and FY 2009/10. The highest ratios $8.12 \%$ and lowest is $1.85 \%$ for NIBL. The average ratio is $4.19 \%$. In the other hand, NABIL has a decreasing trend except in the final year 2009/10. The ratio begins with $10.17 \%$ in the FY 2005/06 and ends up with $8.42 \%$ in the final year of the study period. The average ratio is $8.21 \%$ for NABIL and it is $4.23 \%$ greater than NIBL.

Figure 4.4
Interest Earned to Total Assets for NIBL and NABIL


Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

Figure 4.4 indicate that there is marginal difference in the ratio and suggest the mobilization of total asset is better in NABIL in the context of earning interest. With the view of performance NABIL is performing very impressive.

### 4.1.1.5 Return on Total Deposit

This ratio indicates how much return is generated through mobilization of total deposit. Higher ratio is desirable and indicates that mobilization of total deposit is very handy. This ratio is calculated by dividing NPAT by TD as shown below:

NPAT
Return on Total Deposit $=\square \times 100$
Total Deposit

Table 4.5
Return on Total Deposit for NIBL and NABIL
(Rs. In Million)

| Fiscal <br> Year | NPAT |  | Total Deposit |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 351.00 | 416.24 | 18927.00 | 13447.66 | 1.85 | 3.09 |
| $2006 / 2007$ | 501.00 | 455.32 | 24489.00 | 14119.03 | 2.05 | 3.22 |
| $2007 / 2008$ | 697.00 | 746.50 | 34451.00 | 31915.00 | 2.02 | 2.34 |
| $2008 / 2009$ | 900.62 | 1031.05 | 46698.10 | 37348.30 | 1.93 | 2.76 |
| $2009 / 2010$ | 1265.95 | 1138.57 | 50094.73 | 46410.70 | 2.53 | 2.45 |
|  |  |  |  | Total | 10.38 | 13.86 |
|  |  |  |  | Average | 2.08 | 2.77 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

From the table 4.5, it is clear that the ratio of NIBL is increasing except in FY 2008/09. The ratio begins with $1.85 \%$ and ends with $2.53 \%$ in the final year for NIBL. The average ratio of NIBL is $2.08 \%$. As for NABIL its ratio is in decreasing trend. In the first year it is $3.09 \%$ however, in the last year it decreases by $2.45 \%$ maintaining the average ratio up to $2.77 \%$ which is better by $0.69 \%$ than NIBL.

Figure 4.5
Return on Total Deposit for NIBL and NABIL


Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

Figure 4.5 indicates that the mobilization of total deposit is slightly good in NABIL than NIBL. As a result, higher return is generated in NABIL. Concerning this, it is concluded that the contribution of deposit in profit maximization is very low in NIBL. So, NIBL performance is not so good compare to NABIL.

### 4.1.1.6 Marginal Return to Equity

This ratio is formed by dividing change in Net Income by change in equity. The use of this ratio, mitigate some of the infirmities.

From the Appendix 1, the marginal return to equity of NIBL is $24.14 \%$ where as NABIL is $28.66 \%$. This ratio is greater by $4.52 \%$. The higher ratio of NABIL indicates that the return available to shareholder is very high in NABIL than NIBL. This mitigates some of the infirmities. This ratio is very favorable to equity holders and provides the information about the performance of the firm.

### 4.2 Valuation Ratio

This ratio are the most comprehensive measures of performance for the firm in that they reflect the combined influence of return and risk ratio.

### 4.2.1 Price/Earnings Ratio

Higher the risk and higher the discount factor results the lower the P/E ratio. The higher the growth rates of the firm, the higher the $\mathrm{P} / \mathrm{E}$ ratio. It is obtain as follows:

P/E Ratio $=\frac{\text { Market Price per Share }}{\text { Earning Per Share }} \times 100$

Table 4.6
Price/Earnings Ratio for NIBL and NABIL

| Fiscal Year | MPS |  | EPS |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 1260 | 2240 | 59.35 | 129.21 | 21.23 times | 17.34 times |
| $2006 / 2007$ | 1729 | 5050 | 62.57 | 137.08 | 27.63 times | 36.83 times |
| $2007 / 2008$ | 2450 | 5275 | 57.87 | 108.31 | 42.33 times | 48.70 times |
| $2008 / 2009$ | 1388 | 4899 | 37.42 | 106.76 | 37.1 times | 45.46 times |
| $2009 / 2010$ | 705 | 2384 | 52.55 | 78.61 | 13.42 times | 30.33 times |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

From the table 4.6 shows the P/E ratio of NIBL is increasing in the first three years afterwards it decreases for the last two years. The highest ratio is 42.33 times and lowest is 13.42 times and they are occurred in the FY 2007/08 and 2009/10 respectively It begins with 21.23 times in the starting year and reached to 13.42 times in the final year for NIBL. The ratio of NABIL is in fluctuating. It is in increasing and decreasing trend throughout study period. The highest ratio is 48.70 times and lowest is 17.34 times and they are occurred in the FY 2007/08 and 2005/06 respectively for NABIL. The overall performance of P/E ratio is greater in NABIL than NIBL in all years except in the first year. In the first year P/E ratio of NIBL is greater by 3.89 than NABIL. We can also see
that in the FY 2007/08 both banks get high P/E ratio It concludes that NABIL's growing rate is higher and has a huge opportunity for NABIL to enhance profitability.

### 4.3 Operating Efficiency Measures

This measures the operating efficiency of the firm. It includes

- Asset and Investment Management
- Cost management


### 4.3.1 Asset and Investment Management

This is also known as activity or turnover or utilization ratio. "These ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. This ratio is also called turnover ratio because they indicate the speed with which assets are being converted or turned over into sales. They not only analyze the use of the total resources of the firm but also the use of the components of total assets."

In this study, following mention activity ratios are used to analyze the data. In this study only the term loan and advances is used and it includes bills purchasing.

- Loan and Advances to Total Deposit Ratio
- Loan and Advances to Fixed Deposit Ratio
- Loan and Advances to Saving Deposit Ratio
- Investment to Total Deposit Ratio
- Interest Income to Total Loan and Advances


### 4.3.1.1. Loan and Advances to Total Deposit Ratio

This ratio examines successfulness of firm in mobilizing the total collected deposit in loan and advances to earn profit. This ratio is computed by dividing Loan and Advance by total deposit as shown below:

Loan and Advances
Loan and Advances to Total Deposit Ratio $=工 \times 100$

## Table 4.7

Loan and Advances to Total Deposit Ratio for NIBL and NABIL
(Rs. In Million)

| Fiscal <br> Year | Loan and Advances |  | Total Deposit |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 10801.31 | 7943.51 | 18927.00 | 13447.66 | 57.07 | 41.06 |
| $2006 / 2007$ | 17769.01 | 9855.41 | 24489.00 | 14119.03 | 72.56 | 42.22 |
| $2007 / 2008$ | 27529.30 | 18851.01 | 34451.00 | 31915.00 | 79.91 | 59.07 |
| $2008 / 2009$ | 36827.00 | 25648.01 | 46698.10 | 37348.30 | 78.87 | 68.67 |
| $2009 / 2010$ | 40948.00 | 32811.82 | 50094.73 | 46410.70 | 81.71 | 70.70 |
|  |  |  |  | Total | 370.12 | 281.72 |
|  |  |  |  | Average | 74.02 | 56.34 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table 4.7 shows the ratio of NIBL is in increasing trend. It begins with $57.07 \%$ in the beginning year and ends with $81.71 \%$ in the final year of the study period. The average ratio of NIBL is $74.02 \%$. As for NABIL, the ratio is in increasing trend throughout the year. The highest ratio is $70.70 \%$ in the final year $2009 / 10$ and lowest is $41.06 \%$ in the first year 2005/06. The average ratio of NABIL is $56.34 \%$. This ratio is less by $17.68 \%$ than NIBL. This concludes that the conversion rate of total deposit into loan and advances is high in NIBL than NABIL. The higher conversion ratio gives higher return because loan and advances is an income generating item. Therefore, it is concluded that the contribution of total deposit in maximizing profitability is high in NIBL.

### 4.3.1.2 Loan and Advances to Fixed Deposit Ratio

This ratio examines the contribution of fixed deposit in loan and advances. For this ratio, higher ratio is preferable. It is calculated by using following formula:

Loan and Advances
Loan and Advances to Fixed Deposit Ratio =


Fixed Deposit

## Table 4.8

Loan and Adv to Fixed Deposit Ratio for NIBL and NABIL
(Rs in Million)

| Fiscal <br> Year | Loan and Advances |  | Fixed Deposit |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 10801.31 | 7943.51 | 7242.35 | 2252.54 | 149.14 | 352.65 |
| $2006 / 2007$ | 17769.01 | 9855.41 | 7516.69 | 3310.57 | 236.39 | 297.70 |
| $2007 / 2008$ | 27529.30 | 18851.01 | 7944.23 | 8464.09 | 346.53 | 222.72 |
| $2008 / 2009$ | 36827.00 | 25648.01 | 11633.38 | 8310.71 | 316.56 | 308.61 |
| $2009 / 2010$ | 40948.00 | 32811.82 | 16825.15 | 14711.16 | 243.37 | 223.04 |
|  |  |  |  | Total | 1291.99 | 1404.72 |
|  |  |  |  | Average | 258.40 | 280.94 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

From the table 4.8 it is clear that the ratio of both the banks is in fluctuating trend. The highest ratio is $346.53 \%$ and lowest is $149.14 \%$ which occurs in the year 2007/08 and in $2005 / 06$ for NIBL. The highest ratio is $352.65 \%$ and lowest is $222.72 \%$ which occurs in the FY 2005/06 and 2007/08 respectively for NABIL. As for NIBL the highest ratio is $231.03 \%$ and lowest is $145.62 \%$ and they occur in the final year and beginning year respectively. The average ratio of NIBL is $195.83 \%$ which is lesser by $181.52 \%$ than NABIL. This shows the efficient mobilization of fixed deposit is in NABIL than NIBL. These deposits remain in the firm for a definite period of time and in return bank has to provide higher interest rate than other deposit. Therefore, maximum utilization is anticipated to maximize profitability by the higher conversion rate. The ratio shows in the case NIBL is holding fixed deposit more than NABIL.

### 4.3.1.3 Loan and Advances to Saving Deposit Ratio

This ratio indicates how efficiently saving deposit is used by bank to increase profit. This ratio is computed by using following formula:

Loan and Advances
Loan and Advances to Saving Deposit Ratio =


Saving Deposit

## Table 4.9

Loan and Advances to Saving Deposit Ratio for NIBL and NABIL
Rs In Million

| Fiscal <br> Year | Loan and Advances |  | Saving Deposit |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 10801.31 | 7943.51 | 6929.22 | 5229.72 | 155.88 | 151.89 |
| $2006 / 2007$ | 17769.01 | 9855.41 | 10742.33 | 5994.12 | 165.41 | 164.42 |
| $2007 / 2008$ | 27529.30 | 18851.01 | 13688.77 | 12159.97 | 201.11 | 155.03 |
| $2008 / 2009$ | 36827.00 | 25648.01 | 17066.25 | 14620.41 | 215.79 | 175.43 |
| $2009 / 2010$ | 40948.00 | 32811.82 | 14324.26 | 13783.59 | 285.86 | 238.04 |
|  |  |  |  | Total | 1024.05 | 884.81 |
|  |  |  |  |  |  |  |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table 4.9 shows that the ratio of NIBL is in increasing trend. It starts from $155.88 \%$ in the beginning year and ends at $285.86 \%$ in the final year of the study period. The ratio increases by $129.98 \%$ than the beginning year. The average ratio of NIBL is $204.81 \%$. As for NABIL the ratio is fluctuating. The highest ratio is $238.04 \%$ and lowest is $151.89 \%$ and lies in the year 2005/06 and 2009/10 respectively. The average ratio of NABIL is $176.96 \%$ which is less by $27.85 \%$ than NIBL. It concludes that the conversion rate of saving deposit to loan and advances is very high in NIBL and earns more profit.

### 4.3.1.4 Investment to Total Deposit Ratio

This ratio measures in what extent bank is able to mobilize its deposit on investment. Investment includes investment in Government's treasury bills, development bonds, other company shares and other types of investment. A higher ratio indicates managerial efficiency regarding the utilization of deposit and vice-versa. Therefore high ratio is desirable.
This ratio is obtained by dividing investment by total deposit as shown below:
Investment to Total Deposit Ratio $=\frac{\text { Investment }}{\text { Total Deposit }} \times 100$

Table 4.10
Investment to Total Deposit Ratio for NIBL and NABIL
(Rs. In Million)

| Fiscal <br> Year | Investment |  | Total Deposit |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 5653.98 | 6031.18 | 18927.00 | 13447.66 | 29.87 | 31.17 |
| $2006 / 2007$ | 6505.68 | 5835.95 | 24489.00 | 14119.03 | 26.57 | 25.00 |
| $2007 / 2008$ | 6874.02 | 9966.56 | 34451.00 | 31915.00 | 19.95 | 31.23 |
| $2008 / 2009$ | 7399.81 | 11428.00 | 46698.10 | 37348.30 | 15.84 | 30.60 |
| $2009 / 2010$ | 8635.53 | 13682.37 | 50094.73 | 46410.70 | 17.27 | 29.48 |
|  |  |  |  | Total | 109.5 | 147.48 |
|  |  |  |  | Average | 21.90 | 29.50 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table 4.10 shows that the ratio of NIBL is decreasing trend from the beginning FY to 2008/09.But it rises in the final year of the studied period by $1.43 \%$ than previous year. The cause of decreasing ratio is the high increasing trend pattern of total deposit of NIBL. The average ratio of NIBL is $21.90 \%$. In the other hand, the ratio of NABIL is much fluctuating. The lowest ratio is $25.00 \%$ and highest is $31.23 \%$ lies in the year 2006/07 and 2007/08 respectively. This is due to the fluctuating in investment. The average ratio of NABIL is $29.50 \%$ and this is greater by $7.6 \%$ than NIBL.

This concludes that NIBL is not as much impressive as NABIL in investing activities. The higher average suggests that NABIL is more successful in allocating its deposit in investment portfolio. Since, investing activities generates profit, more investment in fruitful sector is preferred.

