CHAPTER – I

INTRODUCTION

1.1 Background of the Study

The speedy development of any country in this modern era is depends upon to some extent with financial activities of the country. Financial activities play a role of catalyst in the process of economic development of the country. In Nepal financial sectors (banks, finance companies etc.) plays a vital role in the economic development of the country. The current state of Nepalese economy is characterized by unutilized natural sources, miserable agriculture, deficit trade, mass poverty, illiteracy and so forth. Agriculture is the main occupation of almost village people but no scientific methods of agriculture have yet been implemented. It is one of the richest countries in the world in terms of natural resources. The natural resources available here have remained unutilized due to reasons.

A tiny landlocked country is south Asia, Nepal remains as one of the 48 least developed countries in the world. The country's per capital income has been growing at little over two percent annum at a situation when more than two-fifth of the country's population is in absolute poverty. Nepal's current economic situation is best with nearly half of the population living below poverty line, and unemployment and disguised unemployment together depriving one half of the labor force.

Investments in productive sectors increase the economic activities. The unutilized financial resources should be diverted towards productive sector in order to increase the economic activities. To develop the Nepalese economy, the financial institutions should be established. The participations of the private sectors play ever more important role for the economic development. Hence, various banks, insurance companies, financial companies etc. have been established in the private sector and government sector as well to develop the economy to develop the economy of the country, their providing their active participation for the economic development. But however even with the rapid development and expansion of financial institutions, the country has not been able to achieve the desired income so far which is due to the poor capital market condition of our country and due to the early stage of economic growth.

As aforementioned, the financial institutions play a vital role in the economic development e.g. the banks, especially the commercial banks; finance companies and insurance companies have been established.

The Profit planning and control mechanism is being widely practiced in manufacturing industries but it is relatively new in non-manufacturing/service, industries/sectors. However this concept is equally applicable to any kind of business concern for the best utilization of the scarce resources and effectively and efficiently achieving goal.

Every company or institution is established based on the definite goals and objectives. According to the objectives, the company performs is tasks. Mainly two types of institutions such as profit oriented and service-oriented instructions are established, but most of them are profit oriented because profit is the life blood of the business which not only keeps it alive but also assures the future and makes it sound. Profit planning is an important tool of the firm to achieve the objectives. "Profit do not just happen, profits are managed (Lynch and Williamson, 1989: 125). So, to manage the profit, the management should follow various processes of profit planning because the management process and profit planning and control are interrelated to each other.

Profit maximization is the basic objectives of a firm and to make it reliable service should render to its customers. Profit is a device to measure efficiency of a firm.

Planning is the first essence of a management and all other functions are performed with the framework of planning. Planning means deciding in advanced what is to be done in future. Planning starts from forecasting and predetermination of future events. The main objective of planning in business is to increase the chance of making profit. The budget is the primary planning operation document committed to performance. In this sense budget is also called a profit planning.

Planning is the process of developing enterprise objectives and selecting a future course of action to accomplish them. The term comprehensive profit planning and control it defined as a systematic and formalized approach for performing significant phase of the management planning and control function (Welsch, et al, 2001: 45).

- The development and application of broad and long range objectives of the enterprise.
- The specification of enterprise goals.
- A long range profit plan developed in broad terms.
- A short range profit plan detailed by assigned responsibilities (divisions, product, project etc.)
- systematic periodic performance reports detailed by assigned responsibilities, and
- Follow-up procedures.

As like in the other profit oriented organizations, a commercial bank has also to make reasonable profit for its survival. Most of the commercial banks are formed as a company with joint stock and the shares being traded at stock exchanges. Therefore, profit made by them is the important parameter for measurement of effectiveness efficiency of them.

1.2 Statement of The Problem

The profit planning tool is a newly developed concept as a crucial way in the business organization. The concept of profit planning has not even familiarized in the most of the business concern, by proper profit planning a business can be managed more effectively and efficiently.

Every financial institutions, as a commercial bank must make profit out of its operations for its survival and fulfillment of the responsibilities assigned. Major activities of a commercial bank comprise mobilization of resources, which involves cost, and profitable deployment of those resources, which generates income. The different interest income over the interest cost, which is popularly called as interest margin, can be considered as the contribution margin in the profit of the bank. The bank attempts to compensate the other operational expenses by generating other income out of non-fund based business activities of the bank.

The present study aims to analyze and examines the application of PPC tool in the commercial banks taking a case of Bank of Kathmandu Ltd, Nabil Bank Ltd and SBI Bank Ltd In this ground, the study deals with the following issues for the purpose of this study.

- What is the relationship between investment, loan and advances with total deposit, net profit and outside assets?
- How properly the collected fund has been used?
- What is the profitability position of the banks?
- What is the trend position of banks in terms of deposits collection and net profit?
- What is the effect of investment decision on profitability position of the banks?
- Is there significant relationship between loan and advances, total interest earned to total outside assets etc?

1.3 Objectives of the Study

The basic objectives of the study are to analysis the profit planning policy of commercial banks with reference to BOK, NABIL and SBI. The specific objectives of the study are:

- To find out the relationships 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.
- To provide suggestions and possible guidelines to improve investment policy and its problems.
- To provide suggestion and recommendations for improvements of the overall profitability of the banks.

1.4 Significance of The Study

The researcher study is connected with the profit planning in commercial Banks with a case study of Bank of Kathmandu, Nabil Bank Limited and Nepal SBI Bank Limited with the major objectives of examining the proper applicability of profit planning system in the Bank

Accomplishment of objective in every organization depends on the application of scare resources most effectively. Also the functional performance of an organization depends purely on the use of its resources. Budgeting is the key, to productive functional planning. So all the organization running under commercial principles has to give regards these most important single tools while managing their physical and financial targets. If the planning process of an organization is effective and result oriented, the place of development naturally steps forwards.

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 those require an accounting background. It's also need knowledge of business principles, economic statistics and mathematics. Hence profit planning represents on overall plan of preparation for a definite period of time.

Profit planning is crucial for management. Profit is the most important indicators for judging managerial efficiency and does not just happened for this every organization has to manage. Various functional budgets are the basic tools for proper planning of profit and control. Therefore, this study will be useful for those who want to know the profit-planning tool and also for next researcher as a reference.

1.5 Limitations of the Study

The study confines only profit planning aspect of the Bank of Kathmandu Limited, Nabil Bank Ltd. and SBI Bank Ltd. So, the limitations of this study are:

1. This study focuses on profit planning control and its application in the BOK,Nabil and SBI.
2. Only profit planning aspect of Bank of Kathmandu, Nabil Bank and SBI Bank has been analyzed.
3. This study covers the related data of the banks from FY 2003/04 to 2008/09.
4. The study is mostly based on secondary sources of data.

1.6 Organization of The Study

The study is divided into the following five chapters.

Chapter- I	Introduction
Chapter- II	Conceptual Framework and Review of Literature
Chapter- III	Research methodology
Chapter - IV	Data Presentation and Analysis
Chapter - V	Summary, Conclusion and Recommendations.

The first chapter deals the background of the study, brief profile of the BOK, NABIL and SBI, statement of problem, objectives of the study, significance of the study, limitation of the study and organization of the study etc.

Second chapter deals with the review of available literature. It takes in review of related books, journals, articles and previous unpublished Master Degree Dissertation etc.

The third chapter is deals with the research methodology employed in this study. It includes research design, population and sample, data collection procedure and sources of data, data analysis techniques etc.

The fourth chapter is the important chapter of the study which implies the presentation and analysis of data as well as major findings of the study.

The fifth and last chapter covers the summary of the study, the main conclusion that flows from the study and offers some recommendations as well as suggestions for further improvement.

CHAPTER-II

CONCEPTUAL FRAMEWORK AND REVIEW OF LITERATURE

In this part, focus has been made on the conceptual framework and the review of literature that is relevant regarding to the profit planning concepts. In this regard, various books, journals and articles concerned to this topic have been reviewed. Review of literature is based on available literature in the field of research. Every possible effort has been made to grasp knowledge and information that is available from libraries; document collection center helps to take adequate feed back to broaden the information to study. The first part of the chapter deals with the conceptual framework of the study and the second part is concern with the review of previous articles, journals and dissertation. Some philosophers, writers or researchers have given the contribution on it since many years. There are two parts in the review of literature. They are:-

2.1 Conceptual Framework

2.2 Review Of Previous Study

2.1.1 General Concept of Profit Planning

Profit planning involves selection of defined periods of time for the strategic and tactical profit plans (often five years and one year, respectively) in other words profit planning is a comprehensive statement of intentions expressed in financial terms for the operation of both short and long period. It is a plan of the firm's expectation and is used as a basis for measuring the actual performance of managers and their units. A profit plan has an immense value in management; it helps in planning and co-coordinating if used appropriate, but not a replacement for management. Profit planning is a comprehensive and co-coordinated plan expressed in financial terms, for the operations and resource of an enterprise for some specific period in the future.

A profit plan or budget is the formal expression of the enterprises plans and objectives stated in financial terms for a specified future period of time (Fremgen, 1973; 144).

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 is a tool which may be used by the management in planning the future course of actions and controlling the actual performance (Gupta, 1992; 521).

Profit plan is estimation and predetermination of revenues and expenses that estimates how much income will be generated and how it should be spent in order to meet investment and profit requirements. In the case of institutional operations it presents a plan for spending income in a manner that does not result in a loss

The term comprehensive profit planning and control it defined as a systematic and formalized approach for performing significant phase of the management planning and control functions specially it involves:

- The development and application of broad and long range objectives of the enterprise.
- The development of strategic long rang profit plan in broad terms.
- The specification of enterprises goals.
- The specification of tactical short range profit plan detailed by assigned responsibility (Division, Products, projects).
- The establishment of a system of periodic performance reports detailed by assigned responsibility and follow up procedures.

In many of the better-managed companies comprehensive PPC has been identified as a way of managing it focuses directly up on a rational and systematic approach to management by objectives and realistic flexibility in performing the management process.

A profit planning and control program can be one of the more effective communications network is in an enterprise. Communication for effective planning and control requires that both the executive and the subordinate have the same under standing of responsibilities, ensures a degree of understanding not otherwise understanding of responsibilities; ensure a degree of understanding not otherwise possible. Full and open reporting in performance reports that, fouls on assigned responsibilities likewise enhance the degree of communication essential to sound management.

Profit planning is an example of short range planning. This planning focuses on improving the profit especially from a particular product over a relatively short period of time. Therefore as used here, it is not the same as corporate planning of a cost rendition program (Terry, 1968:2).

Profit planning involves streamlining activities in order to get employees profit minded and to secure maximum benefit from minimum effort and expenditure. Best results seem to be obtained by assigning a profit planner to investigate all the footers affecting the profit obtained from a single production the planner is given the right to prove the economics, the organization. The mode of operations, the pricing, the marketing or any fact of making and selling the product that in his judgment affects profit accruing from that product. The concentration of profit efforts upon one product and the fight of the planner to cross traditional functional boundaries of the enterprise of translate needs from one group of another and to obtain concurred profit building efforts among those who can affect profits are the fundamental factors that contribute to the success of profit planning.

A profit plan is an advance decision of expected achievement based on the most efficient operating standards in effect or and prospect of time it is established against which actual accomplishment is regularly compared.

Profit Planning through volume of cost analysis, however, is a modern concept of management planning tools designated primarily for industrial enterprises. It involves a study of what a business cost and expenses should be and will be at different level of operations and it include a study of the resultant effect up to due to this hanging relationships between volume and cost.

Profit Planning is a comprehensive statement of intentions expressed in financial terms for the operation of both short and long period. It is a plan of the firm's expectation and is used as a basis for measuring the actual performance of managers and their units. A profit plan has an immense value in management; it helps in planning and coordinating if used appropriately, but not a replacement for management. Profit planning is a comprehensive and coordinated plan expressed in financial terms for the operations and resource of an enterprise for some specific period in the future (Fremgen, 1973: 12).

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 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 (Gupta, 1992:3).

The term comprehensive profit planning and control it defined as a systematic and formalized approach for performing significant phase of the management planning and control functions.

A profit planning and control program can be one of the more effective communication networks in an enterprise. Communication for effective planning and control requires that both the executive and the subordinate have the same understanding of responsibilities, ensure a degree of understanding not otherwise understanding of responsibilities, and ensure a degree of understanding not otherwise possible. Full and open reporting in performing reports that, fouls on assigned responsibilities likewise enhance the degree of communication essential to sound management (Welsch,et al., 2001:215).

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A profit plan is an advance decision of expected achievement based on the most efficient operating standards in effect or n prospect of time. It is established against which actual accomplishment is regularly compared (Niel, 2001:305).

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2.1.2 Concept of Profit

Profit is the basic elements of profit plan so that the concept of profit planning may not be completed and meaningful in absence of the clear-cut well defined idea of profit. Oxford dictionary defines profit as a (a) financial gain and amount of money gained in business especially the difference between the amount earned and the amount spent (b) Advantage or benefits gained from something (Hornby et al., 1992:63).

According to some theories, profits are the factor payment for talking the risk for agreeing to take what is left over after contractual outlays have been made. In the second type of profit theory they viewed as a wage for the service of innovation. Profits in this theory are tied to dynamic development. Profit around which all enterprises activities directly or indirectly revolve play the significant role for judging the managerial efficiency. In absence of profit nobody can think about the long-term survivability of the enterprises.

2.1.3 Concept of Planning

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 with proper and effective planning. No firm can accomplish its predetermined goals and objectives. Hence it is the life blood of any organization which helps them to run efficiently in competitive environment. Planning is a techniques were by the use pattern of resources is carried out (Agrawal, et al., 1989:24).

A planning process includes setting goals, evaluating resources forecasting by different methods and formulating a master plan. Planning depends upon the organized objectives. For the planning purpose a firm's objectives can distinguish mainly three types, the first is prime, the second is instrumental objectives are aims for accomplishment of more basis aim. For this purpose the company has established divisional departmental and individual job objectives. Specific objectives are those objectives that have been specified as to tome and magnitude which is known as goals. As a result of specifying a time period and a target amount, this goal is capable of giving specific guidance to various senses of management planning. Objective setting of a firm is very difficult task. Unfortunately, most top management fails to develop a clear and operational statement of company objectives. More carefulness is necessary for this tedious job and it stated from firm's objectives. More carefulness is necessary for this tedious job. Carefully stated firm's objectives would yield at least the following benefits.

1. Company objectives provide the ultimate criteria for resolving difficult company decisions.
2. Company objectives are the basis for long-range profit planning.

Planning is the process of developing enterprises objectives and selecting future course of action to accomplish them. It includes (Welsch, et al., 1992:127).

1. Establishing enterprises objectives,
2. Developing premises about the environment in which they are to be accomplished,
3. Decision making,
4. Identifying activities necessary to translate plans in to action, and
5. Current re-planning to current deficiencies.

The planning processes both short and long term is the most crucial component of the whole system. It is both foundation and the bond for the other elements because it is through the planning process that we determine what we are going to do, how we are going to do it and who is going to do it. It operates as the brain centre of an organization and like the brain it both reason and communicate (Welsch, et al., 1992:73).

Planning is the conscious recognition of the futurity of present decision (Drucker, 1989:87).

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 (Pandey, 1991:325).