### 4.3.1.5 Interest Income to total Loan and Advances Ratio

Interest income is generated out of the loan and advances made by the bank. Therefore, it is called yield on fund (YOF). This is obtained by dividing interest income by loan and advances as shown below:

Interest Income
Yield on Fund $=\longrightarrow$ Loan and Advances $\times 100$

Table 4.11
Interest Income to Total Loan and Advances for NIBL and NABIL
(Rs. in Million)

| Fiscal <br> Year | Interest Income |  | Loan and Advances |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 903.41 | 1310.00 | 10801.31 | 7943.51 | 8.36 | 16.49 |
| $2006 / 2007$ | 1584.99 | 1587.76 | 17769.01 | 9855.41 | 8.92 | 16.11 |
| $2007 / 2008$ | 2194.28 | 1943.96 | 27529.30 | 18851.01 | 7.97 | 10.31 |
| $2008 / 2009$ | 3267.94 | 2798.49 | 36827.00 | 25648.01 | 8.87 | 10.91 |
| $2009 / 2010$ | 4653.52 | 4047.73 | 40948.00 | 32811.82 | 11.36 | 12.34 |
|  |  |  |  | Total | 45.48 | 66.16 |
|  |  |  |  | Average | 9.10 | 13.23 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table no. 4.11 shows that the yield of loan and advances is fluctuating for NIBL. It means that earning from interest income is fluctuating. The highest yield is $11.36 \%$ in the final year and the lowest is $7.97 \%$ in the FY 2007/08. The average yield is $9.10 \%$. As for NABIL, the table shows that the yield of loan and advances is in decreasing trend up to FY 2007/08 from the beginning and slightly move upwards towards the final year of the study period. The highest yield is $16.49 \%$ in the beginning period and lowest is $10.91 \%$ in the FY 2008/09. The average yield is $13.23 \%$ for NABIL and is greater than NIBL. It concludes that earning from loan and advances as interest income is greater in NABIL. So, NABIL is earning more profit through this ratio.

### 4.3.2 Cost Effectiveness Measures

Cost plays a vital role in profit making. It has indirect relationship with profit. If it decreases at that time profit rises and vice-versa. Therefore, for profit to be occurred at satisfactory level cost should be controlled effectively. So, management always takes it very seriously. Under the cost effectiveness measures, banks look at two basic ratios. They are:

- Personnel Expense to Total Income Ratio
- Operation expenses to Total Operating Income Ratio


### 4.3.2.1 Personal expense to Total Income Ratio

This ratio determines how much part of the total income is being covered by the personnel expenses. The expenses include expenses related to personnel such as salary, allowance training expenses, uniforms, contribution to provident fund etc. A higher ratio is not desirable.

This ratio is calculated by dividing personnel expenses by total income as shown below:
Personal expenses to Total Income Ratio $=\frac{\text { Personnel Expenses }}{\text { Total Income }} \times 100$

Table 4.12
Personnel Expenses to Total Income Ratio for NIBL and NABIL
(Rs. In Million)

| Fiscal <br> Year | Personal Expenses |  | Total Income |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 70.92 | 210.58 | 1066.50 | 1178.48 | 6.65 | 17.87 |
| $2006 / 2007$ | 145.37 | 180.84 | 1246.03 | 1415.80 | 11.67 | 12.77 |
| $2007 / 2008$ | 187.15 | 262.91 | 1649.62 | 2515.16 | 11.35 | 10.45 |
| $2008 / 2009$ | 225.72 | 339.90 | 2110.23 | 3373.85 | 10.70 | 10.07 |
| $2009 / 2010$ | 279.85 | 366.94 | 2734.93 | 4722.39 | 10.23 | 7.77 |
|  |  |  |  | Total | 50.60 | 58.93 |
|  |  |  |  | Average | 10.12 | 11.77 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table 4.12 shows that the ratio of both banks is fluctuating. The highest ratio of NIBL is $11.67 \%$ and lowest is $6.65 \%$ and they lie in the FY 2006/07 and 2005/06. In the overall standing the ratio is over $5 \%$. The average ratio of NIBL is $10.12 \%$. As for the NABIL, the ratio is highest in the year 2005/06 with $17.87 \%$ and lowest in the year 2009/10 with $7.77 \%$. The average ratio is $11.77 \%$ which is greater than NIBL by $1.65 \%$. This result suggests that NABIL is investing large amount in personnel development. From the other perspective, it seems more satisfactory for employee and success of the organization to attract efficient manpower from outside and utilize their talent. It might have maintained
higher ratio to build the well employee management relationship, reduce the employees absenteeism and turnover for the further enhancement of profit.

### 4.3.2.2. Operating Expenses to Total Operating Income Ratio

This ratio determines the percentage of covering the cost through total operating income. For this ratio also higher ratio is not preferable. This ratio is computed by dividing office operating expenses by total operating income as shown below:

Operating Expenses
Operating Expenses to Total Operating Income Ratio $=$ $\times 100$

Total Operating Income

Table 4.13
Operating Expenses to Total Operating I Ratio for NIBL and NABIL
(Rs. In Million)

| Fiscal Year | Operating Expenses |  | Total Operating <br> Income |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 143.56 | 166.20 | 1063.55 | 1340.50 | 13.50 | 12.40 |
| $2006 / 2007$ | 243.43 | 153.37 | 1649.62 | 1333.65 | 14.76 | 11.50 |
| $2007 / 2008$ | 313.15 | 220.75 | 1246.03 | 1798.70 | 25.13 | 12.27 |
| $2008 / 2009$ | 360.53 | 265.20 | 2063.31 | 2220.98 | 17.47 | 11.94 |
| $2009 / 2010$ | 433.60 | 334.20 | 2734.93 | 2764.09 | 15.85 | 12.09 |
|  |  |  |  | Total | 86.71 | 60.2 |
|  |  |  |  | Average | 17.34 | 12.04 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table 4.13 shows that the ratio of both the bank is fluctuating. The highest ratio of NIBL is $25.13 \%$ and lowest is $13.50 \%$ which lies in the FY 2007/08 and 2005/06 respectively. The average ratio of NIBL is $17.34 \%$. Similarly, the ratio of NABIL is maximum $12.40 \%$ and minimum $11.50 \%$ which lies in the FY 2005/06 and 2006/07 respectively. The average ratio of NABIL is $12.04 \%$ which is lesser by $5.3 \%$ than NIBL. The ratio shows the pattern of controlling operating expenses and NABIL is very
efficient in controlling the expenses than NIBL. Therefore, NABIL is operating efficiently.

### 4.4. Financial Policy Measures

This ratio is related with the financial policy decisions. These must necessarily relate to strategic decisions as well as to investment management and cost management. Following ratios are used here to analyze financial policy measures:

- Leverage Factor Ratio
- Coverage Ratio
- Liquidity Ratio


### 4.4.1 Leverage Factor Ratio

This ratio measures the extent to which the shareholder's equity invested is magnified by the use of debt in financing total assets. Shareholder's earning and debt are the major two sources of financing total asset. The ratio is calculated by dividing total asset by net worth as shown in the following formula.

Total Asset
Leverage Factor Ratio $=\frac{}{\text { Net Worth }} \times 100$

Table 4.14
Leverage Factor Ratio for NIBL and NABIL
(Rs. in Million)

| Fiscal Year | Total Assets |  | Net Worth |  | Ratio in \% |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 21330.00 | 12886.69 | 1415.00 | 1314.19 | 15.07 | 9.80 |
| $2006 / 2007$ | 27591.00 | 16739.71 | 1878.00 | 1481.68 | 14.69 | 11.30 |
| $2007 / 2008$ | 38873.00 | 32176.72 | 2686.00 | 2437.20 | 14.47 | 13.20 |
| $2008 / 2009$ | 53010.80 | 40433.33 | 4996.57 | 3130.20 | 10.61 | 12.92 |
| $2009 / 2010$ | 57305.41 | 48040.92 | 5672.71 | 3834.80 | 10.10 | 12.53 |
|  |  |  |  | Total | 64.94 | 59.75 |
|  |  |  |  | Average | 12.99 | 11.95 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table no. 4.14 shows that the ratio of NIBL is in decreasing trend. Begins with $15.07 \%$ in the beginning FY year and ends with $10.61 \%$ in the final year of the study period. There is a $4.97 \%$ of decrement in the ratio when it reached up to final year. The average ratio of NIBL is $12.99 \%$.

As for the NABIL, the table shows that the ratio is in increasing trend from the beginning of the year to FY 2007/08. Then after, it starts decreasing. The highest ratio is $13.20 \%$ and lowest is $9.80 \%$ and they lie in the FY 2007/08 and 2005/06 respectively. The average ratio of NABIL is $11.95 \%$ which is $1.04 \%$ lesser than NIBL. This suggest that NIBL has slightly more than $12 \%$ of the financing of total asset comes from other sources than owner capital. Similarly, NABIL has slightly more than $11 \%$ of the financing comes from sources other than owner capital. This gives a picture of financial policy where NIBL is much reliable in external financing sources than NABIL.

### 4.4.2 Coverage Ratio

The coverage ratio measures the extent to which the firm's earning can decline without inability to meet annual interest costs. Failure to meet such obligations used in the formula to calculate this ratio because income taxes are computed after interest expenses is deducted, the ability to pay current interest is not affected by income taxes.

The formula for coverage ratio is computed by dividing EBIT by interest charges as shown below:
Interest Coverage Ratio $=\frac{\text { EBIT }}{\text { Interest Charged }} \quad \times 100$
"A higher ratio is desirable, but too much high ratio indicates that the firm is very conservative in using debt and that is not using credit to the best advantage of shareholders. A lower ratio indicates excessive use of debt or in efficient operation."

Table 4.15
Interest Coverage Ratio for NIBL and NABIL
(Rs. in Million)

| Fiscal <br> Year | EBIT |  | Interest Charged |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 1066.50 | 1178.48 | 401.40 | 462.08 | 2.66 | 2.55 |
| $2006 / 2007$ | 1246.03 | 1415.80 | 685.53 | 555.71 | 1.82 | 2.55 |
| $2007 / 2008$ | 1649.62 | 2515.16 | 992.16 | 758.44 | 1.66 | 3.31 |
| $2008 / 2009$ | 2110.23 | 3373.85 | 1686.97 | 1153.28 | 1.25 | 2.92 |
| $2009 / 2010$ | 2734.93 | 4722.39 | 2553.85 | 1960.11 | 1.07 | 2.41 |
|  |  |  |  | Total | 8.46 | 13.74 |
|  |  |  |  | Average | 1.69 | 2.75 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table 4.15 shows that the ratio of NIBL is decreasing trend from the beginning of the year up to the final year. The highest ratio is $2.66 \%$ and lowest is $1.07 \%$ in the FY 2005/06 and 2009/10 respectively. It suggests that the trend of debt is decreasing every year after the FY 2005/06. The average ratio of NIBL is $1.69 \%$. As for the NABIL, the ratio is fluctuating. The ratio is constant for the first two years and it increases to the FY $2007 / 08$. Then after, it decreases for the last two years. The highest ratio is $3.31 \%$ and lowest is 2.41 and they lies in the FY 2007/08 and 2009/10 respectively. It means that overall NABIL is using debt as financing sources. The average ratio of NABIL is $2.75 \%$ which is greater by $1.06 \%$ than NIBL. From the table, it is concluded that NIBL is using very much debt as external financial sources than NABIL. This ratio concludes that the trend of debt financing is higher is NIBL than NABIL as an external source of financing policy.

### 4.4.3 Liquidity Ratio

This ratio measures the firm's ability to meet current obligations. This ratio shows that how much liquid is the firm. As a commercial bank, it should have maintained satisfactory liquidity position. It means that bank should meet the obligation at due time. In this study current ratio and NRB Balance to Total Deposit are used to measure the liquidity position of the bank.

### 4.4.3.1 Current Ratio

This ratio measures the short-term solvency. It indicates the extent to which the claims of short term creditors are covered by assets that are expected to be converted to cash in a period roughly corresponding to the maturity of the claim. The ratio is calculated by dividing current asset by current liabilities as shown below:

## Current Assets <br> $C / R=\times 100$

Current Liabilities

The standard ratio is $2: 1$ for the study cash and bank balance, money at called credit are taken as current assets and deposit; other liabilities and bills payable are taken as current liabilities.

Table 4.16
Current Ratio for NIBL and NABIL
(Rs. in Million)

| Fiscal Year | Current Assets |  | Current Liabilities |  | Ratio in \% |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 6189.20 | 9570.92 | 7439.38 | 14286.98 | $0.83: 1$ | $0.67: 1$ |
| $2006 / 2007$ | 6915.00 | 10079.21 | 8928.25 | 15034.14 | $0.77: 1$ | $0.67: 1$ |
| $2007 / 2008$ | 9520.00 | 12013.98 | 10598.90 | 15511.63 | $0.90: 1$ | $0.77: 1$ |
| $2008 / 2009$ | 11756.00 | 15287.68 | 14696.48 | 19812.09 | $0.80: 1$ | $0.77: 1$ |
| $2009 / 2010$ | 14502.00 | 18622.90 | 16800.00 | 23583.90 | $0.86: 1$ | $0.79: 1$ |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The above table no. 4.16 reveals that the current ratio of NIBL is fluctuating. The highest ratio is 0.9 times and lowest is 0.77 times which is in the year 2007/08 and 2006/07 respectively. It clearly indicates that NIBL is not maintaining standard ratio. In the other hand, the ratio of NABIL is constant in every two FY which is shown above in table no. 4.32. It is constant in FY 2005/06, 2006/07 and 2007/08, 2008/09 respectively. The highest ratio is 0.79 times and lowest is 0.67 times. It clearly indicates that NABIL is also not maintaining standard ratio.

### 4.4.3.2 Nepal Rastra Bank Balance to Total Deposit Ratio

Commercial banks are required to hold certain portion of total deposit in NRB's account. It is done to ensure the smooth functioning and for a sound liquidity position of the bank. The ratio shows the percentage of amount deposited by the bank in NRB.

The ratio is calculated by dividing NRB balance by total collected deposit by respective bank.
NRBB to Total Deposit Ratio $=\frac{\text { Nepal Rastra Bank Balance }}{\text { Total Deposit }} \times 100$

Table 4.17
NRB Balance to Total Deposit Ratio for NIBL and NABIL
(Rs. In Million)

| Fiscal Year | NRB Balance |  | Total Deposit |  | Ratio in \% |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 1139.51 | 892.75 | 18927.00 | 13447.66 | 6.02 | 4.61 |
| $2006 / 2007$ | 1381.53 | 606.69 | 24489.00 | 14119.03 | 5.64 | 2.60 |
| $2007 / 2008$ | 1820.00 | 1829.47 s | 34451.00 | 31915.00 | 5.28 | 5.73 |
| $2008 / 2009$ | 4411.13 | 2648.60 | 46698.10 | 37348.30 | 9.45 | 7.09 |
| $2009 / 2010$ | 3237.22 | 549.45 | 50094.73 | 46410.70 | 6.46 | 1.18 |
|  |  |  |  | Total | 32.85 | 21.21 |
|  |  |  |  | Average | 6.57 | 4.24 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table 4.17 shows that the ratio of both banks is fluctuating. It is highest in the year 2008/09 which is $9.45 \%$ and lowest in the year 2007/08 which is $5.28 \%$ for NIBL. This is due to the fluctuation of NRB balance that holds by the bank. The average ratio of NIBL is $6.57 \%$. In the other hand the ratio of NABIL is in much fluctuating. The highest ratio occurs $7.09 \%$ in the FY 2008/09 and the lowest is $1.18 \%$ occurs in the final year. The average ratio of NABIL is $4.24 \%$ which is $2.33 \%$ lesser than NIBL. This ratio depicts that NIBL is using liquidity as a financial policy where as NABIL is not following it.

### 4.5 Income and Expenditure Analysis

Income and expenditure analysis is very crucial factor for the every business firm. From this analysis knows that their income and expenditure items very well. Besides, the trend of them is also known. By controlling the item, firm can generate more profit. This analysis is done in two parts. In the first part income is analyzed and in the second part expenditure is analyzed.

### 4.5.1 Income Analysis

Banks are the service oriented organization, they don't produce and sell product. They produce loan and advances, made investment in different sectors and render different services to earn returns. Normally, bank earns from the following sources:

- Interest Income
- Commission and Discount
- Income on Exchange Fluctuation
- Other Income

For the income high average is desirable for all the items. All the activities content in the income analysis table is deal in respective headings.

Table 4.18
Income Analysis of NIBL
(Rs. in Million)

| Income / Year | $\mathbf{2 0 0 5 / 0 6}$ | $\mathbf{2 0 0 6} / \mathbf{0 7}$ | $\mathbf{2 0 0 7 / 0 8}$ | $\mathbf{2 0 0 8} / \mathbf{0 9}$ | $\mathbf{2 0 0 9 / 1 0}$ | Ave (\%) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Interest Income | 903.41 | 1584.99 | 2194.28 | 3267.94 | 4653.52 |  |
| $\%$ | 82.53 | 82.05 | 83.06 | 87.14 | 87.99 | 84.55 |
| Commission and Discount | 96.84 | 163.90 | 215.29 | 183.04 | 242.89 |  |
| $\%$ | 8.84 | 8.48 | 8.15 | 4.88 | 4.59 | 6.99 |
| Income on Exchange <br> Fluctuation | 45.41 | 135.36 | 165.84 | 185.33 | 224.06 |  |
| $\%$ | 4.15 | 7.01 | 6.28 | 4.94 | 4.24 | 5.32 |
| Other Income | 48.90 | 47.32 | 66.38 | 113.97 | 168.31 |  |
| $\%$ | 4.47 | 2.45 | 2.51 | 3.04 | 3.18 | 3.13 |
| Total | 1094.56 | 1931.57 | 2641.79 | 3750.28 | 5288.78 |  |

Source: Annual Report of NIBL (www.nibl.com.np, www.nabilbank.com)

## Table 4.19

## Income Analysis of NABIL

(Rs. in Million)

| Income / Year | $\mathbf{2 0 0 5 / 0 6}$ | $\mathbf{2 0 0 6} / \mathbf{0 7}$ | $\mathbf{2 0 0 7 / 0 8}$ | $\mathbf{2 0 0 8 / 0 9}$ | $\mathbf{2 0 0 9 / 1 0}$ | Ave.(\%) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Interest Income | 1310.00 | 1587.76 | 1943.96 | 2798.49 | 4047.73 |  |
| $\%$ | 76.18 | 78.9 | 79.51 | 81.81 | 85.05 | 80.29 |
| Commission and Discount | 144.41 | 135.96 | 159.32 | 179.69 | 215.48 |  |
| $\%$ | 8.39 | 6.76 | 6.52 | 5.25 | 4.53 | 6.29 |
| Income on Exchange <br> Fluctuation | 144.08 | 157.32 | 196.49 | 251.92 | 291.44 |  |
| \% | 8.4 | 7.82 | 8.04 | 7.36 | 6.12 | 7.55 |
| Other Income | 121.1 | 131.53 | 145.13 | 190.51 | 204.10 |  |
| $\%$ | 7.05 | 6.53 | 5.94 | 5.57 | 4.29 | 5.88 |
| Total | 1719.59 | 2012.57 | 2444.9 | 3420.61 | 4758.75 |  |

Source: Annual Report of NABIL (www.nibl.com.np, www.nabilbank.com)

## Interest income

The main source of earning of the bank is interest income. A high average indicates that bank is earning more by investing in different sectors such as loan and advances, government securities, debenture, bonds, inter banking lending etc.

The table no. 4.18 shows the p.c. of interest income of NIBL is in increasing trend throughout the study period. It is increasing rapidly. The highest is $87.99 \%$ and lowest is $82.53 \%$ occurs in the FY 2009/10 and 2005/06 respectively. The average p.c. of NIBL is 84.55\%.

As for NABIL, table no. 4.19 the p.c. of interest income is also in increasing trend which is shown on table no. 4.36. The highest p.c. of interest income is $85.05 \%$ in the year 2009/10 and lowest $76.18 \%$ in the year 2005/06. The average p.c. of interest of NABIL is $80.29 \%$. This average is lesser by $4.26 \%$ than NIBL.

It concludes that NIBL might have focused more of its activities towards the lending and investment in government securities and earns more from interest income than NABIL.

## Commission and Discount

This is another source of income for a bank. Bank render various types of services to their customers such as remittance, guarantee, transfer, letter of credit, purchase and discount of bill of exchange facilities and other agency and merchant banking. For these services, bank takes some charges and it is known as commission and discount.

The table no. 4.18 shows that p.c. of commission and discount of NIBL is in decreasing trend from FY 2005/06 to the final year. The highest p.c. of earning from commission and discount is $8.84 \%$ in the year 2005/06 and lowest $5.59 \%$ in the FY 2009/10. The change in p.c. is very small except in the FY 2005/06. In 2005/06 the p.c. is increased by $1.85 \%$. The average p.c. of NIBL is $6.99 \%$.

As for NABIL the table no. 4.19 shows that p.c. of commission and discount is in decreasing trend from the year 2005/06 to the final year 2009/10. It is due the decreasing trend of earning from commission and discount. The highest p.c. is $8.39 \%$ in the FY $2005 / 06$ and lowest is $4.53 \%$ in the FY 2009/10. The average p.c. of NABIL is $6.29 \%$ which is lower by $0.70 \%$. This indicates that NIBL is earning slightly more than NABIL in commission and discount.

## Income on Exchange Fluctuation

One of the major sources of commercial bank is transaction of foreign currency. Both the banks are authorized by NRB to deal with foreign currencies. Income under the heading encompasses not only gain from sales of foreign currency, but also gain from revaluation of our currency i.e. foreign exchange fluctuation income also.

The table no. 4.18 shows that the p.c. of NIBL is in decreasing trend from the FY 2006/07 to the final year. The highest is $7.01 \%$ in the year 2005/06 and lowest is $4.15 \%$ in the first year. It indicates that the contribution of this item is being reduced in profit. The average p.c. of income on exchange fluctuation of NIBL is $5.32 \%$.

As for NABIL the table no. 4.19 reveals that the ratio is in decreasing trend except in the FY 2007/08. The highest p.c. is $8.4 \%$ in the FY 2005/06 and lowest is $6.12 \%$ in 2009/10. Overall bank is earning more by the involvement in this business. The average p.c. of NABIL is $7.55 \%$ which is greater by $2.23 \%$ than NIBL. It concludes that NIBL is earning twice as much as NIBL from this item.

## Other Income

The income which is not related to the above mention activities is assumed as other income. It involves revaluation gain, net income from sales of investment and asset, fixed asset written back etc.

The table no. 4.18 shows that the p.c. of NIBL is in increasing trend except 2005/06 as shown in the above table. The highest p.c. is $4.47 \%$ in the first year and lowest is 2.45 in the FY 2006/07 of the study. Overall the contribution of other income to profit is increasing every year. The average p.c. of NIBL is $3.13 \%$.

In the other hand, the table no. 4.19 shows that the ratio of NABIL is in increasing trend from the beginning year to the final year. The highest p.c. is $7.05 \%$ in the beginning year and lowest is $4.29 \%$ in the final year. It means that contribution from this item is reducing every year. The average p.c. of NABIL is 5.88 which is greater by $2.75 \%$.

This indicates fluctuating trend of NABIL does not affect its income more because it's still earning more than NIBL. The figure shown below shows the contribution in total income by each item.

Figure 4.6
Income Analysis for NIBL


Source: Table No. 4.18

The figure no. 4.6 shows the average contribution by each item in total income of NIBL. The figure reveals that the income interest and other income are the highest and lowest contributor respectively for the bank. The average income interest of NIBL is $85 \%$, Commission and discount is $7 \%$, where as income on exchange fluctuation is $5 \%$. In the other hand NIBL's other income is $3 \%$.

Figure 4.7
Income Analysis for NABIL


Source: Table No. 4.19

The figure no. 4.7 shows the average contribution by each item in total income of NABIL. The figure reveals that the income interest and other income are the highest and lowest contributor respectively for the bank. The average income interest of NABIL is $80 \%$. Commission and discount and Income on exchange fluctuation are equal $7 \%$ in the other hand NABIL's other income is $6 \%$.

Overall both figures show that NIBL is earning more from its interest income than NABIL where as NIBL seems very weak on earning from income on exchange fluctuation and other income.

### 4.5.2 Expenditure Analysis

These are the cost related to operating business firm. These costs are unavoidable. A higher cost gives lower profit and vice versa. Therefore, to earn more profit firm is eager to control unnecessary expenses. In this study following expenses items are analyzed in respective headings.

- Interest Expenses
- Personnel Expenses
- Operating Expenses
- Provisions
- Provision for Staff Bonus
- Provision for Income Tax
- Loan Loss Provision

Table 4.20

## Expenditure Analysis of NIBL

(Rs. in Million)

| Income / Year | $\mathbf{2 0 0 5 / 0 6}$ | $\mathbf{2 0 0 6 / 0 7}$ | $\mathbf{2 0 0 7 / 0 8}$ | $\mathbf{2 0 0 8 / 0 9}$ | $\mathbf{2 0 0 9 / 1 0}$ | Ave (\%) |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest Expenses | 401.40 | 685.53 | 992.16 | 1686.97 | 2553.85 |  |
| $\%$ | 37.34 | 45.75 | 48.31 | 57.01 | 62.55 | 50.19 |
| Personnel Expenses | 137.36 | 145.37 | 187.15 | 225.72 | 279.85 |  |
| $\%$ | 12.77 | 9.70 | 9.11 | 7.63 | 6.85 | 9.21 |
| Office Expenses | 193.59 | 243.43 | 313.15 | 360.53 | 433.60 |  |
| $\%$ | 18.01 | 16.25 | 15.25 | 12.18 | 10.62 | 14.46 |
| Provision for Staff Bonus | 55.10 | 72.34 | 102.00 | 129.86 | 189.82 |  |
| $\%$ | 5.13 | 4.83 | 4.97 | 4.39 | 4.65 | 4.79 |
| Provision for Loan Loss | 95.75 | 129.72 | 135.99 | 166.20 | 93.06 |  |
| $\%$ | 8.91 | 8.66 | 6.62 | 5.62 | 2.28 | 6.42 |
| Provision for Income Tax | 191.71 | 221.98 | 323.23 | 389.58 | 532.90 |  |
| $\%$ | 17.83 | 14.81 | 16.74 | 13.17 | 13.05 | 15.12 |
| Total | 1074.91 | 1498.37 | 2053.68 | 2958.86 | 4083.08 |  |

Source: Annual Report of NIBL (www.nibl.com.np)

Table 4.21
Expenditure Analysis for NABIL
(Rs. in Million)

| Income / Year | $\mathbf{2 0 0 5 / 0 6}$ | $\mathbf{2 0 0 6 / 0 7}$ | $\mathbf{2 0 0 7 / 0 8}$ | $\mathbf{2 0 0 8 / 0 9}$ | $\mathbf{2 0 0 9 / 1 0}$ | Ave (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest Expenses | 462.08 | 555.71 | 758.44 | 1153.28 | 1960.11 |  |
| $\%$ | 41.23 | 46.32 | 48.29 | 48.06 | 53.47 | 47.47 |
| Personnel Expenses | 210.58 | 180.84 | 262.91 | 339.90 | 366.94 |  |
| $\%$ | 18.79 | 15.08 | 16.74 | 14.17 | 10.01 | 14.96 |
| Office Expenses | 182.70 | 188.18 | 157.22 | 265.16 | 334.68 |  |
| $\%$ | 16.30 | 15.69 | 10.01 | 11.05 | 9.13 | 12.44 |
| Provision for Staff Bonus | 66.36 | 71.94 | 84.20 | 147.87 | 162.52 |  |
| $\%$ | 5.92 | 6.01 | 5.36 | 6.16 | 4.43 | 5.58 |
| Provision for Loan Loss | - | 1.05 | 4.21 | 45.72 | 355.83 | - |
| $\%$ | - | 0.09 | 0.27 | 1.91 | 9.71 | 2.40 |
| Provision Income Tax | 199.15 | 201.76 | 303.74 | 447.61 | 485.91 |  |
| $\%$ | 17.77 | 16.82 | 19.34 | 18.65 | 13.25 | 17.17 |
| Total | 1120.87 | 1199.48 | 1570.72 | 2399.54 | 3665.99 |  |

Source: Annual Report of NABIL (www.nabilbank.com)

## Interest Expenses

This cost is occur due to the activities related to customer deposits, loan and borrowings and inter branch transaction.

From the table no. 4.20 it is clear that the p.c. of NIBL is increasing. It starts its interest expenses p.c. with $37.34 \%$ and ends up with $62.55 \%$ in the final year. This is happened due to the deposit collection pattern or may be interest rate of the bank. The average p.c. of NIBL is $50.19 \%$.

As for the NABIL, the table no. 4.21 reveals that the ratio is also increasing. The lowest p.c. is $41.23 \%$ in the beginning year and highest is $53.47 \%$ in the final year. The average p.c. of NABIL is $47.47 \%$ which is lower by $2.72 \%$ than NIBL. It seems that NABIL is controlling the interest expenses where as NIBL is attracting depositors by giving high interest rates.

## Personnel Expenses

It is the expenses related to staff. It includes salary, allowance, training, uniform insurance, medical etc.

The table no. 4.20 shows that the p.c. of NIBL is decreasing trend from FY 2005/06. The highest p.c. is 12.77 in the year 2005/06 and lowest is 6.85 in the year 2009/10. This indicates that NIBL is motivating its staff every year from the beginning but comparing other expenses bank is not performing well in staff expenses. The average p.c. of NIBL is 9.21\%.

In the other hand, the table no. 4.21 shows that fluctuating trend of personnel expenses for NABIL. The highest is $18.79 \%$ in the year 2005/06 and lowest is $10.01 \%$ in the year 2009/10. It seems that NABIL is also motivating its staff by giving different facilities. The average p.c. of NABIL is $14.96 \%$. The average p.c. of NABIL is greater by $5.75 \%$ which indicates that NABIL is ahead in promoting its staff than NIBL.

## Operating Expenses

This is the expenses occurred on routine work. The table no. 4.20 shows that the p.c. of operating expenses of NIBL is decreasing. The highest ratio is $18.01 \%$ lies in the beginning year and ends with $10.62 \%$ in the final year. The average p.c. of NIBL is $14.46 \%$.