Planning could be taken as the tools of achieving organizational goals efficiently and effectively from the selection of various alternatives with in a acceptable time frame. The essence of planning is:

1. To accomplish goals
2. To reduce uncertainty
3. To provide direction by determining the course of action in advance.

Planning is determined course of action for achieving organizational goals or objectives effectively and efficiently at a fluid environment with a certain time frame through the selection of various alternatives. On the other hand it holds accountability and responsibility about result to individual. A full appreciation of the firm task requires distinguishing among three types of company's activities which we call strategic planning, management control and operational control. The strategic planning is a important function of top management. Planning requires the management to setting a future state toward which effort will be directed i.e. objective, assessing the organization's resources, i.e. what the organization is going to work with, assessing the current and future environment with which the organization must connected to achieve its goals and lately determine how and when to allocate resource accomplish the objective. Planning on the other hand is selecting objective and determining a course of action including allocation of resources in order to achieve those objectives in a specific time period. Planning states what, when, and how things will be accomplished. An adequate planning is necessary for control of operations.

2.1.4 Types of Planning

Corporate Planning

Corporate planning means the systematic process of setting corporate objectives and making strategic decisions and developing the plans necessary to achieve these objectives. Corporate planning is one part of profit plan. It was first started in the USA in 1950, and it is however being used in one form or another in many companies there. Corporate planning is to determine the long-term goals of a company as a whole and then to generate plan designated to achieve these goals bearing in mind probable change in its environment. He pointed out the premises of the corporate planning are:

- Before drawing up a plan, which is designed to do something, decide what you want it to do.
- In these days of rapid change it is necessary to look ahead as far a possible to anticipate these changes.
- Instead of treating a company as a collection of department, treat it as a corporate whole.
- Take full account of the company’s environment before doing up any up any plan.(Robertson,1968; 535)

Long term planning is included in corporate planning. Corporate planning often is considered synonymous with long-term planning. The main objectives of corporate planning are as follows.

- Achieving objectives.
- Embodiment of goals and objectives in the Enterprises.
- Formulating realistic and attainable objectives.
- Clarity and adequacy of goals and objectives.
- Communication of goals and objectives.
- Involvement of personnel in developing the goals of the enterprises.

Strategic Long-Range Planning

Strategic planning is a top management function in which the organization's purpose, mission and overall objectives and policies are developed to position the organization advantageously in its operating environment. It refers to the selection of company objective and the determination of the growth or at least constant and competitive policies that are most likely to accomplish those objectives. It is carried out the highest policy making level of the organization will travel. Management planning and control is the process carried on within the framework established by strategic planning. "Long range 5 to 10 years varying with the enterprise sometimes extended to 10 years. It is one of the most difficult times span involved in planning as many problems in short range planning can be traced to the absence of clear sense of direction and the practice which a comprehensive long-range plan provides. Basically, the long-range planning is more important for broad and long living enterprises. 'A long-range planning is closely concerned with the concept of the corporation as a long living institution (David, 1964:298).

The planner must include the following factors in his/her plan from the analysis of available information.

a. Probable future opportunity
b. Uncertainty and
c. Challenges

Long range planning is the continuous process of making present entrepreneurial (risk taking) decision. Systematically and best possible organizing efforts is need to carry out these decisions and measuring the result of these decisions against the expectations through organized systematic feedback (Ducker, 1964:165).

It is a decision making process. Such decision should be related about:

- Determination of goals, objectives and strategies.
- Level and direction of capital expenditure.
- Accession of new sources of funds.
- Organization design and structure etc.

Tactical Short Term Planning

Tactical plan is a short-range plan. It is developed for a short period of time usually a year, initially by quarters and by months for the first quarter. A tactical planning is done at all level and involves directing the organizations activities to achieve overall it strategic objectives consistent with the organization's mission and policies. Standing plans provides consistency by and efficiency for non-going operations, and single use plans are developed for unique situation. Projects are short-term plans designed to achieve objective within large-scale programs. Short-term plans cover about a year, and are less formal and detailed than long-range plans, which usually cover more than three months. The short range planning is selected to conform to fiscal quarter for years. Because of the practical needed for conforming plans to accounting periods and the some. What arbitrary limitation of the long range to three to five years is usually based as has been indicated on the prevailing belief that the degree of uncertainty over a long period makes planning of questionable value.

2.1.5 Role of Forecasting in Planning

The forecasting is to take future decision at present from the analysis of relevant factors of past and present situation. It is an integral part of decision-making activities of management. An organization established goals and objectives seeks to predict the environmental factors that selects action all that is hopes will result in attainment of goals and objectives. The need for forecasting is increasing as management attempts to decrease its dependence on change and become more scientific in dealing with its environment. Since each area of organization is related to all others. A good or bad forecast can affect the entire organization. "It should be realized that building is not merely forecasting although forecasting is form of the basis of budgeting. Forecasting is estimate of the future environment with in which the company will operate. Budgeting or planning on the other hand involves the determination of what should be done, how the goals may be reached and what individual units are to be assumed responsible and be held accountable. Budget provides orderly way to attain goals and also provides a time schedule for future action to produce. Measure result" (Pandey; 1991; 576)

Forecasting is indispensable in planning. Forecasts are statement of expected future conditions definite statements of what will actually happen are partially impossible. Expectations depend upon the assumptions made. If the assumptions are possible the forecast has a better chance of being useful forecasting assumptions and techniques vary with the kind of planning needed. The short-term forecasting is needed in budget making. A budget set for the following year will be much useful. It is regarded to sales levels, which will eventuate rather than nearly to current sales level. As budget distributed according to current sales may establish policy as to lines of emphasis, but will obviously required successive adjustment if sales levels changes. Forecasting is indispensable in planning. Forecast is statement of expected future conditions definite statements of what will actually happen are patently impossible. Expectation depends upon the assumptions made. If the assumptions are possible the forecast has a better chance of being useful forecasting assumptions and techniques vary with the kind of planning needed. The short-term forecasting is needed in budget making. A budget set for the following year will be much useful. It is regarded to sales levels, which will eventuate rather than current sales level. As budget distributed according to current sales may establish policy as to lines of emphasis, but will obviously required successive adjustment if sales levels changes (Bratt, 1985:246).

2.1.6 Planning Verses Forecasting

Planning is clearly district from forecasting. Forecasting one of the essential elements of planning is a prediction of what will happen on the basis of certain assumption. Planning is an attempt to determine what should happen and what will make it likely to happen. A forecast is not a plan, rather it is a statement of and or quantified assessment of future conditions about a particular subject (sales revenue) based on one of more explicit assumption. A forecast should be viewed as only one input into the development of a sales plan. The management of a company may accept modify or eject the forecast. In contrast a sales plan incorporates management decision that are based on the forecast, other inputs and management judgment about such related items as sales volume, price, production and sales, effort and financing (Welsch, 2001:109).

2.1.7 Control

After being clear about the concept of profit and planning we move towards the third component of profit planning and control i.e. control the dictionary meaning of control.

i. Have a power or authority over same body or same thing

ii. Regulate something

iii. Management, guidance, restriction

iv. Standard of comparison for checking the results of the experiment.

Controlling can be defined as a process of measuring and evaluating actual performance of each organizational component of an enterprises and initializing corrective action when necessary to ensure efficient accomplishment of enterprises objectives goals, policies and standards. Planning establishes the objectives, goals, policies and standards of an enterprise. Control is exercised by using personal evaluation periodic performance reports and special reports. Control is an ambiguous word; it means the ability direct oneself and one's work. It can also mean domination of one person by another (management). Objectives are the basis of control in the first sense, but they must never become the basis of control as in the second for this would defeat their purpose, indeed one of the major contributions of management by substitute management. By objective is that it enables us to substitute management by self control for management by domination (Drumeker, 1954: 244).

An important aspect of control that is frequently overlooked is its relationship to the point of action or at the time or commitment. Effective control requires feed forward. In other words it is assumed that objectives plans polices and standard have been develop and communicated to those manager who have the related performance responsibilities. Therefore, control must necessarily rest upon the concept of feedback, which requires performances measurement and tiggers corrective action designed tonsure attainment of the objective. When plans become operational control must be exercised to measure progress. In some cases control also results in the revisions of prior plans and goals or in the formulation new plans changes in operations and reassignment of people. Control approach must be tailored to the characteristics of the operation and the organizational structure. A control process designed to help monitor the periodic activities of business and of each responsibility center has the following phases.

i. Compare actual performance for the period with the planned goals and objectives.

ii. Prepare a performance report that shows actual results, planned results

iii. Any differences between the two (i.e. variations above or below planned results)

iv. Analyze the variations and the related operations to determine the underlying causes of the variations.

v. Develop alternative courses of action to correct any deficiencies and learn from the successes.

vi. Make a choice (corrective action) from the set of alter-natives and implement it.

vii. Follow up to appraise the effectiveness of the correction. Follow with feed forward for re-planning.

The Comparison of actual result with planned goals and standard Constitutes measurement of the effectiveness of control during a specified past period. This provides the basis for effective feedback the facts shown in a performance report cannot be changed, however the historical measurement may lead to improve control in the future. The significant concept here is that objective policies and standards fulfill two basic requirements in the overall control process namely.

1. Feed forward to provide a basis for control at the point of action.
2. Feedback-to provide a basis for measurement of the effectiveness of control after the action was taken place more over feedback is instrumental in re planning.

2.1.8 Purposes of Profit Planning

Some purposes for the application of profit planning are:

1. To state the firms expectations in clear and facilitate for attainability.
2. To communicate expectations to all concerned with the management of the firm so that they are understood, supported and implanted.
3. To provide a detail plan of action for reducing uncertainty and for the proper direction of individual and group efforts to achieve goals.
4. To coordinate the activities and efforts in such as way the use of resource in maximized.

5. To provide a means of measuring the performance of individuals and units and to supply information on the basis of which the necessary corrective action can be taken.

There is controversy is term of profit. It is defined by different people from different aspect. Usually profits does not just happen, profits are managed. Before we can make intelligent approaches to the management concept of profit, there are after all, several different interpretations of the term. Profit, an economist says that profit is the reward of entrepreneurship for risk taking. A labour leader might say that it is a measure of how efficiently labour has produced and that it provides a base for negotiating a wage increase. An inverter views it as a gauge for return on his/her investment. An internal revenue agent might regard, it is the base for determining income taxes. The accountant will define it simply as the excess of firm's revenue over the expenses of producing revenue in a given period. Management thinks of profit as a tangible expression of the goals it has set for the firm, a measure of the performance towards the achievement of it, as a means of measuring the health, growth and continuity of the economy (Lynch and Williamson ,1989:249).

2.1.9 Long Range and Short Range Profit Plan

There are two types of profit plans developed; one strategic (long-range) and another tactical (short-range). The former profit plan takes a time horizon of 5 to 20 years and the later for short period. The long range planning is a picture of more summary data. A part of this plan is more or less informal as presented by tentative commitments made by the executive committee in the organizational planning seasons. The formal portion of long-range profit plan includes the following component detailed by each year.

- Income Statement
- Balance Sheet
- Capital Expenditure Plan
- Personnel Requirements
- Research Plan and
- Long Range Market Penetration Plan

Thus the long range profit plan covers all the key areas of anticipated activity; sales, expenses, research and development, capital expenditure, cash, profit and return on investment. The short range tactical profit plan shows the primarily annual results, the detail by months, responsibility and products. In an organization these annual summaries should be prepared to provide a general understanding of the profit plan and to provide an overall view of the comprehensive short range profit plan.It is possible for the firms to develop these two profit plans for all aspects of the operations (Welsch, et al., 2001:524).

Assuming participatory planning and receipt of the executive instruments, the manager of each responsibility center will immediately initiate activities within his or her responsibility center to develop strategic profit plan and tactical profit plan. Certain format and normally the financial function should establish the general format, amount of detail, and other relevant procedural and format requirements essentially for aggregation of the plan. All these activities must be coordinating among the centers in conformity with the organization structure (Welsch, et al., 2001:523).

The preparation of long-range profit planning in addition to short range profit planning is also viewed as a total planning concept of business. Long range planning is essential to maintain the annual profit at improving level. The ultimate measure of the success of a business in generally based on growth in the volume of sales, increasing return on capital investment, efficient organization and these are all long-term consideration.

2.1.10 Budgeting and Budget

A budget is a detailed plan outlining the acquisition and use of financial and other resources over a given period of time. It represents the plan for the future expressed informal quantities terms. The act of preparing a budget is called budgeting. The uses of a budget to control a firm’s activities are known as budgetary control.

A budget is a detailed plan expressed in quantitative terms that specifies how resources will be acquired and used during a specified period of time. The procedures used to develop a budget constitute a budgeting system (Hilton, 2001; 404).

A budget is the quantitative expression of a proposed plan of action by management for a future time period and is an aid to the coordination and implementation of the plan. Budget is defined as a comprehensive and coordinated plan, expressed in financial terms for the operations and resources of enterprises for some specified period in the future.

Budget is defined as a comprehensive and coordinated plan, expressed in financial terms for the operations and resources of enterprises for some specified period in the future (Fregmen, 1976:256).

According to his definition the essential elements of a budget ate:

- Plan
- Operations and Resources
- Financial Terms
- Specified Future Period
- Comprehensiveness
- Co-operation

Therefore, we can say that budget is a tool, which may be used by the management in planning the future course of action-and in controlling the actual performance.

2.1.11 Budgeting: As a Device of Profit Plan

Budgeting, as a tool of planning, is closely related to the broader system of planning in an organization. It serves basically as a device for management, control; it is rather pivot of any effective scheme of control. Budgeting is the principle tool of planning and control offered to management by accounting function (Welsch,et al. 2001; 632).

The prime objective of budgeting is to assist in systematic planning and in controlling the operations of the enterprises. In fact budgeting is best sources of communication and an important tool in the hands of management. Since, budgeting deals with fundamental policies and objectives, it is prepared by top management. A formal budget by itself will not ensure that a firm’s operations will be automatically geared to the achievement of the goals set in the budget. For this to happen, the top-level managers and lower level employees have to understand the goals and support them and coordinate their efforts to attain them. A budget is comprehensive in that all the activities and operations of an organization are included in it. It covers the organization as a whole and not only some segments. The budgets are prepared for each segment of an organization. These are integrated into an overall budget for the entire organization. The overall budget is referred to as the master budget. Budgeting is a device of a planning and control that serves as a guide to conduct operation and a basis for evaluating actual results.

Budgets are an important tool of profit planning. The main objectives of budgeting are:

- Explicit statement of expectations
- Communication
- Co-ordination

  Expectation as a framework for judging performance.

2.1.12 Essentials of an Effective Budgeting

An effective budgeting system should have some essential feature to ensure best results. The following are the chief characteristics of an effective budgeting.

Sound Forecasting

Forecasts are the foundation of budgets, these forecasts are discussed by the executives and when most profitable combinations of forecasts are selected they becomes budgets. The sounder are the forecasts better result would come out of the budgeting system

An Adequate and Planned Accounting System

There should be proper flow of accurate and timely information in the enterprise which is, must for the preparation of budgets. This can be ensured only by having an adequate and planned accounting system in the firm.

Efficient Organization with Definite Lines of Responsibility

An efficient adequate and best organization is imperative for budget preparation and its operation. Thus a budgeting system should always be supported by a sound organization structure demarcating clearly the lines of Authority and responsibility. Not only this, there should be a true delegation of authority from top to low levels of management. This will provide adequate opportunity to all executives to make decisions and also to participate in the function of budget preparation. Thus, an efficient organization helps not only in budget co-ordination but it also plays important role in budget co-ordination and operation.

Formation of Budget Committee

As mentioned earlier, budget committee receives the forecasts and targets of each department as well as periodic reports and finalizes. And also approves the departmental budgets. Thus in order to make a budgeting system more and more effective, a budget committee should always be set up.

Clearly Defined Business Policies

Every budget reflects the business policies formulated by the top management. In other words budgets should always prepare talking in to account the policies set for particular department or functions. But for this purpose, policies should be precise and clearly defined as well as free from any ambiguity.