As for the NABIL, the table no. 4.21 shows decreasing trend. It starts from $16.30 \%$ in FY 2005/06 and ends with $9.13 \%$ in the final year. The highest p.c. is $16.30 \%$ in the FY 2005/06 and lowest is $9.13 \%$ in final year. The average p.c. of NABIL is $12.44 \%$ which is lower by $2.02 \%$. It concludes that NABIL is efficient in controlling the office operating expenses.

## Provisions

Firm should separate some amount to different provision like staff bonus, income tax, loan losses etc. Banks should distribute certain sum of their profit to their staff as a bonus in reward for their well performance. This plays key role in motivating them.

The table no. 4.20 reveals the p.c. of NIBL is in decreasing trend but in final year it slightly increased than previous year. The highest p.c. is $51.34 \%$ in the FY 2005/06 and lowest is 4.39 in FY 2008/09. In final year, it increases to $0.26 \%$ than previous year. The increasing trend indicates that bank is distributing its earning as bonus to the staff for motivating in this year. The average p.c. of NIBL is $4.79 \%$.

As for the NABIL the table no. 4.21 shows this ratio is more fluctuating. The p.c. is increased for first two years and thereafter it decreases in the FY 2007/08. However it p.c. moves down slightly in the final year. The highest p.c. is $6.16 \%$ in the year 2008/09 and lowest is $4.43 \%$ in the year final year. The average p.c. of NABIL is $5.58 \%$ which is greater by $0.79 \%$ than NIBL. It shows that NABIL staff is getting more bonus than NIBL.

Similarly the table no. 4.20 and 4.21 show that there is a provision of loan loss in case of happening in NIBL throughout the study period where as NABIL starts maintaining loan
loss provision from the FY 2006/07. This indicates that NIBL is little bit safe in the case of loan loss.

Paying income tax at the end of every FY is the duty of the loyal firm. In the case of NIBL, table no. 4.20 shows the p.c. of income tax is in fluctuating. It is due to the increment in operating profit. The highest is $17.83 \%$ in the FY 2005/06 and lowest is $13.05 \%$ in the FY 2009/10. The average p.c. of NIBL is $15.12 \%$.

As for the NABIL the table no. 4.21 shows that the p.c. is in fluctuating. In the final year it moves down heavily. The highest p.c. is $19.34 \%$ in the FY $2007 / 08$ and lowest is $13.25 \%$ in the year 2009/10. The average p.c. is $17.17 \%$ for NABIL which is greater by $2.05 \%$ than NIBL. It indicates that NABIL is paying more tax than NIBL. The Figure shown below shows the average expenses p.c. covered by each item.

Figure 4.8
Expenses Analysis for NIBL


Source: Table no. 4.20

The figure no. 4.8 shows the average expenses covered by each sector of NIBL. The figure shows that the interest expenses cover the highest area of the pie for the bank. The average interest expense of NIBL is $50 \%$, personnel expense is $9 \%$. However, NIBL is
expensing slightly higher in operating expenses which is $15 \%$, provision for staff bonus is $5 \%$, the provision for loan loss is $6 \%$ and. The provision of income tax is $15 \%$.

Figure 4.9
Expenses Analysis for NABIL


Source: Table no. 4.21

The figure no. 4.9 shows that the average expenses covered by each sector of NABIL. The figure shows that the interest expenses cover the highest area of the pie for the bank. The average interest expense is $48 \%$. The personnel expenses is $15 \%$, office expenses is $12 \%$. Similarly provision for staff bonus is $6 \%$. The pie shows that the provision for loan loss is $2 \%$ and the provision of income tax is $17 \%$.

### 4.6. Interest Spread Position

Interest spread is the difference amount obtained by subtracting total interest expenses from total interest income. Following tables shows the position of interest spread for NIBL and NABIL.

## Table 4.22

## Interest Spread Position for NIBL AND NABIL

(Rs. in Million)

| Fiscal <br> Year | Interest Income |  | Interest Expenses |  | Interest Spread |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 903.41 | 1310.00 | 401.40 | 462.08 | 502.01 | 847.92 |
| $2006 / 2007$ | 1584.99 | 1587.76 | 685.53 | 555.71 | 899.46 | 1032.05 |
| $2007 / 2008$ | 2194.28 | 1943.96 | 992.16 | 758.44 | 1202.12 | 1185.52 |
| $2008 / 2009$ | 3267.94 | 2798.49 | 1686.97 | 1153.28 | 1580.97 | 1645.21 |
| $2009 / 2010$ | 4653.52 | 4047.73 | 2553.85 | 1960.11 | 2099.67 | 2087.62 |
|  |  |  |  | Total | 6284.23 | 6798.32 |
|  |  |  |  | Average | 1256.85 | 1359.66 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table no. 4.22 shows that both the income interest and interest expenses of NIBL are increasing every year. The interest income for NIBL is Rs. 903.41, Rs. 1584.99, Rs. 2194.28, Rs. 3267.94 and Rs. 4653.52 respectively and interest expenses is Rs. 401.40, Rs. 685.53 , Rs. 992.16 , Rs. 1686.97 and Rs. 2553.85 respectively for FY 2005/06 to 2009/10. The position of Spread is also in increasing order and they are Rs.502.01, Rs.899.46, Rs. 1202.12 , Rs. 1580.97 and Rs. 2099.67 respectively.

As for NABIL, the table reveals that the pattern of interest income and interest expenses both are increasing trend. The income interest for NABIL from FY 2005/06 to the final year is Rs. 1310, Rs 1587.76 , Rs. 1943.96, Rs. 2798.49 and Rs. 4047.73 respectively. The interest expenses are Rs. 462.08, Rs. 555.71, Rs. 758.44 , Rs 1153.28 and Rs. 1960.11 from FY 2005/06 to 2009/10 respectively. The interest spread is Rs. 847.92, Rs. 1032.05, Rs. 1185.52, Rs. 1645.21 and Rs. 2087.62 respectively. The table shows that higher interest income and lowest interest expenses gives highest interest spread as output. The average interest spread of NABIL is higher than NIBL by 102.81. The interest spread shows NABIL is better positioned than NIBL. It suggests that NABIL has a sound performance.

The figure shown below gives the interest spread position of the respective banks.
Figure 4.10
Interest Spread Position of NIBL and NABIL


Source: Table no. 4.23

The figure no. 4.10 shows that the interest spread position of NIBL and NABIL. The figure shows the increasing trend of interest income and interest spread for NIBL. However, NIBL is successful in reducing interest expenses in the FY 2005/06 otherwise, its interest expenses is increasing every year. NIBL's interest spread is highest in the final FY. Similarly, the figure shows that the decreasing trend of interest income up to 2006/07 from the starting period for NABIL. Compare to NIBL, NABIL is promising in decreasing interest expenses. As NIBL, NABIL also has increasing trend of interest spread. This concludes that NIBL is not very successful in controlling the interest expenses than NABIL.

### 4.7. Burden

Burden is the overall expenses of the bank excepting interest expenses incurred for the payment at deposit interest. Net burden is net amount of burden cost obtained from
difference between other expenses and other income. The nature of this cost is semi fixed where as interest cost is variable cost.

Table 4.23
Net Burden for NIBL and NABIL
(Rs. In Million)

| Fiscal Year | Other Expenses |  | Other Income |  | Net Burden |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 193.59 | 182.70 | 48.90 | 121.1 | 144.69 | 61.60 |
| $2006 / 2007$ | 243.43 | 188.18 | 47.32 | 131.53 | 196.11 | 56.65 |
| $2007 / 2008$ | 313.15 | 157.22 | 66.38 | 145.13 | 246.77 | 12.09 |
| $2008 / 2009$ | 360.53 | 265.16 | 113.97 | 190.51 | 246.56 | 74.65 |
| $2009 / 2010$ | 433.60 | 334.68 | 168.31 | 202.10 | 265.29 | 132.58 |
| Total | 1544.3 | 1127.94 | 444.88 | 790.37 | 1099.42 | 337.57 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The table 4.23 shows the trend of net burden for NIBL and NABIL. The trend is increasing for NIBL. This is due to the increasing trend of other expenses. The highest net burden is Rs. 265.29 in FY 2009/10 and lowest is Rs. 144.69 million in FY 2005/06. As for NABIL, this trend is fluctuating.

The table no. 4.24 shows that NABIL is very successful in reducing net burden. The highest net burden is Rs. 132.58 in 2009/10 and lowest is 12.09 in the FY 2007/08. The net burden of NABIL is lesser in each year than NIBL

The figure shown below gives the Net Burden of the respective banks.
Figure 4.11
Net Burden for NIBL and NABIL


Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

The figure 4.11 shows the increasing trend of Net Burden of NIBL and fluctuating trend of NABIL. The figure shows NIBL has a large Net Burden than NABIL throughout the study. This concludes that NABIL is very successful in controlling the operating expenses than NIBL.

### 2.8. Break Even Analysis of NIBL and NABIL

The following assumptions are made for the break even analysis:

- Activity base is selected in terms of million.
- Cost volume structure is based on the data of FY 2009/10 and CD ratio and YOF is taken from the five years average.
- Net burden is treated as fixed cost and calculated in the basis of total other expenses, total other income of FY 2009/2010. Similarly, interest spread is calculated on the basis of total income and total interest expenses of FY 2009/2010.

From the Appendix 2, BEP analysis shows that the BEP in terms of loan and advances and total deposit are Rs. 5037.03 and Rs. 6804.96 million respectively for 2009/10. The safety margin and BEP for NIBL is Rs. 4195.15 and Rs. 458.37 million respectively. Since, it's a point of no gain and no loss below the BEP bank suffers from loss and above the BEP it enjoys profit and at the point it neither suffer nor enjoys. Therefore, BEP in terms of volume of loan and advances and total deposit is vital. The analysis shows that the volume is above the BEP point, so it is concluded that the trend of profit is appreciable and high.

From Appendix 3, the BEP analysis shows that the BEP in terms of loan and advances and total deposit are Rs. 1942.78 and Rs. 3448.31 million respectively for 2009/10. The safety margin and BEP for NABIL is Rs. 3790.17 and Rs. 257.03 million respectively. Since, it's a point of no gain and no loss below the BEP bank suffers from loss and above the BEP it enjoys profit and at the point it neither suffer nor enjoys. Therefore, BEP in terms of volume of loan and advances and total deposit is vital. The analysis shows that the volume is above the BEP point, so it is concluded that the trend of profit is appreciable and high.

The BEP shows the NABIL has a lower breakeven point than NIBL. The BEP volume of loan and advances and total deposit are also lower than NIBL. It suggests NABIL is earning more than NIBL.

### 4.9. Time Series Analysis

A time series may be defined as a collection of magnitudes belonging to different time periods, of some variable or composite of variables, such as production of still, per capita income, gross national product, price of tobacco or index of industrial production. It indicates that time series is formed by recording the values of variable at different period of time. The process of plotting the data on the graph and obtaining a trend line is known as trend projection. This is very important tool in forecasting. If the assumptions remain constant, it is able to forecast the variable in definite time period.

In this study, least square trend method is used for analyzing deposit, profit and loan and advances trend. The projection is based on following assumption:

- It assumes that everything remain constant.
- The bank will run in the present position.
- The economy will remain in the present stage.
- NRB will not change its guidelines for commercial banks.

If the above fact remains the straight line trend is represented by the equation $\mathrm{Yc}=\mathrm{a}+\mathrm{bX}$.

Where, $Y c$ is used to designate the trend values to distinguish them from the actual Y values, a is the $Y$ intercept or the computed trend figure of the $Y$ variable when $X=0, b$ is the slope of the trend line or the amount of change in $Y$ variable that is associated with a change of one unit in $X$ variable. In the series time is represented by $X$. To get the trend equation the value of constant and $b$ should be known and it is done by solving following two equations.
$\sum Y=N a+b \sum X \rightarrow e q^{n} .1$
$\sum X Y=a \sum X+b \sum X^{2} \rightarrow e q^{n} .2$

Where,
N represents number of years

$$
\sum X=0, \mathrm{a}=\frac{\sum Y}{N} \quad b=\frac{\sum X Y}{\sum X^{2}}
$$

The constant value of $a$ and $b$ is obtain by $a=\frac{\sum Y}{N}$ and $b=\frac{\sum X Y}{\sum X^{2}}$. Since, $\Sigma \mathrm{x}=0$ it eliminates $b \Sigma x$ from equation 2. Putting the value of a and b in the trend equation the required trend line is obtained i.e. $Y c=a+b X$.

### 4.9.1. Trend Analysis of Profit

The appendix 4 shows that the value of $a$ and $b$ are Rs. 743.11 million and Rs. 222.95 million respectively for NIBL. The trend of profit for the study period is increasing and average increment in profit is Rs. 222.95 million.

Hence, the trend equation of profit is $\mathrm{Yc}=743.11+222.95 \mathrm{X}$.
Similarly, the appendix 5 shows the value of $a$ and $b$ for NABIL is Rs. 757.54 and Rs. 202.04 million respectively. The profit trend is in increasing order for the study period and average increment is Rs. 202.04 million per year.

Hence, the trend equation of profit is $\mathrm{Yc}=757.54+202.04 \mathrm{X}$.

The following table and figure show Predicted values of the profit trend of NIBL and NABIL from the year 2010 to 2015.

Table 4.24
Predicted Values of Profit of NIBL and NABIL
(Rs.In Million)

| Fiscal Year | Predicted Profit of NIBL | Predicted Profit of NABIL |
| :---: | :---: | :---: |
| $2010 / 2011$ | 1411.96 | 1363.66 |
| $2011 / 2012$ | 1634.91 | 1565.7 |
| $2012 / 2013$ | 1857.86 | 1767.74 |
| $2013 / 2014$ | 2080.81 | 1969.78 |
| $2014 / 2015$ | 2303.76 | 2171.82 |

Source: - Appendix 4 and 5

The table 4.24 shows the forecasting of next five years profit on the basis of trend equation be Rs. 1411.96 , Rs. 1634.91 , Rs. 1857.86 , Rs. 2080.81 and Rs. 2303.76 million respectively. The forecasting of next five years profit for NABIL on the basis of trend equation be Rs. 1363.66, Rs. 1565.7, Rs. 1767.74, Rs. 1969.78 and Rs. 2171.82 million respectively.

## Figure 4.12

Trend of Profit for NIBL and NABIL


Source: Table 4.24

The figure 4.12 shows the increasing trend of profit for NIBL and NABIL. The trend analysis reveals that the present trend of profit is increasing for both banks. But if the volume of profit is compared NIBL seems better than NABIL. The trend shows both banks are in profitable position in present and future also.

### 4.9.2. Trend Analysis of Loan and Advances

The appendix 6 shows that the value of $a$ and $b$ are Rs. 26774.92 and Rs. 7935.14 million respectively for NIBL. The loan and advances pattern is increasing trend for the study period and the average increment is Rs. 7935.14 million per year.

Therefore, the trend equation of loan and advances be $\mathrm{Yc}=26774.92+7935.14 \mathrm{X}$ As for the NABIL the appendix 7 shows that the value of a and b is Rs. 19021.95 and Rs. 6552.92 million respectively. NABIL has increasing pattern of loan and advances and average increment is Rs. 6552.29 million every year.

Hence the trend equation of loan and advances by $\mathrm{Yc}=19021.95+6552.29 \mathrm{X} 3$

The following table and figure show Predicted values of the Loan and Advances trend of NIBL and NABIL from the year 2010 to 2015

Table 4.25
Predicted Values of Loan and Advances of NIBL and NABIL
(Rs. In Million)

| Fiscal <br> Year | Predicted Loan and Advances <br> for NIBL | Predicted Loan and <br> Advances for NABIL |
| :---: | :---: | :---: |
| $2010 / 2011$ | 50580.30 | 38680.70 |
| $2011 / 2012$ | 58515.5 | 45233.60 |
| $2012 / 2013$ | 66450.60 | 51786.60 |
| $2013 / 2014$ | 74385.80 | 58339.50 |
| $2014 / 2015$ | 82320.9 | 64892.40 |

Source: Appendix 6 and 7
From the table 4.25 the forecasting of next five years loan and advances for NIBL on the basis of trend equation be Rs. 50580.3, Rs. 58515.5, Rs 66450.6 , Rs. 74385.8 and Rs. 82320.9 million respectively. The forecasting of next five years loan and advances for NABIL on the basis of trend equation be Rs. 38680.70 , Rs. 45233.6 , Rs. 51786.6 , Rs. 58339.5 and Rs. 64892.4 million respectively. The trend shows that in future also the loan and advances will be increased every year.

Figure 4.13
Trend of Loan and Advances for NIBL and NABIL


Source: Table 4.25.

The figure 4.13 shows the present trend of loan and advances is increasing for both banks. But if the volume of loan and advances is compared NIBL seems better than NABIL in present as well in future.

### 4.9.3 Trend Analysis of Total Deposit

The appendix 8 shows that the value of a and b for NIBL is Rs. 34931.97 and Rs.8454.46 million respectively. The deposit of NIBL is increasing trend and the average increment is Rs. 8454.46 million per year.

Hence, the trend equation be $\mathrm{Yc}=34931.97+8454.46 \mathrm{X}$

The appendix 9 shows that the value of a and b is Rs. 19021.94 and Rs. 6552.92 million respectively. In average it is increasing by Rs. 6552.92 million every year.
Therefore, the trend equation be $\mathrm{Yc}=19021.94+6552.92 \mathrm{X}$
Table 4.26
Predicted Values of Total Deposit NIBL and NABIL
(Rs. In Million)

| Fiscal Year | Predicted Total Deposit for <br> NIBL | Predicted Total Deposit for NABIL |
| :---: | :---: | :---: |
| $2010 / 2011$ | 60295.40 | 52112.71 |
| $2011 / 2012$ | 68749.80 | 58926.08 |
| $2012 / 2013$ | 77204.30 | 65739.45 |
| $2013 / 2014$ | 85658.70 | 75552.82 |
| $2014 / 2015$ | 94113.20 | 79366.19 |

Source: Appendix 8 and 9

Table 4.26 shows the forecasting of total deposit for next five years be Rs.60295.4, Rs.68749.8, Rs 77204.3, Rs. 85658.7 and Rs. 94113.2 million respectively. The forecasting of deposit for NABIL for next five years will be Rs. 52112.71, Rs. 58926.08, Rs. 65739.45 , Rs. 72552.82 and Rs. 79366.19 respectively.

Figure 4.14
Trend of Total Deposit for NIBL and NABIL


Source: Table 4.26

The figure 4.14 shows the present trend of Total Deposit is increasing for both banks. But if the volume of Total Deposit is compared NIBL seems better than NABIL in present as well in future.

### 4.10 Correlation Analysis

Correlation refers to the degree of relationship between two variables i.e. independent and dependent variables. In between two variables increase or decrease in one cause increase or decrease in another. Then such variables are correlated variables. "Correlation analysis" is defined as the statistical techniques, which measures the degree and direction of relationship between the variables if two variables are so related that the change in value of one independent variable results, the change in value of dependent, then they are said to have correlation.

Correlation analysis may be defined as the degree of linear relationship existing between two or more variables. Two variables are said to be correlated when the change in the value of one variable is accompanied by the change of another. For the correlation
analysis, in this study Karl Pearson correlation coefficient is used and it is computed by following direct method formula.
$r_{(X, Y)}=\frac{N \sum X Y-\sum X \sum Y}{\sqrt{N \sum X^{2}-\left(\sum X\right)^{2}} \sqrt{N \sum Y^{2}-\left(\sum Y\right)^{2}}}$

Where,
$r_{(x, y)}$ indicate correlation coefficient of two variables. The correlation coefficient always lies between +1 and -1 . It is perfectly correlated when $r$ is +1 , no correlation when $r=0$ and negative correlation when $\mathrm{r}=-1$.

The other test is probable error of correlation coefficient. The probable error determines the reliability of an observed correlation coefficient. It is obtain by
P.E. $(\mathrm{r})=0.6745 \times \frac{1-r^{2}}{\sqrt{N}}$

Where,

$$
\begin{aligned}
\mathrm{r} & =\text { correlation coefficient between given variables } \\
\mathrm{N} & =\text { numbers of pairs of observation }
\end{aligned}
$$

- If $r$ < P.E, it is insignificant i.e. there is no evidence of correlation
- If $r>6$ P.E, it is significant
- If $\mathrm{PE}<\mathrm{r}<6$ P.E nothing can be concluded


## Correlation Analysis between Loan and Advance and Total Deposit

Appendix No. 10and 11 show the correlation between loan and advances with deposit is positive in both banks. That shows any change in deposit may change loan and advances in same direction. Since testing the significance of ' r ' $\mathrm{r}=0.99692>6 \mathrm{PE}=0.01113$ in NIBL but $\mathrm{r}=0.99>6 \mathrm{PE}=0.0219$ in NABIL. The co-efficient of correlation indicate that these variables are insignificant and conclusive relationship in NIBL but there is significant and inconclusive relationship between these variables in NABIL. Since coefficient of determinants, $\mathrm{r}^{2}=99.38 \%$, the change in deposit can explain the variation of loan and advances only by $99.38 \%$ remaining $0.62 \%$ are due to other factors in NIBL.

But $r^{2}=99.18 \%$ the change in deposit explain the variation of loan and deposits by $1.99 \%$, remaining are due to other error factors in NABIL.

The relationship shows that if deposit is increased loan and advances are also increase by $99.38 \%$ in NIBL and $99.18 \%$ in NABIL. The banks should mobilize the deposit towards the profitable projects as loan and advances. This will increased its interest income and total income also. The result highly significant indicates the correlation between loan and advances and total deposit. This suggest that the direct relationship between these two. So, to earn more profit collection of deposit must be maximum and the conversion rate of loan and advances will be higher.

From the correlation analyses that increase in total income also increase in net profit in both banks. Net profit is increasing each year because of increase in total income or reducing expenses. Increase on profit shows efficiency management and effective utilization of resources. To increase its profit more, the enterprises should either reduce its expenses or increase its total income

## Correlation Analysis between Loan and Advances and Profit

The appendix 12 shows the value of correlation coefficient and probable error is 0.9617 and 0.02266 for NIBL. The correlation coefficient is also greater than six times probable error. This indicates that correlation coefficient of NIBL is highly significant.

As for NABIL, the appendix 13 shows the value of correlation coefficient and probable error is 0.99160 and 0.00504 respectively. The correlation coefficient is also greater than six times probable error. This indicates that correlation coefficient of NABIL is highly significant. The result highly significant indicates the correlation between loan and advances and profit. This suggest that the direct relationship between these two. So, by the wide use of loan and advances the bank can generate profit.

The relationship shows that if profit is increased loan and advances are also increase by $92.49 \%$ in NIBL and $98.32 \%$ in NABIL. The banks should mobilize the deposit towards
the profitable projects as loan and advances. This will increased its interest income and total income also

### 4.11 Major Findings of the Study

On the basis of presentation and analysis of data following findings have been made.

- Average net profit margin of NIBL is greater than NABIL. This suggests that profitability position of NIBL is very strong than NABIL.
- The average value of return on asset of NABIL is greater than NIBL. It indicates that NABIL is successful in generating earning from efficient utilization of total asset than NIBL.
- The average value of ROE is greater in NABIL. It suggests that earning available to equity is better in NABIL than NIBL. The shareholder investing in NABIL is earning more than NIBL. Therefore, investing in NABIL share is very beneficial.
- The average interest earned to total asset ratio is higher in NABIL than NIBL. This reveals that both the bank is managing its asset successfully.
- Return on total deposit average ratio is greater in NABIL than NIBL. This reveals that NABIL is earning more from the deposit mobilization than NIBL.
- The position of marginal return to equity is greater in NABIL than that of NIBL by $4.52 \%$. This suggests that the shareholder of NABIL is earning more than NIBL from their share.
- The overall performance of P/E ratio of NIBL is increasing in the first three years afterwards it decreases for the last two years. The ratio of NABIL is in fluctuating. It is in increasing and decreasing trend throughout study period. The overall performance of P/E ratio is greater in NABIL than NIBL in last two years. In the first year P/E ratio of NIBL is greater by 3.89 than NABIL. We can also see that in the FY 2007/08 both banks get high $\mathrm{P} / \mathrm{E}$ ratio It concludes that NABIL's growing rate is higher and has a huge opportunity for NABIL to enhance profitability.
- The average value of loan and advances to total deposit is high in NIBL than NABIL. The higher conversion ratio gives higher return because loan and advances is an income generating item. Therefore, it concludes that the contribution of total deposit in maximizing profitability is high in NIBL. This means that converting deposit into loan and advances is higher in NIBL than NABIL. It clearly indicates that earning from interest income is higher in NIBL.
- Loan and Advances to fixed deposit average ratio of NABIL is greater than NIBL. This suggests the contribution of fixed deposit in loan and advance position is better in NABIL than NIBL.
- Loan and advances to saving deposit average ratio of NIBL is greater than NABIL. This suggests that utilization of saving deposit is very efficient in NIBL where as NABIL is not converting saving deposit into loan and advances efficiently.
- Investment to total deposit ratio indicates that average ratio of NABIL is higher than NIBL. This reveals that NABIL is utilizing its total deposit in investing activities more than NIBL. This also suggests that the contribution of investment in earning is very good in NABIL comparison to NIBL.
- Yield of fund average ratio of NABIL is heavier than NIBL. This shows that earning from loan and advances is greater in NABIL.
- Personnel expenses to total income ratio is higher in NABIL than NIBL by $1.65 \%$. This result suggests that NABIL is investing large amount in personnel development. From the other perspective, it seems more satisfactory for employee and success of the organization to attract efficient manpower from outside and utilize their talent. It might have maintained higher ratio to build the well employee management relationship, reduce the employees absenteeism and turnover for the further enhancement of profit.
- The pattern of controlling operating expenses of NABIL is very efficient in controlling the expenses than NIBL. Therefore, NABIL is operating efficiently.
- NIBL has slightly more than $12 \%$ of the financing of total asset comes from other sources than owner capital. Similarly, NABIL has slightly more than $11 \%$ of the financing comes from sources other than owner capital. This gives a picture of financial policy where NIBL is much reliable in external financing sources than NABIL.
- The average coverage ratio of NABIL is marginally heavier than NIBL. This suggests that debt financing is more in NIBL than NABIL. This indicates that the interest expenses lower the profit margin of NIBL.
- The current ratio of both the banks is below standard ratio. It indicates that liquidity position is not satisfactory for both banks.
- Holding cash balance in NRB is greater for NIBL than that of NABIL. It suggests that the capacity of NIBL in investing activities is little bit lower than NABIL. From this activity NIBL is losing opportunity to make more profit because these amounts remain idle and yield nothing.
- Interest income is the major sources of income for both the banks. Income analysis shows that the contribution of interest income is more in NIBL than NABIL. But NABIL is ahead in income on exchange fluctuation and other income than NIBL.
- An interest expense is the major expensing item for both banks. Expenses analysis show that NABIL is expensing more than NIBL for the first two years but for the last three years Interest expenses are high in NIBL than NABIL. In the case personnel expenses NIBL seems very efficient where as NABIL is very efficient in office expenses. NABIL has provision for staff bonus more than NIBL. NABIL also has higher provision for income tax than NIBL. However, in the case of provisions for loan loss NABIL is not maintaining it properly.
- The average interest spread position is very high in NABIL than NIBL. It indicates greater variance in interest income and interest expenses in NABIL.
- The BEP analysis shows that the BEP in terms of loan and advances and total deposit of NIBL are 5037.03 and Rs. 6804.96 million respectively. The safety margin and BEP for NIBL is Rs. 4195.15 and Rs. 458.37 million respectively The BEP analysis shows that the BEP in terms of loan and advances and total deposit of NABIL are 1942.78 and Rs. 3448.31 million respectively. The safety margin and BEP for NIBL is Rs. 3790.7 and Rs. 257.03 million respectively. The BEP shows that NABIL has a lower breakeven point than NIBL. The BEP volume of loan and advances and total deposit are also lower than NIBL. It suggests NABIL is earning more than NIBL..
- Trend analysis depicts that both the banks profit, loan and advances and total deposit trend is increasing every year in present as well as in future. The deposit trend shows that from the year 2012/13 NIBL overtakes the NABIL is collection of deposit. The standard error shows the liner relationship of variables with time in NIBL is far better than NABIL. The upper and lower limits predicated the forecasted values possibility of occurring with in the range.
- Correlation coefficient depicts both the banks relationship with loan and advances total deposit and profit to loan and advances is positive and P.E shows the significant relationship.


## CHAPTER - V <br> SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 5.1 Summary

Generally fund mobilizing means cash flow in the different sectors at profit motive. In the broadest sense it means, the sacrifice of certain current value for future value or possibly uncertain value. This research focuses on the comparative study of fund mobilization of two joint venture banks; NIBL and NABIL Bank Limited. The study focuses whether it is backward or forward in investing its fund efficiently in the business, industry and commerce. In this study NIBL is compared with the Nabil Bank Limited on their future fund mobilizing activities by collecting five years data from the year 2005/06 to 2009/10. Both banks have strong position in the market with new banking system and their activities. Nowadays there is very much competition in banking market but less opportunity to make investment. In this condition, joint venture bank can take initiation in search of new opportunities, so that they can survive in the competitive market and earn profit. But investment is a very risky job. For a purposeful, safe, profitable investment bank most follows sound investment and fund mobilizing policy.

Deposit utilization is always related with risks and returns. It is appropriate to state that the objective is to make a lot of money by recognizing the possible losses. Fund mobilizing policy also involves the identification of the potential categories of financial assets for consideration in the ultimate portfolio.