Availability of Statistical Information

Since budgets are always prepared and expressed in quantitative terms. It is necessary that sufficient and accurate relevant that should be made available to each department. Such data may not be available from accounting system alone and therefore they may be processed through statistical technique. These data should be as far as possible, reliable accurate and adequate.

Support of Top Management

If a budget program is to be made successful, the sympathy of each member of the management team, it should start preferably from top level (chairman). The enthusiasm for budget operation as well as direction for it should initiate and come from top.

Good Reporting System

An effective budgeting system also requires the presence of a proper feedback system. As work proceeds in the budget period, actual performance should not only be recorded but it should also be compared with budgeted performance. The variations should be reported promptly and clearly to the appropriate levels of management.

Motivational Approach

All the employees or staff other than executives should be strongly a properly motivate towards budgeting system. In an organization it is needed to make each staff member feel too much involved in the budgeting system. To meet this end motivational approach towards budgeting should be followed.

2.1.13 Fundamental of PPC

Comprehensively profit planning and control is one of the more important approaches that has been developed to facilitate effective performance of the management process. The concepts and techniques of PPC have wide application in individual business enterprises, government units, charitable organizations and virtually all group endeavors. "The fundamental concepts of PPC include the underlying activities or tasks that must be carried out to attain maximum usefulness from PPC. The fundamentals of PPC are:

1. Managerial involvement and commitment
2. Organizational adaptation
3. Responsibility accounting
4. Full communication
5. Realistic expectation
6. Flexible application
7. Timeless
8. Individual and group recognition
9. Zero base budgeting
10. Activity costing

11. Behavioral view point
12. Management control using PPC
13. Follow up (Goet, et al., 2062; 1.3)

Each of these fundamentals is discussed briefly in the following paragraphs. And it's tried to proof to what extent they are playing the role to make PPC a meaning full and a comprehensive approach.

Managerial involvement and commitment: -

Managerial involvement entails managerial support, confidence, and participation and performance orientation. All levels of management especially top level management should consider following points in order to make PPC program successful. Managerial support, confidence, participations and performance orientations include managerial involvement. All level of management especially top level management should consider following points in order to make PPC program successful.

- Understand the nature and characteristics of profit planning and control.
- Be convinced that this particular approach to manage is preferable for their situation.
- Be willing to devote the effort required to make it operative.
- Support the program in all its ramifications.
- View the results of the planning process as performance commitments.

For the comprehensive profit planning and control (PPC) program to be successful it must have the full support of each a members of management, starting with the president the impetus and direction most come from the very top(Goet, et al.,2062;1.4)

Organizational Adaptation

A profit planning and control programmed must rest upon sound organizational structure for the enterprise and a clear-cut designation of lines of authorities and responsibilities. The purpose of organizational structure and the assignment of authority is to establish a frame work with in which enterprise objectives may be attained in a co-ordinate and effective way on a continuing basis. The responsibility for the obligation of each departmental manager should be well clarified. Whatever may be the nature and sense of organizational structure, one should always bear in mind the fact that no organizational structure can be taken as ends itself but it should always be treated as means or tools to attain the goal. "In conclusion the organizational involvement includes.

- Delegation of authority and responsibility to each functional sub Units.
- Sub-divide the whole organization into different functional subunits
- Each subunits should prepare its own annual or periodic plan
- Based upon plan prepared by subunits a master plan is to be prepared by higher management."(Goet, et al., 2062; 1.4)

Responsibility Accounting

In order to set up profit planning and control on a sound basis, there must be a responsibility accounting system that is one tailored first and foremost to the organizational responsibilities. A responsibility accounting system can be designed and implemented on a relevant basis regardless of the accounting system standard cost system, direct costing systems, and so on. Therefore PPC requires responsibility accounting system.

Full communication

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

Communication can be either f dialogue messages or understanding from working together. Although most of the management gives 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 system.

For profit planning and control; effective communication means development of well defined objectives specification of goals, development of profit plans and reporting and follow up activities related to performance evaluation for each responsibility center. Communication for effective planning and control requires same understanding of responsibilities and goals in both the executives and subordinates.

Realistic Expectation

Perfection on setting goal or objectives of the future sales, production levels, costs, capital expenditures, cash flow and so on determines the success of profit planning and control programmed. So, for profit planning and control purpose, a realistic approach with time dimension and external and internal environment that will prevail during the time span should be considered. This is called realistic expectation.

Timeliness

'Time and Tide wait for none'. Whether an individual or an entity remains idle or busy, time passes at the same rate. The problem of the manager in one hand is to accomplish the planned activities in a given time and on the other hand is to prepare the plan itself phasing of the planning is of two types:

- Timing of planning horizons and
- Timing of planning activities.

Planning horizons refers to the period of time into the future for which management should plan. Decision made to the organizations obviously can affect only the future. No present decisions can effects or change the past, since all managerial decisions are futuristic each management is faced with the basic question of time dimension. The effective implementation of PPC concepts requires that the management of ES establish a definite time dimension for certain types of decision. And timing of planning activities suggests that there should be a definite management time schedule established for initiating and completing certain phases if the planning process (Goet, et al., 2062; 1.5).

Flexible Application

This stress that a PPC programmed must not dominate the business and that flexibility in applying the plan must be forthright management policy. So that strait jackets are not imposed and all favorable opportunities are seized even through “They are not covered by the budget. Rigidity in practicability will be the harmful boundary in an association in an occasion for the enterprises. So, such boundary should be avoided which mean there should be flexibility in PPC so that the unseen golden opportunity should be grasped in future for the betterment of that organization (Goet, et al., 2062; 1.5) .

Zero Base Budgeting: -

Zero Base Budgeting is a method of budgeting in which managers are required to start from zero level every year and to justify all costs as if the programs involved were being initiated for the first time. Under zero-base budgeting, every budget is constructed on the premise that every activity in the budget must be justified. It starts with the basic premise that the budget for next year is zero and that every expenditure, old and new, must be justified on the basis of its cost and benefit.

Activity Costing: -

Responsibility accounting system generally accumulates costs by department and product costing systems associate costs with units of product or service 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 throughout the organizations managers can identify redundant activities (Welsch,et al., 2001; 42).

Individual and Group Recognition: -

Behavioral aspects of human being are of the field of study of the psychologist, educators and businessman, and finding was that there could be so many unknown misconception and speculations, which has to be considered for an efficient management. A good and dynamic leadership can resolve this problem by integrating all the group efforts for betterment of the organization.

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 facets such as direct observation, oral express, policies and procedures, reports of actual results and performance reports.

PPC focuses on performance reporting and evaluation of performance to determine the causes of both high and low performance. The essential characteristics of a PPC performance reports are as follows (Welsch et al., 2001; 40).

- Performance is classified by assigned responsibilities
- Controllable and non controllable items are designated
- Timely reports are issued.

Emphasis is given to a comparison of actual results and planned results should be designated the responsible manager and show actual results.

Behavioral Viewpoint

An ounce of behavior is better than a quintal of the theorem so ever be the theory and theorem, the organization only when it improves its behavior, is best or in another way Welsch has suggested that the motivation of human resources through dynamic leadership central to effective management. It is found by many psychologist and educators and businessmen that, there are many known and unknown, misconception and speculations concerning the responses of the individual and the group in the varying situation so the PPC programs bring many of these behavior problems in the sharp and focus and trying to resolve (Welsch,et al., 2001; 53) .

Management by Exception

A comprehensive profit planning and control program facilities in many ways, underlying these is the measurement of actual performance against planned objectives goals, and standards and the reporting if that 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

a) Actual result

b) Budgeted or planned results and

c) The differences 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 exceptional 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 need immediate managerial attention to determine causes and to take corrective action. The items that are not out of line need not utilize extensive management time, however; they should 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. The out of line items stand out. It is with respect to these items that the busy executive should investigate, determine the causes and take corrective action (Welsh-et al., 2001; 45).

Follow Up

This fundamentals holds that both good and substandard performance should be carefully investigated the purpose being three fold.

- In the case of substandard performance, to lead in a constructive manner to immediate corrective action.
- In the case of outstanding performance, to recognize it and perhaps provide for a transfer of knowledge to similar operation and
- To provide a basis for better planning and control in the future.

2.1.14 Profit Planning and Control Process

A PPC program includes more than the traditional idea of a periodic or master budget. Rather, it encompasses the application of a number of related management concepts through a variety of approaches techniques and sequential steps. These steps are out lined in this study in the following manner.

Identification and Evaluation of External Variables

The variable identification phase of the PPC process focuses on (1) identifying and (2) evaluating the effects of the external variables. Management planning must focus on how to manipulate controllable variables and how to work with the existing situation of non-controllable variables. Variables, which have a direct and significant impact on the enterprises, are called relevant variables. Variables may have their different relevancy according to the market nature. For the enterprises purpose the external relevant variables are population, G.N.P. competitive activities product line, and industry sales. And so far internal variables are concerned employees, capital, research productivity, pricing, operating costs, advertisements etc. A particularly significant phase of this analysis includes an evaluation of the present strength and weakness of the enterprises. The comprehensive PPC approach is based on the expectation that these significant aspects of operations will be critically analyzed and evaluated periodically and in an orderly manner.

Development for the Board Objectives of the Enterprises

Development of the broad objectives of the enterprises is a responsibility of executive management. Based on a realistic evaluation of the relevant variables and an assessment of the strength and weakness of the organization, executive management, can specify or restate this phase of the PPC process.

The statement of broad objectives should express the mission, vision and ethnical character of the enterprise. Its purpose is to provide enterprise identify continuity of purpose is to provide and identification. One research study listed the purpose of the statement essentially as follows.

1. To define of the purpose of the Co.
2. To clarify the philosophy character of the Co.
3. To create particular climate with in the business.

4. To set down a guide for managers so that the decisions they make will reflect the best interest of the business with fairness and justice to those concerned.

Development of Specific Goals for the Enterprises

This component of a comprehensive PPC process is to bring the statement of broad objectives into sharper focus and to move from the realm of general information to more specific planning information. It provides both narrative and quantitative goals that are definite and measurable. These are specific goals that relate to the enterprises as a whole and to the major responsibility centers.

These goals should be developed by executive management as the second component of the substantive plan for the upcoming budget year. Executive management should exercise leadership in this planning phase so that there will be a realistic and clearly articulated framework within which operations will be conducted toward common goals.

Development and Evaluation of Company Strategy

Companies' strategies are the basis thrusts ways and tactics that will be used to attain planned objectives and goals. Some examples of basic strategies are:

- Increase long-term market penetration by using technology to development new products and innovation the product.
- Emphasize product equality and price for the top market.
- Expand market the company will not enter foreign markets in the foreseeable future.
- Market with low price to expand value.
- Use both institutional and local advertisement program to build market share.
- Improve employee morale and productivity by initiating a behavior management program.

Executive Management Planning Instruction

Executive management explicitly establishes a planning foundation that is a condition precedent to the movement in the planning foundation the statement of planning guidelines is set as executive management instructions and is disseminated in order to initiate a sophisticated and potent move from broad corporate planning to the development of profits plans by each major responsibility center in the enterprises. It is simply a communication steps from executive management to the lower levels of management and it should adopt the fundamentals of full communication.

Preparation and Evaluation of Project Plans

Periodic plans and project plans are different in feature and functions. It will be recalled that project plans encompasses different time horizons because each project has a unique time dimension, they encompasses such items as plans for improvements of present, products, view and expanded physical facilities, entrance in to new industrial unit from products and industries and new technology and other major activities that can be separately identified for planning purpose. The nature of projects is such that they must be planned as separate units.

Consistent with this approach during the formal planning cycle, management must evaluated decide up on the plan status of each project in process and select any new projects to be initiated during time dimension covered by the upcoming strategies and tactical profit plans.

Development of Strategies and Tactical Profit Plan

When the managers of the various responsibility centers in the enterprises receive the executive management planning instruction and the projects plans, they can begin intensive activities to develop their respective strategic or tactical profit plans. The strategic and tactical profit plans are usually developed concurrently. Certain format and procedural instructions should be provided by a centralized source, normally the financial functions, to establish the general format, amount of detail and other relevant procedural and format requirement essential for aggregation of the plans of the responsibility centers, into the overall profit plans. All of this activity must be coordinated among the centers in conformity with the organization structure. When the two profit plans for the overall enterprises are completed, executive management should subject the entire planning package to a careful analysis and evaluation to determine whether overall plans are the most realistic set that can be developed under the circumstances. When this point reaches the two profit plans should be formally approved by the top executive and distributed to the appropriate managers.

Implementation of Profits Plans

That profit plans strategies should be implemented by every level management is an accepted norm. Implementation of management plans that have been developed and approved in the planning process, involves the management functions of leading subordinates in attaining enterprises objectives and goals. Thus effective management at all levels requires that enterprises objectives, goals, strategies, and policy to be communicated and understood by subordinates. There are many facets involved in management leadership. However the comprehensive PPC program may aid substantially in performing this function, plans, strategies and policies foundation for effective communication. The plan should have been developed with the managerial conviction that they are going to be met or exceeded in all major respects. If these principles are effective in the development process, the various effective and supervisor will have a clear understanding of their responsibilities and the expected level of performance.

Use of Periodic Performance Reports

Only implementing the strategy will be on no meaning when the implementation is not checked and trial whether used appropriately. So that the significance has been raised that monthly and three monthly performance reports are to be prepared.

Follow Up

It is an important part of control. Because of performance reports are based on assigned responsibilities, they are the basis for effective follow up actions. Finally, there should be a special follow up of the prior follow up actions. This step should be designed to:

- Determinate the effectiveness of prior corrective action and
- Provide a basis for improving future planning and control procedures.

2.1.15 Basic Assumptions and Limitations of Profit Plan

Profit planning systems are more common in business organizations and non-business organization. But there are so many assumptions of using profit-planning program. Firstly, the basic plans of the business must be measured in items of money, if there is to be any assurance that many will be available for the needs of the business. Secondly, it is possible to plan for the future of a business in a comprehensive way, coordinating every aspect of the business, with every other aspect to establish optimum profits goals. Thirdly, profit planning is preplanning not merely what to do if things work out as forecasted, but also what to do if things work out differently from the forecast. In developing and using a profit planning and control (PPC) program, the following limitations should consider:

1. Profit plan is based on estimates.
2. A PPC program must be continually adapted to fit changing circumstances.
3. Execution of a profit plan will not occur automatically the profit plan is not a substitute for management.

The profit plan should be regarded not as a master but as a servant. It is not one of the best tools yet devised for advancing the affairs of a company and the individuals in their various spheres of managerial activity. It is not assumed that any profit plan is perfect. The most important consideration is to make sure, by intelligent use of profit plans that all possible attainable benefits are derived from the plans as rendered and to re-plan when there are compelling business reasons.

2.1.16 Development of Profit Plan

Development of profit plan in commercial Bank begins with the preparation of various functional budgets. Those functional 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 investments, budget for non-fund based business, budgets for expenditures and revenues. The development of profit plans process that involves managerial decisions and ideally a high level of management participation. The following are the budgets, which are developed in a bank while making a profit plan.

2.1.17 Resources Mobilization Plan or Budget

Planning for resources mobilization is the foundation for planning in a bank. The all other planning is based on it. The major and the sustainable resource of a bank are the customer deposits. Therefore, the plan for resources mobilization has a primary focus on the customer deposit mobilization. The lending and investment activities are depended on the deposit mobilized by the Bank. So the deposit mobilization or collection plan is the starting point in preparing the other different plan.