The main objective of the study is to analyze the deposit mobilizing policy adopted by NABIL and NIBL Bank Limited. Investment to total deposit ratio indicates that average ratio of NABIL is higher than NIBL. This reveals that NABIL is utilizing its total deposit in investing activities more than NIBL. This also suggests that the contribution of investment in earning is very good in comparison to NIBL. Yield of fund average ratio of NABIL is heavier than NIBL. This shows that earning from loan and advances is greater in NABIL. Personnel expenses to total income ratio is higher in NABIL than NIBL by
$1.65 \%$. This suggests that NIBL is controlling cost low than NABIL. This contributes for the increment of profit. However, it might be the case of maintaining policy of motivating staff by different facilities and reducing absenteeism and increase turnover in the case of NABIL.

The average value of operating expenses to total operating income is higher by $5.30 \%$ in NIBL than NABIL. This suggests that in the case of controlling operating expenses NABIL is efficient than NIBL. The leverage factor ratio of NIBL is decreasing every year where as NABIL is increasing. This revels that debt financing is decreasing in NIBL every year where as increasing in NABIL. The average coverage ratio of NABIL is marginally heavier than NIBL. This suggests that debt financing is more in NIBL than NABIL. This indicates that the interest expenses lower the profit margin of NIBL. The current ratio of both the bank is below standard ratio. It indicates that liquidity position is not satisfactory for both banks. Holding cash balance in NRB is greater for NIBL than that of NABIL. It suggests that the capacity of NIBL in investing activities is little bit lower than NABIL. From this activity NIBL is losing opportunity to make more profit because these amounts remain idle and yield nothing.

Interest income is the major sources of income for both the banks. Income analysis shows that the contribution of interest income is more in NIBL than NABIL except in first year. But NABIL is ahead in income on exchange fluctuation and other income than NIBL. An interest expense is the major expensing item for both banks. Expenses analysis show that NIBL is expensing more than NABIL on this item. In the case personnel expenses NIBL seems very efficient. Both banks are equal in office expenses. NABIL has provision for staff bonus higher than NIBL. NABIL also has higher provision for income tax than NIBL. However, in the case of provisions for loan loss NABIL is not maintaining it properly.

### 5.2 Conclusion

From the analysis and interpretation of the data of respective banks with different angles, is very competitive. But NABIL is a head in the performance where as the performance of NIBL is appreciable. NIBL interest earning capacity is very impressive than NABIL from total asset and net profit margin is also appreciable than NABIL. NIBL is still behind return on asset, return on equity, return on deposit and marginal return to equity. The valuation ratio shows that P/E ratio in NIBL is better than NABIL.

In the case of operating efficiency measures, both banks seem vary challenging. It means that the operation of both banks is efficient. NIBL is ahead in loan and advances to total deposit and loan and advances to saving deposit where as NABIL overtakes the operation in loan and advances to fixed deposit and investment to total deposit ratio.

The cost effective measures shows that the personnel expenses of NIBL is lower than NABIL. The lower cost gives higher yield of return. It seems that, NIBL is earning more than NABIL by lowering its personnel expenses low. However, NIBL is not very effective in controlling the operating expenses because the operating expense of NIBL is more than NABIL. But the overall cost is lower in NIBL. From the view of financial policy measure, it seems that NIBL is using more debt than NABIL.

Income and Expenses analysis reveals that the trend of income and expenses of NIBL is increasing every year. The main sources of income and expenses are interest income and interest expenses and NABIL is successful in reducing the expenses. However, its income is reduced in 2005/06 but after then it keeps its earning momentum but the growing p.c. is low.

BEP analysis shows that both the banks are in earning trend. The trend analysis gives the hint that both the bank has increasing trend of profit. Loan and advances, deposit at present as well as in future.

Finally, Correlation analysis shows the relationship between loan and advances and total deposit, loan and advances and profit. The probable error shows the highly significant relationship of analyzed variables.

### 5.3 Recommendations

On the basis of analysis and findings of the study following recommendations can be made to overcome weakness, inefficiency and to improve profit planning of the banks.

## 1. Improve Income for Sound Performance

The performance measure ratio such as ROA, ROE, return on total deposit, margin return to equity is higher in NABIL than NIBL except net profit margin. This concludes that NIBL's performance is lower than NABIL. So, for the sound performance NIBL have to increase its income through proper utilization of total asset, shareholders fund and total deposit.

However, in the other hand, NIBL's interest earned to total asset is slightly higher than NABIL. Therefore, NABIL have to improve interest earning through efficient utilization of total asset.

## 2. Identify New Investment Areas

The valuation measures depicts that NABIL's growing rate is very higher compare to NIBL. Therefore, NIBL have to identify new investment areas to grow its market share. The new investment areas may be investing in sports, commercial buildings, information technology etc which helps in increasing its goodwill among public.

## 3. Maintain Optimum Conversion Ratio

The total deposit and saving deposit to loan and advances ratio of NIBL is higher compare to NABIL where as NABIL is ahead in fixed deposit to loan and advances ratio. Therefore, NABIL must increase its activity of converting total deposit and saving deposit into loan and advances. In the other hand, NIBL has to increase its conversion of fixed deposit into loan and advances. In doing so, both the bank must maintain standard ratio.

## 4. Cost control

NABIL is expensing more on personnel departments and less on operating expenses than NIBL. For the higher profit, both the cost should be control efficiently. The expenses of personnel department motivate the staff and increase turnover where as operating expenses helps in smooth operation of the firm. NIBL must diagnose its loopholes and control the cost. In other hand, NABIL must control its personnel department cost by eliminating the unnecessary facilities.

## 5. Minimize Debt Financing

NIBL is using debt financing policy widely as an external source of investment than NABIL. NIBL should aware about its impact on the share holder's return because more include of debt in capital structure decreases profit. Therefore, NIBL must decrease debt financing and increase shareholders equity to fulfill the capital.

## 6. Maintain Standard Current Ratio

Both the bank is unable to maintain the standard current ratio. This shows that both the bank financial position is not so good. Therefore, both banks must take the major decision to improve and maintain standard current ratio. For doing so, banks have to increase its current asset and try to reduce its current liabilities.

## 7. Invest Bank's Idle NRB Cash Balance

The NRB cash balance of NIBL is higher than NABIL. This balance yields nothing for bank but fulfill liquidity position of the bank. Therefore, NIBL must invest this idle balance in productive areas such as govt. securities, bonds, debenture and marketable securities so that it can convert them at any time.

## 8. Improve Linear Relationship between Variables

NIBL has a better linear relationship of variables than NABIL. Therefore, NABIL must improve its linear relationship of variables by minimizing the deviation in actual values.

## 9. Lower the BEP

BEP of NABIL is lower than NIBL. It suggests NABIL is earning more than NIBL. So, to compete with NABIL, NIBL must decrease its BEP by increasing its interest income and lowering its interest expenses so that it gets higher interest spread position.

## 10. Improve interest Spread Position

The interest spread position of NIBL is lower compare to NABIL. Therefore, NIBL must increase its interest spread position by increasing interest income through wide range of distribution of loan and advance and try to decrease interest expenses.

## 11. Maintain Provision of Loan Loss

NIBL is maintaining a loan loss provision regularly where as NABIL is not giving priority to maintain provision. Therefore, it is recommended that NABIL must maintain proper provision of loan and advances to reduce risk.

## 12. Reduce Current Practices of Focusing in Central Development Region

Both the bank should enhance profit through wide coverage of the market by establishing its branches in different development region. Both the banks must focus to operate its services in far western and eastern development region also.

## BIBLIOGRAPHY

## Books

Batty, J. (1974). Industrial Administration and Management. (3 ${ }^{\text {rd }}$ edition). McDonald and Evans.

Baxley, J. B. (1987). Banking Management. New Delhi: Subject publication.
Benerjee, S.K. (1998). Financial Management. New Delhi: S. Chand \& Company Ltd., Ram Nagar.

Bhalla, V.K. (1997). Investment Management. (4 $4^{\text {th }}$ edition). New Delhi: S. Chand \& Company Ltd.

Brigham, E.F. (1983). Financial Management. New York: A Harcourt Publishers International Company.

Brown, R. \& Howard, (1969) Principles and Practice of Management Accountancy. London English Language Book Society.

Charles, J.P. (1999). Investment Analysis and Management. Bombay: Himalayan Publishing House.

Chaudhary, A.K. \& Sharma, P. K. (2058). Statistical Methods. (1 ${ }^{\text {st }}$ edition). Kathmandu: Khanal Books Prakashan.

Cheney, J.M. \& Moses, E.A. (1983). Fundamental of Investment. New York: St. Paul;West Publishing Company.
Crosse, H.K. (1963). Management Policies for Commercial Banks. (2 ${ }^{\text {nd }}$ edition). New Jersey: Englewood Cliffs, Prentice Hall, Inc.

Dangol, R.M. (2061). Management Accounting. Kathmandu: Taleju Prakashan Bhotahity.
Desai, V.R.M. (1967). Banking Development in India. Bombay: Pc Mansktol and Sons Pvt. Ltd.

Drucker, P.F. (1954). The practice of Management. New York: Harper \& Raw Publishers.
Francis, J.C. (1991). Investment Analysis and Management. New York: Mc Graw Hill, International Edition.

Gittman \& Jochnk, L.J. (1990). Fundamental of Investment. (4 $4^{\text {th }}$ edition). New York: Harper and Row Publisher.

Gupta, G.P. (1984). Banking System, its Role in Export Development. New Delhi: S. Chand and Company.

Kothari, C.R. (1992). Quantitative Techniques. New Delhi: Vikash Publishing House Pvt. Ltd.

Merriam, G.C. (1975). Webster's New Collegiate Dictionary. (8 $8^{\text {th }}$ edition). New York: Springfield,
Munakarmi, S.P. (2002). Management Accounting. (1 $1^{\text {st }}$ edition). Kathmandu: Buddha Academic Enterprises Pvt. Ltd.
Pandey, I.M. (1975). Financial Management. ( $7^{\text {th }}$ Revised edition). New Delhi, Vikash Publishing House Pvt. Ltd.

Pradhan, R.S. (1998). Financial Management Practice in Nepal. New Delhi: Vikash Publishing House.

Reed, E.W.G., Edward, K., Cotter, R.V. \& Smith, R.K. (1980). Commercial Banking. (2 $2^{\text {nd }}$ edition). New Jersey: Prentice Hall, Inc. Englewood Cliffs.

Reilly, F.K. (1998). Investment. Japan: The Dryden Press, CBS Publishing.
Richard, L.I. \& David, RS. (1991). Statistics for Management. New Delhi: Prentice Hall of India Pvt. Ltd.

Sharpe, J.W. \& Gorden, J.A. (1996). Investment. ( $5^{\text {th }}$ edition). New Delhi: Prentice Hall of India.

Shrestha, S. (1995). Portfolio Behavior of Commercial Banks in Nepal. Kathmandu: T.U.

Shrestha, S. (1996). Investment Planning of Commercial Banks in Nepal. Kathmandu: T.U.

Singh, P. (1998). Investment Management. Bombay: Himalayan Publishing House.
Swamy, R. \& Basudeven, S.V. (1979). A Text Book of Banking; Law, Practice and Theory of Banking. S. Chand \& Company Ltd. India.

The American Bankers Association. (1972). Principle of Bank Operation. New York: American Institute of Banking.

Welsch, G., Hilton, R.W. \& Gordon, P.N. (2006). Budgeting Profit Planning Control. (updated edition). New Delhi: Prentice Hall of India.
Weston \& Bigham, (1980). Managerial Finance. (7 $7^{\text {th }}$ edition). USA: The Dryden Press, Hinsdale Illions.

Wolf, H.K. \& Pant, P.R. (2005). A Hand Book for Social Science Research and Thesis Writing (4 $4^{\text {th }}$ edition). Kathmandu: Buddha Academic Publishers and Distributors Pvt. Ltd.

## Journals \&Articles

A Daily Economic Journal (Various Issues) Aarthik Abhiyan .Kathmandu: New Business Age, Dillibazzar.

Bajracharya, B.B. (2047). Monetary Policy and Deposit Mobilization in Nepal. Kathmandu: Rajat Jayanti Smarika, Rastriya Banijya Bank.
Bhatta, G. (1999). Financial Policies to Prevent Financial Crisis. Kathmandu: 47 ${ }^{\text {th }}$ Edition.

Chopra, S. (1989). Role of Foreign Banks in Nepal. Kathmandu: Nepal Rastra Bank Samchar NRB.

Grywinski, R. (1991). The New Fashioned Banking. London: Howard Business Review.
NABIL Bank Limited, (2005/06 to 2009/10). Annual Report. Kathmandu.
Nepal Investment Bank Limited, (2005/06 to 2009/10). Annual Report Kathmandu.
Nepal Rastra Bank, (2006). Rastra Bank Samachar, Kathmandu: NRB.
Sharma, B. (2000). Banking the Future on Competition. Kathmandu: Business age.
Shrestha, R.L. (1988). A Study on Deposit and Credits of Commercial Banks in Nepal. Kathmandu: Nepal Rastra Bank Samachar.

Shrestha, S. (1997). Lending Operations of Commercial Banks of Nepal and its Impact on $G D P$. Kathmandu: The Business Voice of Nepal (the special issue of Banijya Sansar) T.U.

Shrestha, S. R. (2055). Portfolio Management in Commercial Bank Theory and Practice. Kathmandu: Nepal Bank Patrika, Baisakh Masanta.

## Thesis

Bajgai, G. (2009). Profit Planning In Commercial Bank: A Case Study of Nepal Investment Bank Limited. An Unpublished MBS Thesis, Submitted to Faculty of Management Shankar Dev Campus, T.U.
Kharel, S. (2008). Profit Planning of Commercial Banks in Nepal : A Comparative Study of Everest Bank limited, Nabil Bank limited, and Bank of Kathmandu Limited. An

Unpublished MBS Thesis, Submitted to Faculty of Management Nepal Commerce Campus, T.U.

Rijal, M. (2005). Cost Volume Profit Analysis as a Toll to Measure the Effectiveness of Profit Planning and Control: A Case Study of NEBICO Pvt. Ltd. An Unpublished MBS Thesis, Submitted to Faculty of Management Shankar Dev Campus, T.U.

Sharmila, R. (2010). A Managerial Tool of Profit Planning and Control (With Reference to Himalayan Distillery Company Limited). An Unpublished Master Degree Thesis, Submitted to Faculty of Management Shankar Dev Campus, T.U.
Subedi, K. (2007). A Comparative study on Profit Planning of Nepal Bangladesh Bank and Everest Bank Ltd. An Unpublished Master Degree Thesis, Submitted to Faculty of Management Nepal Commerce Campus, T.U.

Thapa, S. (2004), Profit Planning in Nepal Electricity Authority. An Unpublished Master Degree Thesis, Submitted to Faculty of Management Shankar Dev Campus, T.U.

Tiwari, P. (2006). Profit Planning in Commercial Bank with a Case of Standard Chartered Bank Ltd. An Unpublished Master Degree Thesis, Submitted to Faculty of Management Shankar Dev Campus, T.U.