Deposit mobilization is the primary function of a bank, which has major contribution in the total resources of the bank. In terms of cost for the Bank, customer's deposit are of two kinds, viz. (i) interest free deposits i.e. current deposits, margin deposits etc. and (ii) interest bearing deposit i.e. saving deposits, fixed deposits of various tenure, call deposits etc. The interest free deposits are cost free but are generally volatile in nature. Those can be withdrawn without restriction from the bank, thus cannot be invested into higher income yielding assets. Further, interest bearing deposits involve cost of deposit but their 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 assets. The cost of deposit of banks is also affected by the prevailing deposit interest rate of other banks in the market.

Budgeted targets for deposit mobilization during a particular year is set in advance with each view of optimizing the cost of deposit and the same are allocated to the different branches of the banks. Such allocations may be regarded as the tactical plan for deposit mobilization of the banks. Banks resources other than customer deposits are the borrowing from other banks and the capital fund. Generally banks borrows from other banks to meet temporary requirement of liquidity which may occur, sometimes, during the occurs of banking operation caused due to unexpected withdrawals of deposit or deferment in loan repayments by the borrower by some reason or other. Such activities are managed from the Head Office with the least possible cost.

Among the capital fund, the equity capital is formed generally one time during opening of the bank. The central bank (NRB) may from time to time instruct the bank to enhance the paid up capital to improve the capital adequacy of the bank.

Further, the bankers may choose by themselves whether or not to increase the owner's capital by raising the other item included in capital funds beside paid up capital and general reserves. It is always better to have a higher capital fund base of a bank because, creation of bank's assets, and the size of lending to any particular borrower are tried up with the capital adequacy requirement by the central Bank. As per NRB directives, banks shall have to build their capital base at least of 12 percent by the end of FY 2060/61. And a bank can take the size of exposure per borrower equivalent to maximum of 25 percent of its core capital in fund based, and 50 percent of than in non-fund based exposure.

2.1.18 Resources Deployment Plan or Budget

Planning for development of resources starts from assessment of nature of resources to be mobilized. That is the assets are allocated on the basis of the nature of resources. This approach of deployment of resources is called asset allocation approach. The fundamental criterion which must be followed in allocating funds for acquiring different types of assets is that the velocity-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 used to buy long dated high yielding securities, demand deposit which are more volatile, could be used to acquire relatively liquid assets like cash or money at call and short notice on which little or no return is made by the bank (Vaish, 1996:365).

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 from time to time. There is no yield in the fund deployed as liquid assets.

Deployment for lower income yielding assets are generally placing the funds in short term securities, treasury bills etc. which provides reasonable liquidity to be bank as well as yield some return although they are at very low rate. Major portion the income of the Bank comes as interest income from the resources deployed to loans advances and Bill discounting (LDO). As the most part of the resources are for LDO. Banks make its lending budgets in advance as per their lending policies. Lending targets and fixed at various sector of economy for various kinds of trades and commercial activities and to various borrowers ensuring well diversification of the assets. The targets are allocated to the branches, which are generally operated as separated profit centers.

2.1.19 Planning for Non-Funded Business Activities

Other activities of commercial banks where it does not have to involve its fund yet it can generate other income are called non-funded business activities of the Bank. They are usually letter of credit and Bank guarantee issuance business of the bank where the bank undertakes payment liabilities, which are contingent in nature and the banks charges certain percentage of commission on such transaction to their client who are availing these facilities from the bank. The bank fixes annual target for such business and those are allocated to the branches of the bank.

Expenditure Planning

The expenses planning and controlling are very necessary for supporting the objectives and planned programs of the firm. An expense is related with profit. It is real fact, that the minimization of cost is maximization profit. So the expenses must be planned carefully for developing a profit plan. In Bank there are generally following types of expenses:

a. Interest Expenses

b. Personnel Expenses

c. Office Operating Expenses

d. Expenses meeting the loss in Exchange Fluctuation

e. Non-operating expenses

f. Expenses for provision for loan loss

g. Expenses for provision for staff bonus

h. Expenses for provision of income tax

The interest expenses are incurred while paying for the deposit mobilized by the bank and include the expenses incurred for interest payment in all kinds of interest bearing deposit as per the agreed rate between the bank and the borrower. In the total expenses of a bank, the portion of interest expenses is quite higher. Therefore, the expenses are categorized into interest expenses and other expenses while the later includes other expenses as mention above except the interest expense.

Interest expenses in a bank depend on the average cost of deposit (COD) mobilized by the bank. Lower the COD lower the interest expenses and thus higher the profitability. Therefore from profitability point of view banks plan their COD at lowest possible level. The nature of interest expense is that of a variable expense. The net earnings from interest income of a bank deducting the interest expense for the deposit mobilized is called 'Spread' which is similar to the 'Contribution Margin' in sales of commodities by a manufacturing units.

Other expenses are the administrative expenses those are generally incurred by the bank during the course of its operation. Higher the volume of business transaction of a bank, higher will be the amount of its other expenses. Therefore, the expense should be related with the business activities, which ultimately should yield in income for the bank. Such other expenses from burden to the profitability as it consume the spread earned. Therefore budgets are prepared with an aim of reducing the burden as far as possible. The expenses budgets are formulated in co related with the activities of the bank and the targets are allocated to different branches.

Revenue Plan

Revenue of a bank is generated from the income yielding activities of the bank. Therefore while preparing the resources deployment plan and non-funded business activities plan, the banks make the estimation of the revenue in advance during the period for which the plan is developed. Revenues of a bank are generated in the following forms:

a. Interest income

b. Commission and discounts

c. Dividend

d. Other income

e. Foreign exchange income

f. Non-operating income

Generally the interest income of a commercial bank holds a major portion in total revenue of the bank and it provides the major source of earning of a bank. Therefore total income of a bank is categorized in two type viz. interest income and other income, while the later including other income items as listed above except the interest income.

The interest income is earned by charging interest on the fund deployed in interest earning assets such as loan and advances, overdraft, investments in government securities, debentures etc. For this study, the income from Bills discounting has also been treated as interest income, as we consider loans overdraft and bills discounting together as a single asset portfolio as LDO.

As the average rate of interest on LDO are comparatively higher than any other kind of income yielding assets, from the profitability point of view, higher asset allocation into LDO, higher will be the income. The other income are generate from other activities of the bank such as issuance of L/C Bank Guarantees, from remittance charges, cheque collection fee, locker charges, service charges, commitment charges, trading gain on foreign exchange, revaluation gain on foreign exchange reserves etc. The amount of other income of a bank greatly contributes in lowering the burden on the profitability. Higher the other income earned by the bank, lower will be the net burden amount and thus better will be the profitability of the bank.

Income of a bank is essentially activity based i.e. the volume of business. Higher the income generating activities of a bank, higher will be the amount of its revenue. Therefore the bank develops its plans for various activities in such a way that it optimizes its revenue.

2.1.20 Implementation of the Profit Plan

Development of an annual profit plan ends with the planned income statement, the balance sheet and the planned statement of changes in financial position. These three statements summaries and integrate the details of plans developed by management for the period. They also report the primary impact of detailed plans on the financial characteristics of the firm. Before redistributing the completed profit plan it is general desirable to recast certain budget schedules so that technical accounting mechanics and jargon are avoided as much as possible.

The redesigned budget schedules should be assembled in on logical order, reproduced and distributed before the first day of the upcoming budget period. The profit plan completion data is important. Issuance of a profit plan after the beginning of the budget period is one sure way of destroying much of the budget potential. Timely completion of the planning budget suggests the need for a budget calendar.

The final test of whether the efforts and cost in developing a profit plan are worthwhile is its usefulness to management. The plan should be developed with the conviction that the enterprises are going to meet or exceed all major objectives. Participation enhances communication. If this principle is to be effective, the various executives and supervisors should have a clear understanding of their responsibilities. The copies of the complete profit plan be prepared and distributed to the member of executive management. The guiding principle in establishing the distribution policy might be to provide one copy to each member of the management team according to his/her overall responsibilities, while taking in to account the problem of security. After distribution of the profit plan a series of profit plan conferences should be held. The top executives discuss comprehensively the plans expectations and steps in implementation. At this top level meeting the importance of action, flexibility and continuous control may well be emphasized. In essence, each manager has to realize that the budget is a tool for his or her use. Conferences should be a held so as to convey the profit plan to each level of management.

The manager of each responsibility centre obtains an approved profit plan for this centre and it becomes the basis for current operations and excerpts considerable coordinating and controlling effects. Performance must be measured and reported to management. Execution of the plan is assured through control procedure must be established so that accomplishment, or failure is immediately known. On this basis action can be taken to correct or minimize and undesirable effects. Short term performance reporting is essential.

A budget program viewed and administrated in a sophisticated way does not hamper or restrict management, instead, it provide definite goals around which day today and mouth to mouth decisions are made. Flexibility in the use and application of both the profit plan and variable budgets also should be considered in detail. Flexibility in budget application is essential and it increases the probabilities of achieving or bettering the objectives.

2.1.21 Performance Reports

Performance reporting is an important part of a comprehensive PPC system. Its phase of a comprehensive PPC program significantly influences the extent to which the organization's planned goals and objectives are attained. Performance reports deal with control aspect of PPC. The control function of management defined as the action necessary to assure the objectives plans, policies and standards are being attended. Performance reports are one of the vital tools of management to exercise its control function effectively.

Special external reports, reports to owner and internal reports are specially presented in the organization. Performance reports include in internal reports groups. It is usually prepared on an monthly basis and follows a standardized format. Such reports are designed to facilitate internal control by management. Fundamentally actual results of reports are compared with goals and budget plans. Frequently they identify problems that require special attention since these reports are prepared to pinpoint both efficient and inefficient performance.

Features of Performance Reports

In comprehensive PPC, performance report is very important. The main objective of performance reports is the communication of performance measurement, actual results and the related variances. Performance reports offer management essential insights in to all the facts of operational efficiencies. Performance reports should be:

1. Tailored to the organizational structure and focus of controllability (that is by responsibility centers).
2. Designed to implement the management by exception principle.
3. Repetitive and related to short term period.
4. Adapted to the requirements of the primary users.
5. Simple understandable and reports only essential information.
6. Accurate and designed to pinpoint significant distinctions.
7. Prepared and presently promptly.
8. Constructive in tone.

Aspects of Performance Reports

The various managers use their performance reports depends on many factors, some behavioral and some technical. One important factor is the extent to while the performance reports serves the management and decisions making needs of the users. Top management needs reports that give a complete and readily comprehensive summary of the overall aspects of operations and identification of major events. Middle management needs summary data as well as detailed data on day-to-day operation. Similarly lower level management needs reports that must be detailed, simple understandable and limited to items having a direct bearing on the supervisor's operational responsibilities.

In the design and preparation of performance reports careful attention must be given that titles and headings should be descriptive; column heading and side caption should clearly identify the data, and the technical jargon should be avoided. Reports should not be too long and complex; tabulations should be avoided. Performance reports should be standardized to a reasonable degree and if should be relevant.

Performance reports should be available on a timely basis. To attain a realistic balance between immediate reporting and the costs of detailed reporting, monthly performance reports are widely used in the organization.

2.1.22 **Concept of Banking**:

Bank is a financial institution, which plays a significant role in the development of the country. It facilitates the growth of trade and industry and other sectors of the national economy. It is a resource for economic development, which maintains the self-confidence of segments of society and extends credit to the people. The more development financial system of the world characteristically falls into three parts: The central bank, the commercial banks and other financial institutions. They are also known as financial intermediaries. A bank is a business organization that receives and holds deposits of funds from others makes loans or extends credits and transfers funds by written orders of depositors. The business in banking is one of collecting funds from the community and extending credit (making loans) to people for useful purpose. Banks have played a pivotal role in moving money from lenders to borrowers. Banking is a profit seeking business not a community charity. As a profit seeker, it is expected to pay dividends and otherwise add to the wealth of its shareholders. In the Nepalese context, owadays three types of banks are being operated by performing their activities in different sectors, such as Central Bank (Nepal Rastra Bank), Commercial Banks and Development Banks, commercial banking are either operated fully in the public sector (RBB) or the joint sector (NBL) or being operated under joint venture with foreign banks with private participation (NABIL/ BOK). Evolution of Commercial Bank The world 'Bank' is derived from the word 'Banco', "Bancus' or 'Banque' all meaning to a bench. This refers that early bankers transacted their money lending activities on banches in the marketplace exhibiting the coins of different countries in different denominations for the purpose of changing and or lending money. Some writers are of the opinion that the word 'Bank' came from the German word 'Banc' meaning joint stock fund (Varshney, 1993:169).

In its native from, banking is as old as in the authentic history and origins of the modern commercial banking are traceable in ancient times. In ancient Greece, around 2000 B.C., the famous temples of Ephesus, Delphi and Olympia were used as depositories for people surplus fund and these temples were the centers for money lending transactions. The pries of these temples acted as financial agents until public confidence was destroyed by the spread of disbelief in the religion. Later, however, for a few centuries, banking as an organized system of money lending receded because of the religious belief that the charging of interest was immoral. However, the banking as we know today, made its first beginning around the middle of 12th century in Italy. The Bank of Venice, founded in 1157 A.D. was the first public banking institutions. Following this, in 14th century, the Bank of Barcelona and the Bank of Genoa were established in 1401 A.D. and 1407 A.D. respectively (Vaish, 1996:192).

In England, start of Banking can be accounted for as far back as the region of Edward III. Those days, the Royal Exchanger used to exchange the various coins into British money and also used to supply foreign money to the British men going out of the country. The bankers of Lombardy were famous n medieval Europe as the credit of planning the seed of modern banking in England goes to them when they settled in London in the locality now famous as the Lombard Street.

The goldsmiths can be considered as the initial Bankers in England as they used to keep strong rooms with watchmen employed. People entrusted their cash to them. The goldsmiths used to issue duly signed receipt of the deposits with the undertaking to return the money on demand charging some fee for safe keeping. These undertaking helped in gaining a further confidence of the public therefore the money were kept with them for longer periods. They were thereby encouraged to lend some part of these funds, which became profitable business to them. Therefore they started offering interest on the deposits to attract more funds. In the course of time independent banking concerned were set up. The Bank of England was established in 1694, under a special Royal Charter. Further in 1833 legislative sanction was granted for establishment of joint stock banks in London, which served as a big impetus to the development of joint stock banking. These banks took the initiative for extending current account facilities and also introduced the facilities of withdrawals through cheques.

In India, the ancient Hindu scriptures refer to the money lending activities in the Vedic period. During the Ramayan and Mahabharata eras, banking had become a full-fledged business activity and during the smiriti period (after the Vedic period), the business of Banking was carried on by the members of Vanish community. Manu, the great law giver of the time speaks of the earning of interest as the business of Bishyas. The bankers in the Smriti period performed most of those functions which the banks in modern times performs such as the accepting of deposits, granting loans, acting as the treasurer, granting loans to the king in times of grave arises and banker to the state and issuing and managing the currency of the country (Vanish, 1992:183).

In Nepal, although the monetary history dates back to 1st century (Lichhavi Dynasty), the banking history is comparatively very short. The development of organized banking has started in Nepal only from around the starting of 20th century of Bikram Sambat. Nepal Bank Limited, established in B.S. 1994 with an authorized capital of Rs.1 crore and paid up capital of Rs.8 lacs 42 thousand is the first organized bank established in Nepal (NRB, 2045). Although during the Prime Minister-ship of Rana Prime Minister Ranadwip Singh an office called "Tejarath Adda" was established for granting loans to government officials and also to the general public against the security of gold, silver and other valuables, it could not be considered as Bank in real sense as it did not collect deposit. Later after establishment of Nepal Bank, the functions of "Tejarath Adda' were limited up to providing loans to government officials only (NRB Report, 2045:12).

Banking development in Nepal found another break after the establishment of Nepal Rastra Bank, the Central Bank of Nepal in 2013 B.S. (NRB, 2045:14). This has helped organizing the monetary system in the country before which the duel currency system (Indian and Nepalese currency) was prevailing in the system. Larger sector of economy was none monetized. In the course of organized development of banking sector, second commercial bank, Rastriya Banijya Bank was established in 2022 B.S. at the state ownership (NRB Report, 2045:16). Later on, in FY 2039/40, the policy for allowing establishment of foreign joint venture banks was taken with an aim of having fair competition and skill development in banking sector, which had added a new dimension in development of banking in Nepal. Accordingly, Nepal Arab Bank Ltd. (presently renamed as Nabil Bank) has been established as the first joint venture bank in Nepal in 2041 B.S. (NRB Report, 2045:17).

Afterward, various commercial banks were opened with foreign joint venture under private sectors in Nepal which had contributed a lot to bring the commercial banking at present day position. Nepal Bangladesh Bank has established in the year 2051 B.S.

2.1.23 Concept of Commercials Banks

The term 'Bank', signifies the place where we keep our money for safe keeping as well as for earning some interest or the place from where we borrow money as loan. As regard to the borrowing money from the Bank, we may consider its function as that of money lender in our society. But a bank a moneylender is different in the sense that the former lends the money which is principally collected from their depositors while later does so from its own resources. The Random House Dictionary of the English Language defines the bank as an institution for receiving money and is some cases, issuing notes and transiting other financial business (Stein and Urdang, 1985:29).

Banks refer to an institution, which perform the activities related with money and credit. Banks have been traditionally regarded as merely the purveyor of money. But today they are not merely purveyor of money but creator or manufacturer of money in an economic system. Maclead, in this book 'theory of credit' has defined the bank not only as an institution, that borrows and lend money but also the institution for creating credit. In the opinion of Sayers, Banks are the institutions whose debts usually are referred to as bank deposit and are commonly acceptable in final settlement of other people's debt. He has taken the bank deposit as the debt owe by bank and that particular depositor can set off his liability with his creditor by the deposit in the Bank to the extent of his deposit amount.

The Commercial Bank Act 2031, under which commercial banks in Nepal are established and operated, has defined Commercial Bank as a bank which exchanges money, accepts deposit, advances loans and performs other commercial transactions and which is not specially established with the objectives of co-operative, agricultural, industrial or any other of such kind of specified purpose. The Act has defined the commercial Bank on the basis of its objectives and activities. Referring to the act, a commercial bank:

- Should be established with a specified objective of co-operative, agricultural, industrial or any of such of specific purpose.
- Should accept customer deposit.
- Should advance loans and make investments.

- Perform commercial transactions.

The same Act has provided for the modalities of establishing a commercial bank, as per which a commercial bank can be established under the Company Act as a limited liability company only with the recommendations of Nepal Rastra Bank.

From the various definition made and opinion produced regarding commercial banking, it can be concluded that a commercial bank is set up to collect scattered funds and employ them to productive sector of economy.

2.1.24 Function of Commercial Banks:

Commercial banks are the important type of financial institution for the nation in terms of aggregate assets. The business of banking is very broad in modern business age. The number and variety of services provided by commercial bank will probably expand. Recent innovation in banking includes the introduction of credit cards, accounting services for business firms, factoring, leasing participation in the Eurodollar market, and lock-box banking. The major functions of commercial banks are explained in brief below:

a. Creating Money

One of the major functions of the commercial bank that separates it from other financial institutions is its ability to create money and to destroy money, which is accomplished by the lending and investing activities. The power of commercial banking system to create money is of great economic significance as it results in the elastic credit system that is necessary for economic progress at relatively steady rate of growth.

b. Payment Mechanism

Providing for a payment mechanism or the transfer of funds is one of the important functions performed by commercial banks and it is increasing in importance as greater reliance is placed on the use of cheques and credit cards. Moreover, bank credit card can be used to withdraw cash from a depositors account, make deposits and loan payment and transfer funds between a depositor's saving and checking account.

C. Pooling of Nation is Saving

Commercial banks perform vital services to all sector of the economy by providing facilities for the pooling of national saving and making them available for economically and socially desirable purposes. The saver is rewarded by the payment of interest on saving. These pooled funds are made available to businessman who may use them for the expansion of their productivity capacity and to consumers for such items as housing and consumer goods.

d. Extension of Credit

The major function of commercial bank is the extension of credit to worthy borrowers. Bank lending is very important to the economy for it makes possible the financing of agriculture, commercial and industrial activities of the country. Moreover, the provision of bank credit provides for the smooth operation of government such as capital improvements for building of school and hospitals and purchasing of new fire-trucks, construction of highways and dams and for the nation defense.

e. Facilities for the financing of Foreign Trade

The other primary function of commercial banks is making arrangements for the amount of foreign exchange needed by business organization to pay in foreign country. Banks provide more satisfactory guarantee to an individual or firms bought the issuance of commercial letter of credit, drafts telegraphic transfer (TT) and an accepting traveler's letter of credit or traveler's cheques.

f. Trust Service

Increased incomes have made possible the accumulation of wealth, which in turn has contributed to the growth of the trust services of commercial banks. Trust department serve as trustees in connection with bond issues and as transfer agents and registers for corporation. They may also administer sinking funds and perform other related activities with the issuance and redemption of bonds and stocks.

g. Safekeeping of Valuables

The safekeeping of valuables is one of the oldest services provided by commercial banks. The protection of valuables falls into two areas or a department of a bank: safe deposit boxes and safekeeping. Safe deposit boxes are made available to customer on a rental basis that may be useful provides a place for securities, deeds, insurance policies and personal items of valuable only to the owners. In other hand, safekeeping differs form safe deposits box services in that the bank has custody of valuables and acts as an agent for the customer.

2.1.25 Role of Commercial Banks in the Development of Economy

Commercial Banks play an important role in facilitating the affairs of the economy in various ways. The operations of commercial Banks record the economic pulse of the country. The size and composition of their transaction reflect the economic happening in the country. Commercial Banks have played a vital role in giving the direction in economic growth over the time by financing the requirement of industries and trade in the country. By encouraging thrift among the people, banks have fostered the process of capital formation in the country. In the context of deposit mobilization, commercial banks induce the savers to hold their savings in the form of bank deposits thus help bringing the scattered resources into the organized banking sector which can be allocated to the different economic activities. In his way they help in country's capital assets formation. Through their advances, banks also help the creation of income out of which further saving by the community and further growth potentials emerge for the good of the economy. In a planned economy, banks make the entire planned productive process possible by providing funds to the public sector, joint sector or private sector for any type of organization. All employment income distribution and other objectives of the plan as far as possible subsumed into the production plan which banks finance.

The importance of commercial banks in directing the economic activities in the system is immense. Not only in the highly developed economies where the commercial and industrial activities are paralyzed in the absence of banks, even in the developing countries' economy are most of the economic activities particularly of organized sectors bank based. Therefore, in a nutshell it can be said that the growth of the economy is tied up with the growth of the commercial banks in the economy.

2.2 Review of Previous Studies

Pandey (2008) carried a study entitled "**Profit planning in commercial banks with a case study of Bank of Kathmandu Ltd and Himalayan Bank Ltd.**" for the purpose of the partial fulfillment of the requirement for Master Degree in Business Administration. The main objective of this study is to trace out the situation of profit planning in Nepalese commercial banks.

His main objectives:

- To highlight the current profit planning premises adopted and its effectiveness in HB Land BOK.
- To analyze the variance of budgeted and actual achievements.
- To study the growth of the business of the Banks over the period.
- To provide suggestion and recommendations for improvements of the overall profitability of the banks.

His Major Findings:

- Major concentration of the analysis on profit planning in commercial banks is at deposit mobilization. In this respect, they are incurring higher cost toward deposit mobilizations. The average growth rate of total deposit of BOK is more than of HBL i.e.17.0725% > 11.36%.
- The LABP of both banks are fluctuating rate over the study period, but in the FY 2002/03 is negative growth of BOK by -1.54% (on the basis of FY 2001/02). Comparatively BOK is good position than HBL. From the average growth rate i.e. 16.08% > 14.11% respectively.
- In the BOK, NLABP has found high at first years and negative in second year then after fluctuate. At the last it growth rate is 22.19 percent (on the basis of 2004/05). Similarly the HBL, NLABP has found positive in 5 years and negative in two years. At last year it's growth rate is negative by -7.79 percent (on the basis of 2004/05) .
- Expenditure of the both banks are increasing trend but in the FY 2002/03 of BOK and FY 2001/02 of HBL is decreased. In comparatively more increasing trend in the HBL than BOK.

His Major Recommendations:

- The deposit collections of both the banks are increasing over the period but the collection of HBL is not satisfactory in comparison with BOK. So, it is recommended to HBL to collect more amounts as deposit through large variety of deposit scheme and facilities, like cumulative deposit scheme, gift cheques recurring deposit scheme (life insurance), and monthly interest income. The minimum amount needed to open on account should be minimizes so that it will attract other small deposits.
- The average cost of deposit of BOK is high than HBL. Therefore BOK should try to lower it by mobilizing more and more low cost or Cost free deposits there by reducing the interest cost because due to high cost of deposit, bank is forced to invest its fund more on high yield assets, which are generally not liquid and obviously risky for the bank.
- Correlation between interest expenses and deposit of HBL is negative, it shows there is no relation between interest expenses and deposit but it is not possible. So HBL should increase its cost of deposit rate.

Kharel (2008) conducted a study entitled "***Profit planning of commercial banks in Nepal comparative study of Everest Bank, Nabil Bank and Bank of Kathmandu*** **"** for the purpose of the partial fulfillment of the requirement for Master Degree in Business Studies.

His main objectives:

- To find out the relationships between total investment loan and advances, deposit, net profit and outside assets.
- To identify the investment priority sectors of commercial Bank
- 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 Bank

His Major Findings:

- The liquidity position of EBL is comparatively better than that NABIL and BOK. EBL has invested higher sector in government
- Securities than BOK less then portion than of Nabil. Asset management ratio found that EBL is better position as compared to that of Nabil and BOK.
- EBL has trying to best in loan loss provision.
- Investment on share and debenture to total working found ratio is higher in BOK.
- The interest earned to total outside asset and return on total working fund ratio of EBL is lowest of all. However, over all analysis of profitability ratios is average profitable in comparison to other compared bank. I.e. Nabil and BOK. to make the profit BOK is taking highest risk by providing the higher portion of its deposit as a loan.
- The return, loan, advances ratio, and return on assets of EBL are lowest of all. The ratio suggests that the earning capacities of the bank's loan and advances is satisfactory. The return on asset of the bank is good in average. It indicates the good earning capacity of the bank assets and good utilization of its assets.
- 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 profitable position as it is getting higher return that is interest cost .
- EBL has showing its good performance by increasing the total deposit, loan and advance and investment in profitable sectors interested earning by providing loan to clients.
- The trend of the total investment, total deposit, loan and advances and net profits of EBL shows better position than that of NABIL and BOK.

Kunwar (2009), has submitted thesis on the topic ***Profit Planning of Nabil Bank Limited.'*** The study is conducted on profit planning of Nabil Bank, which is one of the leading banks in Nepal.

Main Objectives:

- To find out the relationships between total investment loan and advances, deposit, net profit and outside assets.
- To identify the investment priority sectors of commercial Bank
- 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 Bank
- To provide suggestion and possible guidelines to improve investment policy and its problems.

Major Findings:

- NABIL has been maintaining a steady growth rate over this period.
- NABIL has earned a net profit of Rs 747 million for the fiscal year 2007/08 and this comes to be 10.83% more as compared to the same period in the previous fiscal year.
- NABIL earned a operating profit of Rs 1122.7 million for the fiscal year 2007/08 and this comes to be 8.19%more as compared to the same period in the previous fiscal year.
- Total deposit is Rs 31915 million for the fiscal year 2007/08 and this comes to be 36.72% more as compared to the same period in the previous fiscal year.
- Total loan is Rs 21759 million which is increase by 36.8%compare as previous fiscal year.
- Nabil bank has adequate liquidity position. It shows that bank's investment is appropriate.
- Loan loss provision to total loan and advances ratio of NABIL is in decreasing trend. This shows that good quality of assets in total volume of loan and advances.
- Total non-performing assets to total assets ratio is also in decreasing trend. It indicates proper mange of total asset. This ratio indicates the more efficient operating of credit management. Ratios are decreasing trends it indicates the bank is decreasing the non-performing loan from total loan.

- Interest expenses to total deposit ratio of NABIL is increased in fiscal year 2007/08. That this ratio does not indicate higher interest expenses on total deposit.
- Equity portion of the bank is slightly increasing in the recent years due to issue of directives by Nepal Rastra Bank (NRB) the entire bank to increases it's paid up capital.

His Major Recommendations:

- Cash and bank balance of NABIL is high. Banks efficiency should be increased to satisfy the demand of depositor at low level of cash and bank balance does not provide return to the bank. Therefore some percentage of the cash and bank balance should be invested in profitable sectors.
- Bank is suggested to make policy to ensure rapid identification of delinquent loans. Bank should make immediate follow-up of loan until it is recovered. The recovery of loan is very challenging as well as important part of the bank. Therefore bank must be careful to strengthen credit collection policy
- NABIL should avoid extending credits merely based on oral information presented at the credit interview. Historical financial and trade records should be obtained for proper assessment of the proposal.

Maharjan (2009) conducted a study on the topic **'Profit Planning in a Commercial Bank (a case study of Standard Chartered Bank)'**

Main Objectives:

- To highlight the current profit-planning premises adopted and its effectiveness in Standard Chartered Bank.
- To observe Standard Chartered Bank's Profit Planning on the basis of overall managerial Budgets developed by Bank.
- To analyze the variance of budgeted and actual achievements
- To study the growth of the business of the Bank over the period.
- To make necessary suggestions and recommendations.

His Major Findings:

- The decision making process is highly centralized however, management takes the feed forwards for annual planning and strategy building through manager conferences and strategy building through manager conferences and strategic meeting organized twice in every year at the head office.
- Interest expenses amount is the highest among total expense items of the bank every year.
- The total deposit of the bank is found increasing every year corresponding to the Increase in interest expenses the total deposit is perfectly and positively correlated with total interest expenses.
- The Profitability ratio shows that it is a useful measurement for all financial researchers invested in the assets. As Return on assets is high during 2005/06 with 2.55% and return on equity is high in same fiscal year with 37.55%. This shows that overall efficiency of the SC Bank and better utilization of total resources available is higher and strong.

His Major Recommendations:

- Profit Planning & control technique should be used for making long term banking strategies and managerial decisions.
- Employee training & career planning at advance level should be given more focus in order to keep the man power updated with the changing practices and the technologies.
- The average cost of deposit of the Bank is high. Therefore, bank should try to lower it by mobilizing more and more low cost or cost free deposits thereby reducing the interest cost due to high cost of deposit, bank is forced to invest its liquid and obviously risky for the bank.
- Bank CD ratio is high, which is rather a compulsion to meet the cost of high cost deposits. Higher CD ratio although gives better return in short term, it hampers the liquid and is more risky for the bank and calls for more provision for loan loss. In this way, the profitability of the bank also gets hampered on the long run. Therefore, the bank should

improve its position from lowering the deposit cost and increase the investments in liquid assets although they are of low yield.

2.3 Research Gap

Today's world is marketed by rapid changes and new developments, financial recession, as such researchers conducted a few years back may not be adequate to explain current phenomena. Thus continuous attempt needs to be taken and new researcher and conducted to build our existing knowledge base, interpret and analyze events in the face of dynamism. Most of the past research studies about profit planning system are basically related to the profit planning system of manufacturing organization or production oriented activities. The researcher could find some study so far that has been related to profit planning system of commercial bank in Bank Of Kathmandu Limited, Himalayan Bank, Standard Chartered Bank, Bank of Kathmandu, Nabil Bank Limited, and Everest Bank Limited. All the dissertations have pointed out that there is no proper profit planning system and recommend for the effective implementation of profit planning system in the concerned institution. Through many affiliate researchers have been done in this area but these have been very few exclusive researchers on this subject.