## Websites

http://eng.atlants.lv/essays/walker-and-company-profit-plan-decisions/911198/
http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5719971
http://www.google.com
http://www.nabilbank.com.
http://www.nibl.com.np
http://www.nrb.org.np

## APPENDICES

## Appendix-1 <br> Marginal Return to Equity for NIBL and NABIL

(Rs. In Million)

| Fiscal <br> Year | NPAT |  | Total Deposit |  | Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NIBL | NABIL | NIBL | NABIL | NIBL | NABIL |
| $2005 / 2006$ | 351.00 | 416.24 | 1138.75 | 1138.75 | 1064 | 722.51 |
| $2009 / 2010$ | 1265.95 | 1138.57 | 3834.80 | 3834.80 | 4406.76 | 2520.61 |

Source: Annual Report of NIBL and NABIL (www.nibl.com.np, www.nabilbank.com)

| Marginal Return to Equity of NIBL | $=\frac{\text { Change in Net Income }}{\text { Change in Equity }} \times 100$ |
| ---: | :--- |
| Marginal Return to Equity of NIBL | $=\frac{1064}{4406.76} \times 100$ |
|  | $=24.14 \%$ |

Marginal Return to Equity of NABIL $=\frac{\text { Change in Net Income }}{\text { Change in Equity }} \quad \times 100$
722.51
$=\quad \times 100$
2520.61
$=\quad 28.66 \%$

## Appendix-2

## Calculation of BEP Analysis of NIBL Bank

## For NIBL

Total Interest Income =
Total Interest Expenses =
Total Other Expenses $=\quad$ Rs 433.60
Total Other Income =
Rs. 168.31

Loan \& Advances to Total Deposit Ratio $=74.02 \%$
Average Yield on Fund $(\mathrm{YOF})=9.10 \%$

Net Burden $=$ Total other Expenses - Total Other Income

$$
=433.60-168.31=\text { Rs. } 265.29
$$

Interest Margin $($ Spread $)=$ Total Interest Income - Total Interest Expenses

$$
=4653.52-1960.11=\text { Rs. } 2693.41
$$

a. Calculation of the BEP in terms of Interest Income:

$$
\begin{aligned}
\text { BEP in } \% & =\frac{\text { Net Burden }}{\text { Spread }} \times 100 \\
& =265.29 / 2693.41 \times 100=9.85 \%
\end{aligned}
$$

BEP in Rs. $=$ Interest Income $\times$ BEP in \%

$$
=4653.52 \times 9.85 \%=\text { Rs. } 458.37
$$

b. The Breakeven Point of NIBL is Rs. 458.37 million.
c. Margin of Safety for the year 2009/10 can be calculated as follows:

Margin of Safety $=$ Total Interest Income - BEP Income

$$
=\text { Rs }(4653.52-458.37)=\text { Rs. } 4195.15 \text { Million }
$$

Margin of Safety Ratio for FY 2009/2010 $=\frac{M \text { arg in of Safety }}{\text { Total Interest Income }} \times 100$

$$
=\frac{4195.15}{4653.52} \times 100=90.15 \%
$$

d. BEP in terms of volume of loan and advances:

$$
\begin{aligned}
& \text { BEP Loan and Advances }=-\frac{\text { BEP Interest income }}{\text { Average YOF }} \\
&=\frac{458.37}{0.091}=R s .5037 .03 \text { million }
\end{aligned}
$$

e. BEP in terms of volume of Deposit:

$$
\begin{aligned}
\text { BEP Deposit } \quad & \frac{B E P \text { Loan and advances }}{\text { Average TD ratio }} \\
& =\frac{5037.03}{0.7402}=R s .6804 .96 \text { million }
\end{aligned}
$$

## Appendix -3

## Calculation of BEP Analysis of NABIL Bank

For NABIL
Total Interest Income =
Total Interest Expenses $=$
Total other Expenses $=$
Total Other Income =
(In Million)
Rs. 4047.73
Rs. 1960.11
Rs 334.68
Rs. 202.10

Loan \& Advances on Total Deposit (TD) Ratio =56.34\%
Average Yield on Fund $(\mathrm{YOF})=13.23 \%$

Net Burden $=$ Total other Expenses - Total Other Income

$$
=\text { Rs. }(334.68-202.10)=\text { Rs. } 132.58
$$

Interest Margin $($ Spread $)=$ Total Interest Income - Total Interest Expenses

$$
=\text { Rs. }(4047.73-1960.11)=\text { Rs. } 2087.62
$$

a. Calculation of the BEP in terms of Interest Income:

$$
\begin{aligned}
\text { BEP in } \% & =\frac{\text { Net Burden }}{\text { Spread }} \times 100 \\
& =132.58 / 2087.62 \times 100=6.35 \% \\
\text { BEP in Rs. } & =\text { Interest Income BEP in } \% \\
& =4047.73 \times 6.35 \%=\text { Rs. } 257.03 \text { million }
\end{aligned}
$$

b. The Breakeven Point of NIBL is Rs. 257.03 million.
c. Margin of Safety for the year 2009/10 can be calculated as follows:

Margin of Safety $=$ Total Interest Income - BEP Income

$$
=\text { Rs }(4047.73-257.03)=\text { Rs. 3790.7 Million }
$$

Margin of Safety Ratio for FY 2008/2009 $=\frac{M \text { arg in of Safety }}{\text { Total Interest Income }} \times 100$

$$
=\frac{3790.7}{4047.73} \times 100=93.65 \%
$$

d. BEP in terms of volume of loan and advances:

$$
\begin{aligned}
\text { BEP Loan and Advances } & =-\frac{\text { BEP Interest income }}{\text { Average YOF }} \\
& =\frac{257.03}{0.1323}=R s .1942 .78 \text { million }
\end{aligned}
$$

e. BEP in terms of volume of Deposit:

$$
\begin{aligned}
\text { BEP Deposit } \quad & =\frac{\text { BEP Loan and advances }}{\text { Average TD ratio }} \\
& =\frac{1942.78}{0.5634}=\text { Rs. } 3448.31 \text { million }
\end{aligned}
$$

## Appendix - 4

## Calculation of the Trend of Profit of NIBL Bank

(Rs. In Million)

| Fiscal <br> Year | Profit(Y) | $\mathbf{X = X}$ <br> $(\mathbf{2 0 0 7 / 2 0 0 8})$ | $\mathbf{X}^{2}$ | $\mathbf{X Y}$ | Y=a+bx |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 351.00 | -2 | 4 | -702 | 297.21 |
| $2006 / 2007$ | 501.00 | -1 | 1 | -501 | 520.16 |
| $2007 / 2008$ | 697.00 | 0 | 0 | 0 | 743.11 |
| $2008 / 2009$ | 900.62 | 1 | 1 | 900.62 | 966.06 |
| $2009 / 2010$ | 1265.95 | 2 | 4 | 2531.9 | 1189.01 |
|  | $\sum \mathrm{Y}=3715.57$ | $\sum \mathrm{X}=0$ | $\sum \mathrm{X}^{2}=10$ | $\sum \mathrm{XY}=2229.52$ |  |

Calculation of $a, b$ value
We know,
The straight line trend is given by the following formula: $\mathrm{Y}=\mathrm{a}+\mathrm{bx}$
$\mathrm{Y}=$ Values of profit
$a=A v e r a g e ~ o f ~ T o t a l ~ p r o f i t ~$
$b=$ Rate of change of total profit
X=Year
$a=\frac{\sum y}{n}$
3715.57
$a=$
5
$a=743.11$
$\mathrm{b}=\frac{\Sigma \mathrm{XY}}{\Sigma \mathrm{X}^{2}}$
2229.52
$\mathrm{b}=\square$
10
$\mathrm{b}=222.95$;

Put the value of $a$ and $b$ in equation
If $x=2009 / 10$

Then, $\mathrm{Y}=743.11+222.95 \mathrm{X} 3$

$$
=1411.96
$$

Similarly,
If $x=2010 / 11$
Then, $\mathrm{Y}=743.11+222.95 \mathrm{X} 4$
$=1634.91$

Expected Trend Values of Profit of NIBL Bank

| Fiscal Year | Deviation from Mid July2006/07(X) | Y=a+bx |
| :---: | :---: | :---: |
| $2010 / 2011$ | 3 | 1411.96 |
| $2011 / 2012$ | 4 | 1634.91 |
| $2012 / 2013$ | 5 | 1857.86 |
| $2013 / 2014$ | 6 | 2080.81 |
| $2014 / 2015$ | 7 | 2303.76 |

## Appendix -5

## Calculation of the Trend of Profit of NABIL Bank

(Rs. In Million)

| Fiscal <br> Year | Profit(Y) | $\mathbf{X = X}$ <br> $(\mathbf{2 0 0 7 / 2 0 0 8})$ | $\mathbf{X}^{2}$ | $\mathbf{X Y}$ | $\mathbf{Y}=\mathbf{a + b x}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 416.24 | -2 | 4 | -832.48 | 353.46 |
| $2006 / 2007$ | 455.32 | -1 | 1 | -455.32 | 555.5 |
| $2007 / 2008$ | 746.5 | 0 | 0 | 0 | 757.54 |
| $2008 / 2009$ | 1031.05 | 1 | 1 | 1031.05 | 959.58 |
| $2009 / 2010$ | 1138.57 | 2 | 4 | 2277.14 | 1161.62 |
|  | $\sum \mathrm{Y}=3787.68$ | $\Sigma \mathrm{X}=0$ | $\Sigma \mathrm{X}^{2}=10$ | $\Sigma \mathrm{XY}=2020.39$ |  |

Calculation of $a, b$ value

We know,
The straight line trend is given by the following formula: $\mathrm{Y}=\mathrm{a}+\mathrm{bX}$
$\mathrm{Y}=$ Values of profit
$a=A v e r a g e ~ o f ~ T o t a l ~ p r o f i t ~$
$b=$ Rate of change of total profit
$\mathrm{X}=$ Year
$\sum \mathrm{y}$
$a=$
n
3787.68
$\mathrm{a}=$
5
$a=757.54$
$\mathrm{b}=\frac{\Sigma \mathrm{XY}}{\Sigma \mathrm{X}^{2}}$
...... 2020.39
$\mathrm{b}=$
10
b=202.04;

Put the value of $a$ and $b$ in equation
If $x=2009 / 10$

Then, $\mathrm{Y}=757.54+202.04 \mathrm{X} 3$

$$
=1363.66
$$

Similarly,
If $x=2010 / 11$
Then, $Y=757.54+202.04 \mathrm{X} 4$
$=1565.7$

Expected Trend Values Of Profit of NABIL Bank

| Fiscal Year | Deviation from Mid <br> July2006/07(X) | Y=a+bx |
| :---: | :---: | :---: |
| $2010 / 2011$ | 3 | 1363.66 |
| $2011 / 2012$ | 4 | 1565.7 |
| $2012 / 2013$ | 5 | 1767.74 |
| $2013 / 2014$ | 6 | 1969.78 |
| $2014 / 2015$ | 7 | 2171.82 |

## Appendix-6

## Calculation of the Trend of Loan and Advances of NIBL Bank

(Rs. In Million)

| Fiscal <br> Year | Loan and <br> Advances (Y) | $\mathbf{X = X}-$ <br> $(\mathbf{2 0 0 7 / 2 0 0 8})$ | $\mathbf{X}^{\mathbf{2}}$ | $\mathbf{X Y}$ | $\mathbf{Y}=\mathbf{a + b x}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 10801.3 | -2 | 4 | -21603 | 10904.6 |
| $2006 / 2007$ | 17769 | -1 | 1 | -17769 | 2969.5 |
| $2007 / 2008$ | 27529.3 | 0 | 0 | 0 | 26774.9 |
| $2008 / 2009$ | 36827 | 1 | 1 | 36827 | 34710.1 |
| $2009 / 2010$ | 40948 | 2 | 4 | 81896 | 42645.2 |
|  | $\sum Y=133874.62$ | $\sum X=0$ | $\Sigma X^{2}=10$ | $\sum X Y=79351.4$ |  |

Calculation of $a, b$ value

We know,
The straight line trend is given by the following formula: $\mathrm{Y}=\mathrm{a}+\mathrm{bX}$
$\mathrm{Y}=$ Values of Loan and Advances
$a=$ Average of Total Loan and Advances
$\mathrm{b}=$ Rate of change of total Loan and Advances
X=Year
$\sum \mathrm{y}$
$\mathrm{a}=\square$
n
...... 133874.62
$\mathrm{a}=$
5
$\mathrm{a}=26774.92$
$\mathrm{b}=\frac{\sum \mathrm{XY}}{\Sigma \mathrm{X}^{2}}$
$=79351.4$
$\mathrm{b}=$
10
$\mathrm{b}=7935.14$;

Put the value of $a$ and $b$ in equation
If $x=2009 / 10$

Then, $Y=26774.92+7935.14 \mathrm{X} 3$

$$
=50580.3
$$

Similarly,
If $x=2010 / 11$

Then, $\mathrm{Y}=26774.92+7935.14 \mathrm{X} 4$

$$
=58515.5
$$

## Expected Trend Values of Loan and Advances of NIBL Bank

| Fiscal Year | Deviation from Mid July2006/07(X) | Y=a+bx |
| :---: | :---: | :---: |
| $2010 / 2011$ | 3 | 50580.30 |
| $2011 / 2012$ | 4 | 58515.5 |
| $2012 / 2013$ | 5 | 66450.60 |
| $2013 / 2014$ | 6 | 74385.80 |
| $2014 / 2015$ | 7 | 82320.9 |

## Appendix -7

## Calculation of the Trend of Loan and Advances of NABIL Bank

(Rs. In Million)

| Fiscal <br> Year | Loan and <br> Advances (Y) | $\mathbf{X = X} \mathbf{- ( 2 0 0 7 / 2 0 0 8 )}$ | $\mathbf{X}^{\mathbf{2}}$ | $\mathbf{X Y}$ | $\mathbf{Y = a + b x}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 7943.51 | -2 | 4 | -15887 | 5917.37 |
| $2006 / 2007$ | 9855.41 | -1 | 1 | -9855.4 | 12469.7 |
| $2007 / 2008$ | 18851 | 0 | 0 | 0 | 19022 |
| $2008 / 2009$ | 25648 | 1 | 1 | 25648 | 25574.2 |
| $2009 / 2010$ | 32811.8 | 2 | 4 | 65623.6 | 32126.5 |
|  | $\sum \mathrm{Y}=95109.76$ | $\Sigma \mathrm{X}=0$ | $\Sigma \mathrm{X}^{2}=10$ | $\Sigma \mathrm{XY}=65529.2$ |  |

Calculation of $a, b$ value

We know,
The straight line trend is given by the following formula: $\mathrm{Y}=\mathrm{a}+\mathrm{bX}$
$\mathrm{Y}=$ Values of Loan and Advances
$a=$ Average of Total Loan and Advances
$\mathrm{b}=$ Rate of change of total Loan and Advances
X=Year

n
95109.76
$a=$
5
$a=19021.952$
$b=\frac{\sum X Y}{\sum X^{2}}$
...... 65529.2
$\mathrm{b}=\square$
10
$\mathrm{b}=6552.92$;