This study shall be a new study in this field as no study has been made so far in the profit planning of commercial banks i.e. comparative study on profit planning in Bank of Kathmandu Limited, NABIL Bank Limited and SBI Bank Limited. This study has tried to indicate the implementation of profit planning system as well as to see how far the banks are practicing. This study has analyzed the financial position of BOK, NABIL and SBI by applying the tools of ratio analysis and other mathematical and statistical tools. Finally it concludes the various findings of research and recommendations to the BOK, NABIL and SBI.

CHAPTER – III

RESEARCH METHODOLOGY

The term ‘research’ is believed to be derived from the French word ‘Researcher’ meaning to search again. The research work is undertaken following a systematic way, which is called Research Methodology. As per Kother, it is the way to solve systematically about the research problem. This chapter refers to the overall research method comprising the theoretical aspect to the collection and analysis of data. This study covers quantitative methodology in a greater extent and also cases the descriptive part based on both technical aspect and logical aspect. This study has intense relation with the application of planning and control in a commercial Bank with a specific reference to BOK, Nabil and Nepal SBI Bank Ltd regarding the objectives to analyze, examine and interpret the application of profit planning in the Bank. The Research Methodology includes research design, data collection procedures and research variable and tools used. This chapter describes research design, population, sampling procedure, sources of data and analysis of data.

3.1 Research Design

The research design is the conceptual structure within which research is conducted. It constitutes the blueprint for the collection, measurement and analysis of data. As such the design includes an outline of what the researcher will do from writing the hypothesis and its operational implications to the final analysis of data.

This study is an examination and evaluation of budget process in profit planning program of BOK, NABIL and SBI. Various functional budgets and other related accounting information and statement of the banks are materials to analyze and evaluate the profit planning system of banks. Descriptive as well as analytical approaches have been adopted in this research. This is a comparative study research of commercial banks.

3.2 Population and Sample

As this research aims at studying the profit planning aspect of the commercial bank taking the reference of BOK, NABIL and SBI and data have been analyze for several years of its operation. Here, all the commercial banks are population of the study and BOK, NABIL and SBI have been selected as sample for the present study.

3.3 Data Collection Procedures and Sources of Data

This study is mostly based on secondary data. However, primary data and information have been obtained through informal discussions with the staffs of the bank. Secondary data have been collected from the annual published accounting and financial statement of the banks. Similarly other necessary data have collected from website, newspapers and related publications.

3.4 Research Variables

Loans/Advances overdrafts and Bills discounted (LDO), customer deposits, total resources, total deployment interest expenses, other expenses, interest income, other income etc. of the banks are the research variables of this study.

3.5 Analysis of Data

Analysis is the careful study of available facts so that one can understand and drew conclusion from them on the basis of established principles and sound logic (Cottle etal; 1988, 29). This study mostly based the analysis of secondary data with the help of different statistical tools. Therefore the data have been collected accordingly and managed, analyzed and presented in suitable tables, formats, diagrams, graphs and charts. Such presentations have been interpreted and explained wherever necessary. Financial, mathematical and statistical tools are used to analyze the presented data, which includes ratio analysis, percentage, regression analysis, correlation, mean, standard deviation, coefficient of variance, percentile increment, etc.

3.6 Statistical Tools

To draw the conclusion by analyzing the collected data simple statistical tool like arithmetic mean, multiple bar diagram, pie-chart are used and tabulation are used to implicit the comparative results.

3.6.1 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 observations.

3.6.2 Multiple Bar- Diagrams and Graphs

Diagrams and graphs are visual aids which give a bird's eye view of a set of numerical data which show the information in a way that enables us to make comparison between two or more than two sets of data. Diagrams are in different types. Out of these various types of diagram one of the most important form of diagrammatic presentation of data is multiple bar diagram which is used in cases where multiple characteristics of the same set of data have to be presented and compared.

3.6.3 Percentage

Percentage is one of the most useful tools for the comparison of two quantities or variables. Simply, the word percentage means per hundred. In other words, the fraction with 100 as its denominator is known as a percentage and the numerator of this fraction is known as rate of percent.

3.6.4 Coefficient of correlation(R)

Correlation analysis is the statistical tools use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the direction of relationship between the two sets of figures. It is the square root of the coefficient of determination. Correlation can either be negative or positive. It always lies between +1 to -1. The degree of association between the two variables, say X and Y, and is defined by correlation coefficient (R)

$$R = \frac{xy}{\sqrt{x2}\sqrt{y2}}$$

Where,

$X = X - \overline{X}$ and $Y = Y - \overline{Y}$

3.6.5 Regression Analysis

Regression is the statistical tool which is used to determine the statistical relationship between two (or more) variables and to make estimation (or prediction) of one variable on the basis of the other variable(s).In other words, regression is that statistical tool with the help of which the unknown value of one variable can be estimated on the basis of known value of the other variable.

3.6.6 Standard Deviation (σ)

The standard deviation is the absolute measure of dispersion. It is defined as the positive square root of the mean of the square of the deviation taken from the arithmetic mean. The greater the amount of dispersion or variability, the greater the standard deviation, the greater will be the magnitude of the deviation of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series and a large standard deviation means just the opposite.

3.6.7 Coefficient of Variation (C.V.)

The relative measure of dispersion based on the standard deviation is known as the coefficient of variation. It is independent of unit. So, two distributions can bitterly be compared with the help of C.V. for their variability. Less the C.V., more will be the uniformity, consistency, stable and homogeneous etc. and vice versa.

CHAPTER-IV

PRESENTATION AND ANALYSIS OF DATA

This chapter is devoted to the presentation, analysis, interpretation and scoring the empirical finding out of the study through definite course of research methodology. To achieve the stated objective of the study researcher has tabulated the available data in different chart, table and analyzed using the tools where necessary and applicable stated in the research methodology.

4.1 Financial Analysis of Commercial Bank

Financial analysis of the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of the balance sheet. Here relevant ratio is calculated and appropriate interpretations are made. Analysis of financial ratio shows the performance of the concern banks.

4.1.1 Liquidity Ratio

Commercial Banks must maintain its satisfactory liquidity position to satisfy the credit needs of the commercial to meet demands for deposits, withdrawals, pay nation by obligation in time and convert non-cash assets into cash to fulfill immediate needs without loss of bank and consequent impact on long run profit.

Current Ratio

It is the relationship of current assets and current liabilities. Current assets can be converted in to cash with in short period of time normally not exceeding one year. Current liabilities are those obligation which are payable within short period. Current assets consist of cash and bank balance, money at call or short terms notice, other interest receivable and other miscellaneous current assets. Current liabilities consist of bills payable, Tax provision, staff bonus, dividend payable and miscellaneous current liabilities.

Table 4.1
Current Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			**%**
BOK	3.14	3.87	5.96	7.17	5.89	6.31	5.39	1.39	25.89
NABIL	2.60	2.29	3.11	2.55	4.43	3.40	3.06	0.71	23.17
SBI	2.66	2.74	6.63	6.07	8.11	7.03	5.54	2.09	37.72

(Source: Annual Report of Bank)

In the table 4.1 current ratio of commercial banks are analyzed. The table reflects that the current assets of all commercial banks have exceeded the current liabilities during the six years period. In general it can be said that all the banks have sound ability to meet their short term obligations in other words bank is capable of discharging the current obligations.

In case of BOK, the current ratios are in increasing trend from fiscal year 2003/04 to 2006/07 but it has slightly decreased in the year 2007/08 by 1.28 & in the year 2008/09 Increased by 0.42 . NABIL has a fluctuating trend ratio. Similarly SBI has increasing trend ratio but in the fiscal Year 2006/07 & 2008/09 decreased by 0.56 & 1.08 respectively. In an average, NABIL has maintained lower current ratio, which states that liquidity position of NABIL is fair. The value of coefficient of variation of BOK is 25.89% which is comparatively lower than SBI and greater than NABIL i.e. 37.72% < 25.89% > 23.17%. Thus it can be said that current ratio of BOK is less consistence than NABIL and is slightly consistence than SBI.

Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance are assets that constitute the banks first line of defense and consist of cash and hand foreign cash on hand cheques and other cash items balance with demotic banks and balance help aboard. This ratio measures the promotion of most liquid assets i.e. cash and balance among the total current asset of bank. Higher ratio shows the bank ability to meet demand for cash.

The table below shows cash and bank balance to total deposit ratio of BOK. NABIL and SBI from the FY 2003/04 to 2008/09.

Table 4.2
Cash and Bank Balance to Total Deposit Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	10.65	9.40	12.34	9.97	10.90	16.96	11.70	2.53	21.62
NABIL	6.87	3.83	3.26	6.00	8.37	9.03	6.23	2.12	34.05
SBI	12.01	8.36	10.16	9.81	9.79	6.81	9.49	1.60	16.86

(Source: Annual Report of Bank)

The table 4.2 shows the percentage of cash and bank balance to total deposit ratio position of BOK, NABIL and SBI. The mean standard deviation and coefficient of variation of cash and bank balance to total deposit ratios of all banks are better. The above table reflects all Banks has fluctuating trend from the FY 2003/04 to 2007/08 respectively. In average BOK has higher cash and bank balance to total deposits ratio than SBI and NABIL. It states that the liquidity position of BOK is better in this regard.

The above analysis helps to conclude that, the cash and bank balance position of NABIL with respect to deposits is not better against the readiness to serve its customers deposits than that of the BOK. So NABIL may invest in more productive sectors like short-term marketable securities, treasury bills etc ensuring enough liquidity which will helps the bank to improve its profitability.

Cash and Bank Balance to Current Assets Ratio

This ratio measures the proportion of most liquid assets i.e. cash and bank balance among the total current assets of bank. Higher ratio indicated the bank's ability to meet the daily cash requirement of their customers' deposit. Bank has to balance the cash and bank balance to adequate cash for the customers demand against deposit when required and less interest is required to be paid against the cash deposit.

The table below shows the Cash and bank balance to current asset ratio of BOK, NABIL and SBI from the FY 2003/04 to 2008/09.

Table 4.3
Cash and Bank Balance to Current Assets Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	60.95	70.80	89.60	80.33	93.12	95.29	81.68	12.45	15.24
NABIL	40.75	30.38	21.66	56.55	51.07	70.41	45.14	16.28	36.07
SBI	65.15	49.66	70.62	66.67	72.02	84.80	68.15	10.44	15.32

(Source: Annual Report of Bank)

This table 4.3 shows the mean standard deviation and coefficient of variance of cash and bank balance to current asset ratio of all three banks are in fluctuating trend during the study period. They show the ability to manage the deposit with drawls from the customers. BOK has maintained a highest ratio of 95.29% in the year 2008/09. Similarly NABIL and SBI have a highest ratio of 70.41% and 84.80% in the year 2008/09 for both Banks. The mean value of BOK is highest in comparisons to other banks. Similarly the coefficient of variation of SBI is 15.32%, which is higher than BOK and lower than NABIL, it reflects that the current ratio is less heterogeneous than NABIL bank.

Lastly, the analysis reveals that BOK is better position during the study period as the bank shows the ability to manage the deposit with drawl from the customers although it has the fluctuating trend.

Investment on Government Securities to Current Assets Ratio

The ratio examines portion of a commercial banks current assets which invested in different government securities i.e. treasury bills and government bonds. Commercial banks are interested to invest their collected fund on different securities issued by government to utilize their excess funds. Even governments securities are not so liquid as cash and bank balance of commercial bank, they can easily be sold in the market or it can also be converted into cash in other ways. The ratio is computed as:-

Table 4.4
Investment on Government Securities to Current Assets Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	99.40	102.92	96.73	107.14	78.24	30.46	85.82	26.35	30.71
NABIL	154.22	131.35	79.09	194.25	88.85	77.37	120.86	43.32	35.84
SBI	261.79	152.84	119.34	153.68	148.17	130.67	161.08	46.73	29.01

(Source: Annual Report of Bank)

The above table 4.4 reflects that investment in government securities to current asset ratio of all banks are fluctuating trend.

The mean ratio of NABIL is lesser than SBI and higher than BOK. It means that NABIL has invest it's as much as portion of its current assets as government securities as that of BOK and less than of SBI. The coefficient of variation of SBI is lower in comparison to the other banks.

Lastly it can be conclude that it has invested it's more of portion assets as government securities than other banks and investment made is consistence of coefficient of variation reveals. But its liquidity portion is slightly poor than other banks ion view point of investment on government securities.

Loans and Advances to Current Assets Ratio

Loan and advances include short and long term loan overdrafts and cash credit. Commercial banks should not keep its all collected funds as cash and banks balance in order to invest as loan and advances to the customers. If sufficient loan and advances cannot be granted, it should pay interest on those un-utilized deposits funds. Even high loan and advances may also effects to keep the bank in most liquid position because they can only be collected at the time of maturity. This, a bank must maintain its loan and advances on proper way.

Table 4.5
Loan and Advances to Current Assets Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	354.19	534.86	489.96	568.77	669.47	436.17	495.92	102.90	20.75
NABIL	343.91	574.98	444.1	628.01	408.52	575.98	508.94	99.68	19.59
SBI	387.65	426.38	481.66	561.76	649.65	673.97	530.18	107.53	20.28

(Source: Annual Report of Bank)

The table shows the percentage of loan and advances ratio to current assets ratio position of BOK, SBI and NABIL. The loan and advances to current assets ratio of SBI is in increasing trend & other banks are fluctuating trend. The mean ratio of NABIL is slightly less than SBI and higher than BOK.

It reflects that loan and advances to current asset ratios of the BOK has maintained a highest ratio of 669.47 % in the FY 2007/08. Similarly NABIL and SBI have in 628.01% and 673.97% in the FY 2006/07 & 2007/08 respectively.

The coefficient of variation among ratio is lower in case of NABIL, which indicates uniformity of NABIL in comparison to other banks. So it can conclude that it is better to mobilize its funds as loan and advances. On the other hand satisfactory than that of other banks from the view point of mean ratios.

4.1.2 Asset Management Ratio

Commercial bank must be managed its assets very well to satisfy its customers to earn high profit and for its own existence. It measures the efficiency of the bank.

a. Loans and Advances to Total Deposits Ratio

This ratio measures how successfully the banks are able to mobilize the total deposit on loan and advances for profit generating purpose. Higher the ratio indicates the better mobilization of total deposits, but too high is not be better from its liquidity point of view. This table 4.6 reflects the percentage of loan and advances to total deposit ratios position of BOK, NABIL and SBI.

Table 4.6
Loan and Advances to Total Deposit Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	61.87	71.04	67.50	70.59	78.36	77.61	71.16	5.70	8.01
NABIL	58.01	72.57	66.79	66.60	66.94	73.87	67.46	5.17	7.66
SBI	71.46	71.80	69.32	82.66	88.32	54.12	72.95	10.79	14.79

(Source: Annual Report of Bank)

The ratio of BOK SBI and NABIL have in fluctuating trend .In the case of BOK has maintained higher loan and advances to total deposit i.e. 78.36 % in a year 2007/08, likewise NABIL has maintained higher ratio73.87 % in a year 2008/09 and SBI is in 88.32% in a year 2007/08 respectively. The mean value of NABIL i.e. 67.46 is less than BOK and higher than SBI i.e. 71.16 < 67.46 > 54.12. The CV of NABIL is lower than that of the other banks which indicate that loan and advances of it is stable and consistent.

Lastly it can be concluded that NABIL is in strong position or in better position regarding the mobilization of total deposits on loan and advances and acquiring higher profit in comparison with SBI and lower than BOK. Higher ratio is not good from the view point of liquidity as the loan and advances are not a liquid as cash and bank balance.

Total Investment to Total Deposit Ratio

The commercial banks must mobilize its deposit fund by investing in different securities issued by government and other financial, non financial sectors. This ratio measures the extent to which the banks are capable to mobilize their deposits on investment in various securities. This ratio is computed by dividing total investment by total deposit ratio. The table 4.8 shows the total investment to total deposit ratio of the banks BOK, NABIL & SBI.

Table 4.7
Total Investment and Total Deposit Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	33.51	27.60	29.60	26.57	19.95	15.85	25.51	5.94	23.28
NABIL	41.33	29.31	31.93	38.32	31.14	28.99	33.50	4.68	13.97
SBI	60.94	60.06	34.17	23.24	22.52	47.52	30.68	8.52	27.77

(Source: Annual Report of Bank)

From the table 4.7, it is found that, total investment to total deposit ratio all three banks are in increasing and decreasing trend or in fluctuating trend during study period 2003/04 to 2008/09. The total investment to total deposit ratio of BOK has highest ratio of 33.51% in FY 2003/04 and lowest ratio 15.85% in FY 2008/09. Similarly NABIL has highest and lowest ratio of 41.33% and 29.31% in FY 2003/04 and 2004/05. SBI has highest and lowest ratio of 60.94% and 22.52% in FY 2003/04 and 2007/08 respectively.

Loan and Advances to Total Working Fund Ratio

Loan and advances is the major components of the total working fund, which indicate the ability of banks to utilize its deposits in the form of loan and advances to earn high return. It is an appropriate level to generate profit. The ratio reflects the extent to which the commercial banks are able to utilizing their assets loan and advances for the purpose of profit generation.

Total working fund is the total assets. It is composed up of current assets, fixed assets, miscellaneous assets and investment, loan and advance and interest receivable.

The table 4.8 shows the loan and advance to total working fund ratio of BOK, NABIL and SBI.

Table 4.8
Loan and Advances to Working Fund Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	53.79	62.22	59.90	62.65	69.45	68.37	62.73	5.25	8.37
NABIL	48.91	62.04	57.87	57.04	57.54	62.89	57.72	4.46	7.73
SBI	60.94	60.06	58.51	68.05	70.48	48.94	61.16	7.00	11.44

(Source: Annual Report of Bank)

This reflects that loan and advances to working fund ratio of all banks are fluctuating trend. BOK has the highest ratio 69.45% in the FY 2007/08, NABIL and SBI has the highest ratio i.e. 62.89% and 70.48% in the FY 2008/09 and 2007/08.

The mean value of NABIL has maintained average loan and advances to total working fund ratio than that of BOK and SBI. This regard, NABIL is in better position among other banks. The coefficient of variation of NABIL is lower than that of both banks i.e. 11.43% < 8.37% > 7.73% respectively, which clear that loan and advances to total working fund ratio is less variable than other banks.

Investment on Government Securities to Total Working Funds Ratio.

The commercial banks should never use all the total deposits resources as loan and advances and other credit from security and liquidity point of view. So to some extent commercial bank seem to be interested to utilize their resources by purchasing government securities. This ratio reflects the relationship between the banks investment securities in comparison to the total working funds.

The table 4.9 shows the investment on government securities to total working fund ratio of BOK, NABIL and SBI.

Table 4.9
Investment on Government Securities to Total Working Fund Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	15.10	11.97	11.83	11.80	8.12	4.78	10.60	3.28	30.94
NABIL	21.93	14.17	10.31	17.64	12.51	8.45	14.17	4.51	31.83
SBI	41.15	21.53	14.50	18.62	16.07	9.49	20.23	10.05	49.69

(Source: Annual Report of Bank)

The comparison of mean ratio of NABIL with other two banks reveal that NABIL is successful; to mobilize their working fund as investment in government securities. Similarly NABIL is also variability between ratios during the study period is greater mean value than that of BOK and SBI.

The table 4.9 reflects that investment on government securities to total working fund ratio of all three banks are in fluctuating trend. Likewise the coefficient of variation is higher than that of other two banks i.e. 30.94% < 31.83% < 49.69%. This means NABIL has invest its more portion of working funds on government securities as than other banks.

Investment on Shares and Debentures to Total Working Fund Ratio

This ratio shows the banks investment in share and debentures of subsidiary and other companies. Now a day, commercial banks are interested to invest its fund not on government securities. They are interested to invest in shares and debenture of different types of companies and also in most of commercial banks in Nepal have purchased shares of regional development banks and some of them have purchased the share of other companies too.

This ratio reflects the extent on which the banks are able to mobilize their total assets on purchase of share and debenture of other companies to generate income and utilize their excess fund. A higher ratio indicated more portion of investment on shares and debenture out of total working fund. The table 4.10 shows the investment ob shares and debenture to total working fund ratio of BOK, NABIL and SBI from the FY 2003/04 to 2008/09.

Table 4.10
Investment on Shares and Debentures to Total Working Fund Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	0.10	0.11	0.08	0.13	0.15	0.12	0.12	0.016	13.91
NABIL	0.13	0.16	0.12	0.21	0.22	0.19	0.17	0.045	26.21
SBI	0.23	0.31	0.14	0.14	0.19	0.11	0.19	0.057	30.54

(Source: Annual Report of Bank)

The table depicts that BOK, NABIL has in increasing trend but in the FY 2005/06 to 2008/09 it has little be decreased. Similarly SBI has also in fluctuating trend to investment on shares and debenture to working fund ratio In the FY 2005/06 & 2006/07 remain constant & in the FY 2008/09 is decreased by 0.08.

In an average, NABIL has maintained medium investment on shares and debentures to total working fund ratio than other. The coefficient of variation of BOK is higher than that of other two banks which indicate that BOK is more variable and less consistent.

Total off Balance Sheet Operation to Loan and Advances Ratio

This ratio shows the proportion of free based off balance sheet activities are very much dependent on made operation management strategy banking net work with foreign banks etc. Commercial banks should not concentrate only on fund based activities such as loan and advances, investment on different sectors and so on. It should pay its attention to increase free based off balance activities. Income generated through the fee based off balance sheet activities constitutes a significant proportion in the total income of most of the commercial banks statement. A high ratio indicates the highest OBS transaction or vice versa.

Table 4.11
Total OBS Operation to Loan and Advances Ratio

(In %)

Bank	**Fiscal Year**						**Mean**	**S.D**	**C.V**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	46.78	39.46	47.57	48.40	46.87	44.89	45.66	2.99	6.55
NABIL	64.69	44.32	42.55	36.64	36.47	42.15	44.47	9.52	21.41
SBI	19.28	27.61	25.62	29.78	56.31	35.51	32.35	11.76	36.35

(Source: Annual Report of Bank)

The total OBS operation to loan and advances ratio of NABIL is in decreasing trend up to FY 2007/08 from FY2003/04 and increased in FY 2008/09 by 5.68% & reach to 42.15%. Similarly BOK and SBI have fluctuating trend. Both have maintained the maximum ratio of 48.40% and 56.31% in the FY 2006/07 and 2007/08 respectively.

The mean if SBI is lower than that of other banks i.e.32.35 < 44.47 < 45.66, which indicates that, SBI has lowest OBS transaction or vice versa. Has highest mean ratio than BOK and NABIL The coefficient of variance of BOK is lower than that of other banks, which indicated that it is giving attention to increase free based off balance activities.

Loan Loss Relation

It is occurred when the debtors fail to pay their loan. Loss of the loan is not only the default of debtors but it is because of the failure of recovery of loan by the bank. Negligence in its part makes a negative impact on the earning and capital of a bank very badly. Greater loan loss provision is made in income statement if high loss is expected. But this will lead to low profit and possible losses and produces low increase or decrease in capital. The loan loss ratio shows how efficiently the bank manages its loan and advances and makes effort for timely recovery of loan.

Table 4.12
Loan Loss Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	2.92	3.21	3.15	2.79	2.34	1.90	2.72	0.45	16.63
NABIL	4.38	3.41	2.76	2.30	1.85	1.48	2.70	0.97	35.97
SBI	7.55	8.46	8.06	6.39	5.22	3.17	6.48	1.83	28.26

(Source: Annual Report of Bank)

The table 4.12 reflects that all three banks have fluctuating trend, BOK has the maximum ratio of 3.21% in the FY 2004/05 and minimum ratio of 1.90% in the FY 2008/09. Similarly, NABIL has the maximum ratio of 4.38% in the FY 2003/04 and minimum ratio of 1.48 % in the FY 2008/09. Likewise in the case of SBI, it has followed the fluctuating trend. It has the maximum ratio of 8.46% in the FY 2004/05 and minimum ratio of 3.17% in the FY 2008/09, Nepal SBI Bank's loan loss ratio of FY 2004/05 is highest ratio among three banks.

The mean value of NABIL is average, which indicated that its position is better in this regard. It has managed its loan and advances and makes effort for timely recovery of loan. Similarly, the coefficient of variance of SBI is lower than that of NABIL and highest than BOK. In average, NABIL has no highest loan loss ratio in comparing with two other banks. So it shows that its performance in terms of recovery of loan is satisfactory in comparison to BOK and SBI.

4.1.3 Profitability Ratio

Profitability ratios are useful to measure the efficiency of operation of a firm in term of profit. Profit is the indicator of the financial performance of any firm. Commercial banks acquire profit by providing different kinds. Higher the profitability ratio shows the efficiency of the management. The following profitability ratios are related to study under this heading

.

Return on Loan and Advances Ratio

Return on loan and advances ratio measures the earning capacity of banks on its total deposits mobilized on loan and advances. Mostly loan and advances included loan, cash credit, and overdraft, bills purchased and discounted. In other words return on loan and advances ratio indicates how efficiently the banks have employed its resources in the firm of loan and advances.

Table 4.13
Return on Loan and Advances Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	2.14	2.29	2.74	2.90	2.58	2.49	2.52	0.256	10.15
NABIL	5.56	4.91	4.92	4.34	3.49	3.74	4.39	0.846	19.26
SBI	1.18	0.92	1.53	2.69	2.05	2.09	1.74	0.60	34.42

(Source: Annual Report of Bank)

The table 4.13 reveals that BOK return on loan and advances ratio has increasing trend in the up to FY 2006/07 than after fluctuating trend. NABIL has maintained decreasing trend where SBI has also fluctuating trend.

The mean of BOK is lesser than NABIL and higher than that of SBI i.e. 2.52 < 4.39 > 1.74 respectively. The standard deviation of BOK is lesser than both banks. Similarly the coefficient of variation of BOK is less than other two banks i.e. 10.15% < 19.26% < 34.42%. NABIL has maintained average C.V. and SBI are in highest C.V value. Thus it can be concluded that BOK is in average position in earning loan and advances in comparison to NABIL and SBI.

Return on Total Working Fund Ratio

It also known as return on asset. This ratio measures the profit earning capacity by mobilizing available resources (total assets). The bank has to earn satisfactory return on assets or working funds are well manage and are efficiently utilized, maximizing taxes with in the legal options available will also improve the available will also improve the return or return will be higher. Net profit includes the profit that is left to the internal equities after all charge and expenses cost.

The table below shows the return on assets of BOK, NABIL and SBI.

Table 4.14
Return on Total Working Fund Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	1.15	1.43	1.64	1.82	1.79	1.70	1.59	0.23	14.48
NABIL	2.72	3.05	2.84	2.47	2.01	2.35	2.57	0.34	13.21
SBI	0.72	0.55	0.90	1.83	1.44	1.02	1.08	0.43	39.94

(Source: Annual Report of Bank)

The table 4.14 reflects the mean, S.D and C.V of BOK, NABIL, SBI banks from FY 2003/04 to 2008/09. BOK has the increasing trend up to FY 2006/07 & than after decreasing trend. Which indicates that its profitability ratio is not consistent. It has highest profit ratio is 1.82 % in the FY 2006/07 and minimum profit ratio is 1.15% in the FY 2003/04. Similarly NABIL and SBI has also fluctuating trend of profit ratio. In average, BOK, NABIL, SBI banks have able to maintain a net profit during the stuffy period.

If the mean values are observed BOK is slightly higher than SBI and lower than NABIL i.e. 1.59 < 2.57 > 1.08 respectively. The coefficient of variation of NABIL is lesser than that of BOK and SBI i.e. 13.21% < 14.48% < 39.94% it indicate, the return on total working fund ratio of NABIL is stable and consistent in comparison to BOK and SBI. The analysis clear the profitability ratio with respect to financial resources investment of NABIL is better as well as stable.

Total Interest Earned to Total outside Assets Ratio

It measures the interest earning capacity of the banks through efficient utilization of all the outside assets. Higher the ratio indicates better us of outside assets of a commercial bank. Total outside assets includes loan and advances, investment on government securities, share and debentures and other all types of investment.

The table below exhibits total interest earned to total outside assets ratio of BOK, NABIL and SBI.

Table 4.15
Total Interest Earned to Total outside Assets Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	6.65	6.31	6.38	6.66	6.48	7.49	6.66	0.39	5.85
NABIL	7.14	7.19	6.86	6.48	6.32	7.28	6.88	0.36	5.23
SBI	7.00	6.56	6.22	6.86	6.38	5.14	6.36	0.60	9.43

(Source: Annual Report of Bank)

The comparison of mean ratios of SBI with other two banks reveal that total interest earned to total outside assets ratio of SBI is lowest, which indicate that it has not able to use its fund (outside assets) to earn high interest income in comparison to other banks.

The total interest earned to total outside assets ratio of NABIL, BOK and SBI has fluctuating trend. In case of BOK it increase at FY 2008/09 i.e. 7.49% and decrease in the year 2004/05 i.e. 6.31%. NABIL it increase at FY 2008/09 i.e. 7.28 % and decrease in the year 2007/08 i.e. 6.32% Similarly SBI has increased & decrease i.e. 7.00 % to 5.14% in the FY 2003/04 & 2008/09 respectively. If the coefficient of variation is observed NABIL has the lowest of all banks i.e. 5.23% < 5.85% < 9.43% respectively. This reflects that earned to total outside assets of NABIL is consistent. In other words it is satisfactory in compared to other banks. So it can conclude that NABIL has better position with respect to the income earned from the total outside assets.

Total Interest Earned to Total Working Fund Ratio

This ratio is calculated to find out the percentages of interest earned to total assets. It reflects the extent to which the banks are success in mobilizing their to total assets to gain higher income as interest. Higher ratio indicated higher earning power of the banks of its total working fund. The table below shows the interest earned to total working fund ratio of BOK, NABIL and SBI.

Table 4.16
Total Interest Earned to Total Working Fund Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	5.52	5.45	5.50	5.74	5.64	6.16	5.67	0.24	4.23
NABIL	5.98	6.26	5.87	5.83	5.33	6.38	5.94	0.34	5.72
SBI	5.85	5.59	5.44	5.98	5.65	4.72	5.54	0.40	7.22

(Source: Annual Report of Bank)

The table 4.16 reveals that the ratio of BOK is in increasing trend up to FY 2006/07 & than after decreased at FY 2007/08 & also increase at FY 2008/09. Where the ratio of NABIL is fluctuating trend at the first two years increases and third year to fifth year decreasing trend & at Last FY 2008/09 at increased. The SBI has maximum ratio is 5.98% in the FY 2006/07 and minimum ratio is 4.72% in the FY 2008/09. On the other hand the mean value of BOK has average of other two banks. It has the mean of 5.67 which is higher than SBI i.e. 5.54 and less than NABIL i.e. 5.94. Similarly the coefficient of variation of NABIL is 5.72% which is also more than BOK and less than SBI.