Put the value of $a$ and $b$ in equation
If $x=2009 / 10$

Then, $\mathrm{Y}=19021.95+6552.29 \mathrm{X} 3$

$$
=38680.7
$$

Similarly,
If $x=2010 / 11$
Then, $Y=19021.95+6552.29 \mathrm{X} 4$

$$
=45233.6
$$

## Expected Trend Values of Loan and Advances of NABIL Bank

| Fiscal Year | Deviation from Mid July2006/07(X) | Y=a+bx |
| :---: | :---: | :---: |
| $2010 / 2011$ | 3 | 38680.70 |
| $2011 / 2012$ | 4 | 45233.60 |
| $2012 / 2013$ | 5 | 51786.60 |
| $2013 / 2014$ | 6 | 58339.50 |
| $2014 / 2015$ | 7 | 64892.40 |

## Appendix - 8

## Calculation of the Trend of Total Deposit of NIBL Bank

(Rs. In Million)

| Fiscal <br> Year | Total Deposit <br> $(\mathbf{Y})$ | $\mathbf{X = X}-$ <br> $(\mathbf{2 0 0 7} / \mathbf{2 0 0 8})$ | $\mathbf{X}^{\mathbf{2}}$ | $\mathbf{X Y}$ | $\mathbf{Y = a + b x}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 18927 | -2 | 4 | -37854 | 18023.05 |
| $2006 / 2007$ | 24489 | -1 | 1 | -24489 | 26477.51 |
| $2007 / 2008$ | 34451 | 0 | 0 | 0 | 34931.97 |
| $2008 / 2009$ | 46698.1 | 1 | 1 | 46698.1 | 43386.43 |
| $2009 / 2010$ | 50094.7 | 2 | 4 | 100189 | 51840.89 |
|  | $\sum \mathrm{Y}=174659.83$ | $\sum \mathrm{X}=0$ | $\sum \mathrm{X}^{2}=10$ | $\sum \mathrm{XY}=84544.6$ |  |

Calculation of $a, b$ value
We know,
The straight line trend is given by the following formula: $\mathrm{Y}=\mathrm{a}+\mathrm{bX}$
Y=Values of Total Deposit
a=Average of Total Deposit
$b=$ Rate of change of Total Deposit
X=Year
$\sum \mathrm{y}$
$a=\longrightarrow$
n
...... 174659.83
$\mathrm{a}=$
5
$a=34931.97$
$\mathrm{b}=\frac{\Sigma \mathrm{XY}}{\Sigma \mathrm{X}^{2}}$
84544.6
$\mathrm{b}=$
10
$\mathrm{b}=8454.46$;

Put the value of $a$ and $b$ in equation
If $x=2009 / 10$

Then, $\mathrm{Y}=34931.97+8454.46 \mathrm{X} 3$

$$
=60295.4
$$

Similarly,
If $x=2010 / 11$
Then, $\mathrm{Y}=34931.97+8454.46 \mathrm{X} 4$

$$
=68749.8
$$

Expected Trend Values Of Total Deposit of NIBL Bank.

| Fiscal Year | Deviation from Mid July2006/07(X) | Y=a+bx |
| :---: | :---: | :---: |
| $2010 / 2011$ | 3 | 60295.40 |
| $2011 / 2012$ | 4 | 68749.80 |
| $2012 / 2013$ | 5 | 77204.30 |
| $2013 / 2014$ | 6 | 85658.70 |
| $2014 / 2015$ | 7 | 94113.20 |

## Appendix -9

## Calculation of the Trend of Total Deposit of NABIL Bank

(Rs. In Million)

| Fiscal <br> Year | Total Deposit <br> $(\mathbf{Y})$ | $\mathbf{X = X}-$ <br> $(\mathbf{2 0 0 7 / 2 0 0 8})$ | $\mathbf{X}^{\mathbf{2}}$ | $\mathbf{X Y}$ | $\mathbf{Y = a + b x}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 19347 | -2 | 4 | -38694 | 18045.86 |
| $2006 / 2007$ | 23342 | -1 | 1 | -23342 | 24859.23 |
| $2007 / 2008$ | 31915 | 0 | 0 | 0 | 31672.6 |
| $2008 / 2009$ | 37348.3 | 1 | 1 | 37348.3 | 38485.97 |
| $2009 / 2010$ | 46410.7 | 2 | 4 | 92821.4 | 45299.34 |
|  | $\sum \mathrm{Y}=158363$ | $\Sigma \mathrm{X}=0$ | $\Sigma \mathrm{X}^{2}=10$ | $\Sigma \mathrm{XY}=68133.7$ |  |

Calculation of $a, b$ value

We know,
The straight line trend is given by the following formula: $\mathrm{Y}=\mathrm{a}+\mathrm{bX}$
$\mathrm{Y}=$ Values of Total Deposit
a=Average of Total Deposit
$b=$ Rate of change of Total Deposit
$\mathrm{X}=$ Year
$\sum \mathrm{y}$
$\mathrm{a}=$
n
...... 158363
$a=\square$
5
$a=31672.60$
$b=\frac{\Sigma X Y}{\Sigma X^{2}}$
68133.7
$\mathrm{b}=\frac{}{10}$
$b=6813.37$

Put the value of $a$ and $b$ in equation
If $x=2010 / 11$

Then, $\mathrm{Y}=31672.60+6813.37 \mathrm{X} 3$

$$
=52112.71
$$

Similarly,
If $x=2011 / 12$
Then, $Y=31672.60+6813.37 \mathrm{X} 4$

$$
=58926.08
$$

Expected Trend Values of Total Deposit of NABIL Bank

| Fiscal Year | Deviation from Mid July2006/07(X) | Y=a+bx |
| :---: | :---: | :---: |
| $2010 / 2011$ | 3 | 52112.71 |
| $2011 / 2012$ | 4 | 58926.08 |
| $2012 / 2013$ | 5 | 65739.45 |
| $2013 / 2014$ | 6 | 72552.82 |
| $2014 / 2015$ | 7 | 79366.19 |

## Appendix-10

## Correlation Analysis between Loan and Advance and Total Deposit of NIBL

(Rs. In Million)

| Fiscal <br> Year |  <br> advances (x) | Total <br> Deposit (y) | $\mathbf{X}^{2}$ | $\mathbf{Y}^{2}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 10801.31 | 18927 | 116668297.7 | 358231329 | 204436394.4 |
| $2006 / 2007$ | 17769.01 | 24489 | 315737716.4 | 599711121 | 435145285.9 |
| $2007 / 2008$ | 27529.3 | 34451 | 757862358.5 | 1186871401 | 948411914.3 |
| $2008 / 2009$ | 36827 | 46698.1 | 1356227929 | 2180712544 | 1719750929 |
| $2009 / 2010$ | 40948 | 50094.73 | 1676738704 | 2509481974 | 2051279004 |
| $\mathrm{~N}=5$ | $\sum \mathrm{X}=$ <br> 133874.62 | $\sum \mathrm{Y}=$ <br> 174659.83 | $\sum \mathrm{X}^{2}=$ <br> 4223235006 | $\sum \mathrm{Y}^{2}=$ <br> 6835008368 | $\Sigma \mathrm{XY}=$ <br> 5359023527 l |

The Karl Pearson's co- efficient of correlation is given by

$$
\begin{aligned}
\because r & =\frac{N \sum x y-\sum x \cdot \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
& =\frac{5 \times 5359023527-133874.62 \times 174659.83}{\sqrt{5 \times 4223235006-(133874)^{2}} \sqrt{5 \times 6835008368-(174659.83)^{2}}} \\
& =\frac{3412599266}{56513.37 \times 60572.15} \\
& =.99692
\end{aligned}
$$

Test of significance of 'r'
Probable error (PE) $=0.6745\left(\frac{1-r^{2}}{\sqrt{N}}\right)$

$$
\begin{aligned}
& =0.6745\left(\frac{1-0.99692^{2}}{\sqrt{5}}\right) \\
& =0.001855
\end{aligned}
$$

$\because 6 P E=0.001855 \times 6=0.011131$

Co-efficient of determinants $r^{2}=0.99692^{2}=0.9938$

$$
=99.38 \%
$$

## Appendix-11

Correlation Analysis between Loan and Advance and Total Deposit of NABIL
(Rs. In Million)

| Fiscal Year | Loan \& advances <br> (X) | Total Deposit (Y) | $\mathbf{X}^{2}$ | $\mathbf{Y}^{2}$ | XY |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2005/2006 | 7943.51 | 19347 | 63099351.12 | 374306409 | 153683088 |
| 2006/2007 | 9855.41 | 23342 | 97129106.27 | 544848964 | 230044980.2 |
| 2007/2008 | 18851.01 | 31915 | 355360578 | 1018567225 | 601629984.2 |
| 2008/2009 | 25648.01 | 37348.3 | 657820417 | 1394895513 | 957909571.9 |
| 2009/2010 | 32811.82 | 46410.7 | 1076615532 | 2153953074 | 1522819534 |
| $\mathrm{N}=5$ | $\begin{gathered} \sum X= \\ 95109.76 \end{gathered}$ | $\begin{gathered} \sum \mathrm{Y}= \\ 158363 \end{gathered}$ | $\begin{gathered} \sum X^{2}= \\ 2250024984 \end{gathered}$ | $\begin{gathered} \sum Y^{2}= \\ 5486571185 \end{gathered}$ | $\begin{gathered} \sum X Y= \\ 3466087159 \end{gathered}$ |

The Karl Pearson's co- efficient of correlation is given by
$\because r=\frac{N \sum x y-\sum x \cdot \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}}$
$=\frac{5 \times 3466087159-95109.76 \times 158363}{\sqrt{5 \times 2250024984-(95109.76)^{2}} \sqrt{5 \times 5486571185-(158363)^{2}}}$

$$
=\frac{2268568871}{46949.53 \times 48518.20}
$$

$=0.9959$

Test of significance of 'r'
Probable error (PE) $=0.6745\left(\frac{1-r^{2}}{\sqrt{N}}\right)$

$$
\begin{aligned}
& =0.6745\left(\frac{1-0.9959^{2}}{\sqrt{5}}\right) \\
& =0.00366
\end{aligned}
$$

$\because 6 P E=0.00366 \times 6=0.02195$
Co-efficient of determinants $\mathrm{r}^{2}=0.9959^{2}=0.9918$

$$
=99.18 \%
$$

## Appendix-12

## Correlation Analysis between Loan and Advance and Profit of NIBL

(Rs. In Million)

| Fiscal <br> Year |  <br> advances (X) | NPAT (Y) | $\mathbf{X}^{2}$ | $\mathbf{Y}^{2}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 10801.31 | 351 | 116668297.7 | 123201 | 3791259.81 |
| $2006 / 2007$ | 17769.01 | 501 | 315737716.4 | 251001 | 8902274.01 |
| $2007 / 2008$ | 27529.3 | 697 | 757862358.5 | 485809 | 19187922.1 |
| $2008 / 2009$ | 36827 | 900.62 | 1356227929 | 811116.3844 | 33167132.74 |
| $2009 / 2010$ | 40948 | 1265.95 | 1676738704 | 1602629.403 | 51838120.6 |
| $\mathrm{~N}=5$ | $\sum \mathrm{X}=$ <br> 133874.62 | $\sum \mathrm{Y}=$ <br> 3715.57 | $\sum \mathrm{X}^{2}=$ <br> 4223235006 | $\sum \mathrm{Y}^{2}=$ <br> 3273756.787 | $\sum \mathrm{XY}=$ |

The Karl Pearson's co- efficient of correlation is given by
$\because r=\frac{N \sum x y-\sum x \cdot \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}}$
$=\frac{5 \times 11688709.3-133874.62 \times 3715.57}{\sqrt{5 \times 4223235006-(5486571185)^{2}} \sqrt{5 \times 3273756.78-(3715.57)^{2}}}$

$$
=\frac{87013024.5}{56513.37 \times 1601.04}
$$

$=0.9617$

Test of significance of ' r '
Probable error (PE) $=0.6745\left(\frac{1-r^{2}}{\sqrt{N}}\right)$

$$
\begin{aligned}
& =0.6745\left(\frac{1-0.9617^{2}}{\sqrt{5}}\right) \\
& =0.02266
\end{aligned}
$$

$\because 6 P E=0.02266 \times 6=0.1359$

Co-efficient of determinants $\mathrm{r}^{2}=0.9617^{2}=0.9248$

$$
=92.49 \%
$$

## Appendix-13

Correlation Analysis between Loan and Advance and Profit of NABIL
(Rs. In Million)

| Fiscal <br> Year |  <br> advances (X) | NPAT (Y) | $\mathbf{X}^{2}$ | $\mathbf{Y}^{2}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 2006$ | 7943.51 | 416.24 | 63099351.12 | 173255.7376 | 3306406.602 |
| $2006 / 2007$ | 9855.41 | 455.32 | 97129106.27 | 207316.3024 | 4487365.281 |
| $2007 / 2008$ | 18851.01 | 746.5 | 355360578 | 557262.25 | 14072278.97 |
| $2008 / 2009$ | 25648.01 | 1031.05 | 657820417 | 1063064.103 | 26444380.71 |
| $2009 / 2010$ | 32811.82 | 1138.57 | 1076615532 | 1296341.645 | 37358553.9 |
| $\mathrm{~N}=5$ | $\Sigma \mathrm{X}=$ | $\sum \mathrm{Y}=$ | $\sum \mathrm{X}^{2}=$ | $\sum \mathrm{Y}^{2}=$ | $\sum \mathrm{XY}=$ |
|  | 95109.76 | 3787.68 | 2250024984 | 3297240.037 | 85668985.46 |

The Karl Pearson's co- efficient of correlation is given by

$$
\begin{aligned}
& \because r=\frac{N \sum x y-\sum x \cdot \sum y}{\sqrt{N \sum x^{2}-\left(\sum x\right)^{2}} \sqrt{N \sum y^{2}-\left(\sum y\right)^{2}}} \\
& =\frac{5 \times 85668985.46-95109.76 * 3787.68}{\sqrt{5 \times 2250024984-(95109.76)^{2}} \sqrt{5 \times 3297240.037-(3787.68)^{2}}} \\
& \quad=\frac{68099591.5}{46949.53 \times 1462.76} \\
& =0.99160
\end{aligned}
$$

Test of significance of 'r'
Probable error (PE) $=0.6745\left(\frac{1-r^{2}}{\sqrt{N}}\right)$

$$
\begin{aligned}
& =0.6745\left(\frac{1-0.99160^{2}}{\sqrt{5}}\right) \\
& =0.00504
\end{aligned}
$$

$\because 6 P E=0.00504 \times 6=0.0303$

Co-efficient of determinants $\mathrm{r}^{2}=0.99160^{2}=0.9832$

$$
=98.32 \%
$$