After analysis it can be concluded that total interest earned to total working fund of BOK is satisfactory in compared to other banks. It indicates the total interest earned to total working fund ratio is stable. SBI has higher coefficient of variation among other two banks. That means it is not successful in earning interest income because high ratio is an indicator of high earning power of the bank on its total working fund and vice versa.

Total Interest Paid to Total Working Ratio

This ratio is calculated to find out the proportion of interest paid against the total working fund. Higher ratio indicated the higher interest expenses on total working fund and vice-versa. The table below reflects the mean, S.D and C.V of total interest paid to total working fund ratio.

Table 4.17
Total Interest Paid to Total Working Fund Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	2.46	2.18	2.30	2.48	2.55	3.18	2.53	0.31	12.28
NABIL	1.69	1.43	1.60	2.04	2.04	2.63	1.91	0.39	20.47
SBI	3.03	2.50	2.57	2.97	2.65	2.67	2.73	0.19	6.96

(Source: Annual Report of Bank)

In the listed table 4.17, total interests paid to working fund ratio of the all banks are in fluctuating trends during the study period. BOK has variable trend from 2.18% to 3.18% in the FY 2004/05 to 2008/09. NABIL and SBI have also variable trend from 1.43% to 2.63% and 2.50% to 3.03% in FY 2004/05 to 2008/09 & in FY 2004/05 to 2003/04 respectively.

In comparison of mean value of BOK with other reveal that BOK is in average between NABIL and SBI i.e. 2.53 > 1.91 < 2.73. It means BOK has paid average interest. Similarly the coefficient of variance of it has lower among both banks which indicates that total interest and to total working fund ratio is inconsistent than that of NABIL and SBI.

After analysis it can be concluded that BOK is in better position from payment of interest point of view. It seems to be successful to collect its working fund from less expensive sources in comparison to others.

4.1.5 Risk Ratio

Risk taking is the prime business of banks investment management which increases effectiveness and profitability of the bank. Bank has to take risk to get return on investment. Risk taken is compensated by the increase in profit. So a bank has to take higher risk if it expects higher return on its investment.

Credit Risk Ratio

Bank utilized its collected funds in providing credit to different sectors while making investment. It is essential for a bank to examine the credit risk involved in the project. This ratio shows the proportion of non performing assets in total loan and advances of the bank. Due to the unavailability of the relevant data the ratio is measure with the help of loan and advances to total assets.

Table 4.18
Credit Risk Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	53.79	62.22	59.90	62.65	69.45	68.37	62.73	5.25	8.37
NABIL	48.91	62.04	57.87	57.04	57.54	62.89	57.72	4.54	7.87
SBI	60.94	60.06	58.51	68.05	70.48	48.94	61.16	6.97	11.40

(Source: Annual Report of Bank)

The table 4.18 shows the percentage of credit risk ratio of BOK, NABIL and SBI. The credit risk ratio of BOK is in fluctuating trend during the study period i.e. it has maintained maximum ratio of 69.45% in the FY 2007/08 and it has minimum ratio of 53.79% in the year 2003/04. Similarly NABIL credit risk ratio is increasing trend up to first two Years & than after fluctuating trend. It has maintained maximum ratio of 62.89% in the FY 2008/09 & it has minimum ratio of 48.91% at FY 2003/04. Similarly SBI credit risk ratio is decreasing trend up to FY 2005/06 and then after increase above two years & also decreased at FY 2008/09. It has maintained maximum ratio of 70.48% in the FY 2007/08 & it has minimum ratio of 58.51% at FY 2005/06.

The mean of SBI is between NABIL and BOK which mean SBI has average credit in comparison to both banks. The coefficient of variance of BOK is 8.37% NABIL has 7.87% and SBI has 11.40%. Among three banks NABIL has less C.V, it indicates that its credit policy is consistent than other banks.

Liquidity Risk Ratio

The liquidity risk of the bank defines it liquidity need for deposit. A higher liquidity indicates less risk and less profitable bank and vice-versa. The ratio of cash and bank balance to total deposits is the indicator of the bank liquidity needed. The cash and bank balance are the most liquid assets and they are considered as bank liquidity sources and deposits as the liquidity needs.

Table 4.19
Liquidity Risk Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	10.65	9.40	12.34	9.97	10.90	16.96	11.70	2.52	21.53
NABIL	6.87	3.83	3.26	6.00	8.37	9.03	6.23	2.14	34.37
SBI	12.01	8.36	10.16	9.81	9.79	6.81	9.49	1.60	16.86

(Source: Annual Report of Bank)

In the table shows the percentage of liquidity risk ratio of BOK, NABIL and SBI. This table reflects the liquidity risk ratio of BOK is fluctuating trend i.e. it has maintained a maximum ratio of

16.96% in the FY 2008/09 and the minimum ratio of 9.40% in the FY 2004/05. Similarly NABIL liquidity risk ratio is in decreasing trend up to 2005/06 & then after increasing trend up to FY2008/09. Similarly SBI liquidity risk ratio is in fluctuating trend. It has maintained a maximum ratio of 12.01% in the FY 2003/04 and the minimum ratio of 6.81% in the FY 2008/09.

While comparing the mean of three banks, NABIL is between BOK and SBI i.e. 11.70 > 6.23 < 9.49 which indicates that BOK liquidity risk is average in compare to other banks. The coefficients of variance of three banks are 21.53%, 34.37%, 16.86% respectively. In comparison them, SBI has less C.V which indicates that liquidity risk ratio of it's in consistent. The C.V ratio of NABIL is slightly lower than that of SBI i.e. 16.86% < 21.53%.

Capital Risk Ratio

The capital risk ratio indicates how much assets value may decline by bank before the position deposition and other creditors is jeopardized. So a bank needs to maintain adequate capital in relation to the nature and condition of its assets, its deposits liabilities and other corporate responsibilities. This ratio measures ability of bank to attract deposits and inter-bank funds. It also determines the level of profit. A bank can earn if a bank choose to take high capital risk.

Table 4.20
Capital Risk Ratio

(In %)

Bank	Fiscal Year						Mean	S.D	C.V
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09			
BOK	7.41	8.66	8.09	5.94	9.44	10.70	8.37	1.50	17.91
NABIL	12.48	11.68	11.04	10.73	9.02	9.63	10.76	1.17	10.87
SBI	9.56	8.76	10.73	10.70	9.71	10.77	10.04	0.76	7.57

(Source: Annual Report of Bank)

From the table 4.20, it is clearly seen that the percentage of capital risk ratio of BOK has maximum and minimum ratio 10.70% to 5.94% in the FY 2008/09 to 2006/07 respectively during the study period. NABIL has decreasing trend till FY 2007/08 &increased by 0.61% in FY 2008/09. Similarly SBI have followed the fluctuating trend. They have maximum ratio of 10.77% and 8.76% in the FY 2008/09 and 2004/05 respectively.

The mean value of SBI has average capital risk ratio in comparison with other two banks. The coefficient of variance of a NABIL is 10.87% that is higher than that of SBI's C.V and lesser than NABIL i.e. 7.57% < 10.87% > 17.91% respectively. Among three banks SBI has less C.V.

Thus it can be concluded that NABIL is stable and heterogeneous than BOK but less stable and less heterogeneous in comparison to the SBI because it has maintained less C.V among three banks.

4.1.5 Growth Ratio

It represents how well the commercial banks those growth ratios are maintaining their economic and financial position. Here those growth ratios are analyzed and interpret ate, which are related to the fund mobilization and investment management of a bank. In this topic, there are four types of growth ratio and under this section growth ratio of total deposit, total investment, loan and advances and net profit are calculated.

Growth Ratio of Total Deposit

The comparative table 4.21 shows that the growth ratio of BOK deposit is higher than that of NABIL & SBI. BOK has maintained ratio of 32.30% where as NABIL and SBI 21.47% and 31.18% respectively. This means the performance of BOK to collect greater deposit compared to other banks. NABIL and SBI are improving year by year. Among three banks NABIL has lowest growth ratio i.e. 21.47%.

Table 4.21
Growth Ratio of Total Deposit

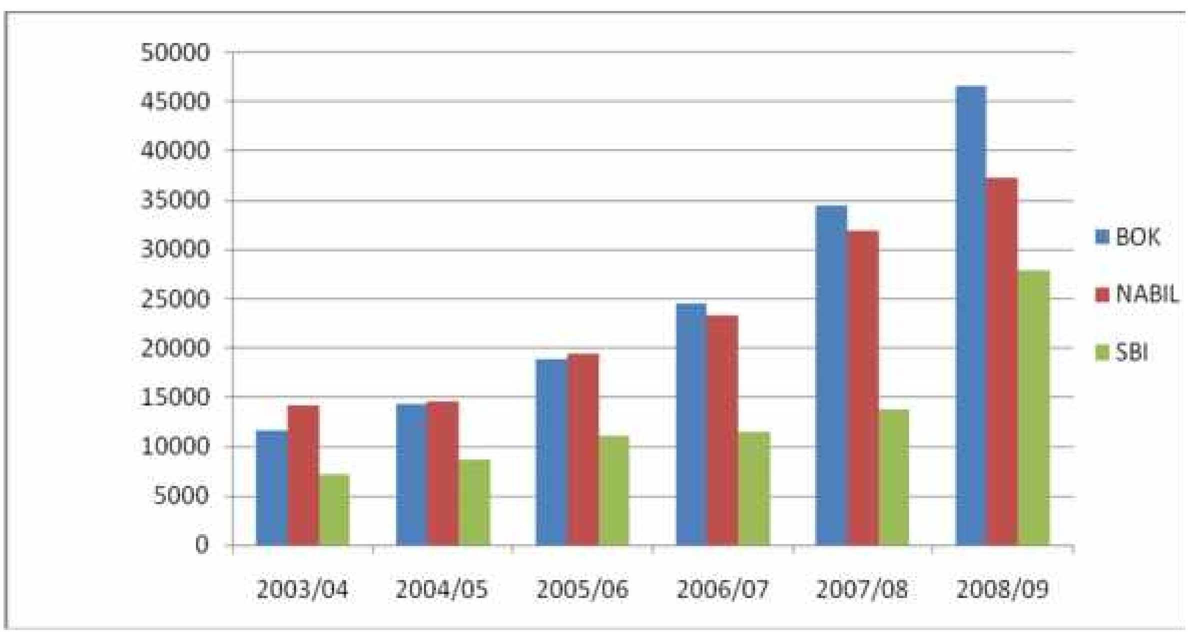
(In Million)

Bank	**Fiscal Year**						**Growth rate (%)**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	
BOK	11524.68	14254.58	18927.31	24488.86	34451.73	46698.10	32.30
NABIL	14119.03	14586.67	19347.40	23342.29	31915.05	37348.26	21.47
SBI	7198.32	8654.77	11002.04	11445.29	13715.40	27957.22	31.18

(Source: Annual Report of Bank)

Figure No: 4.1

Growth Ratio of total Deposit



The comparative table 4.21 & Figure no 4.1 shows that the growth ratio of BOK deposit is higher than that of NABIL & SBI. BOK has maintained growth ratio of 32.30% where as SBI and NABIL 31.18% and 21.47% respectively. This means the performance of BOK to collect greater deposit compared to other banks. SBI and NABIL are improving year by year. Among three banks NABIL has lowest growth ratio i.e.21.47%. In FY 2008/09 BOK, NABIL & SBI has collect 46698.10 Million, 37348.26 Million & 27957.22 Million deposit respectively.

Growth Ratio of Loan and Advances

The comparative table 4.22 shows that the growth ratio of BOK loan and advances is higher than that of other banks. BOK has able to maintain of 38.43%, where as NABIL and SBI able to have maintained 27.50% and 24.09% respectively. The performance of BOK to grant loan and advances is better in comparison to other banks i.e. NABIL and SBI. The highest growth ratio is 38.43% and lowest growth ratio is 24.09%. The above table clearly has shown that. BOK in comparison to other banks is better year by year.

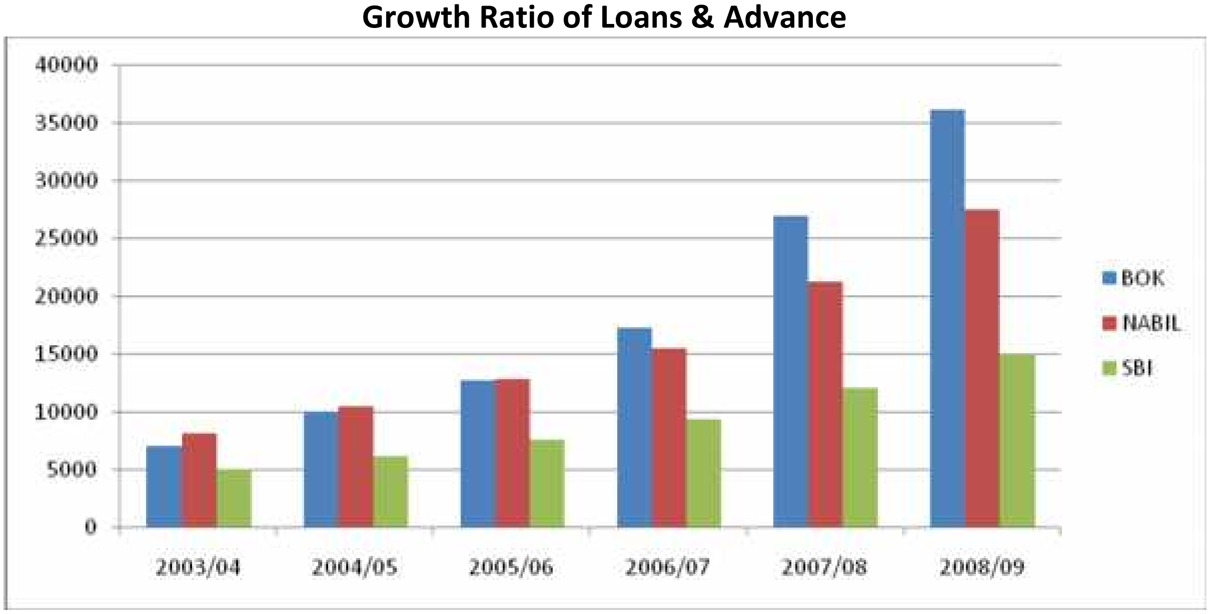
Table 4.22
Growth Ratio of Loan and Advances

(In Millions)

Bank	Fiscal Year						Growth Rate (%)
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	
BOK	7130.13	10126.06	12776.21	17286.43	26996.65	36241.21	38.43
NABIL	8189.99	10586.17	12922.54	15545.78	21365.06	27589.93	27.50
SBI	5143.66	6213.88	7626.74	9460.45	12113.70	15131.75	24.09

(Source: Annual Report of Bank)

Figure No: 4.2
Growth Ratio of Loans & Advance



The comparative table 4.22 & Figure no 4.2 shows that the growth ratio of BOK loan and advances is higher than that of other banks. BOK has able to maintain of 38.43%, whereas NABIL and SBI able to have maintained 27.50% and 24.09% respectively. The performance of BOK to grant loan and advances is better in comparison to other banks i.e. NABIL and SBI. The highest growth ratio is 38.43% and lowest growth ratio is 24.09%. The above table clearly has shown that BOK in comparison to other banks is better year by year and NABIL also maintained the average performance to grant loan and advance in the study period.

Growth Ratio of Total Investment

The comparative table 4.23 show that the growth ratio of BOK total investment is lower than SBI and higher than NABIL i.e. 13.89 > 13.15 < 47.43%. The total investment of BOK has average position in comparison to the NABIL and SBI. SBI is higher growth rate due to vast increased in FY 2008/09 by 10197.30 than last FY 2007/08.

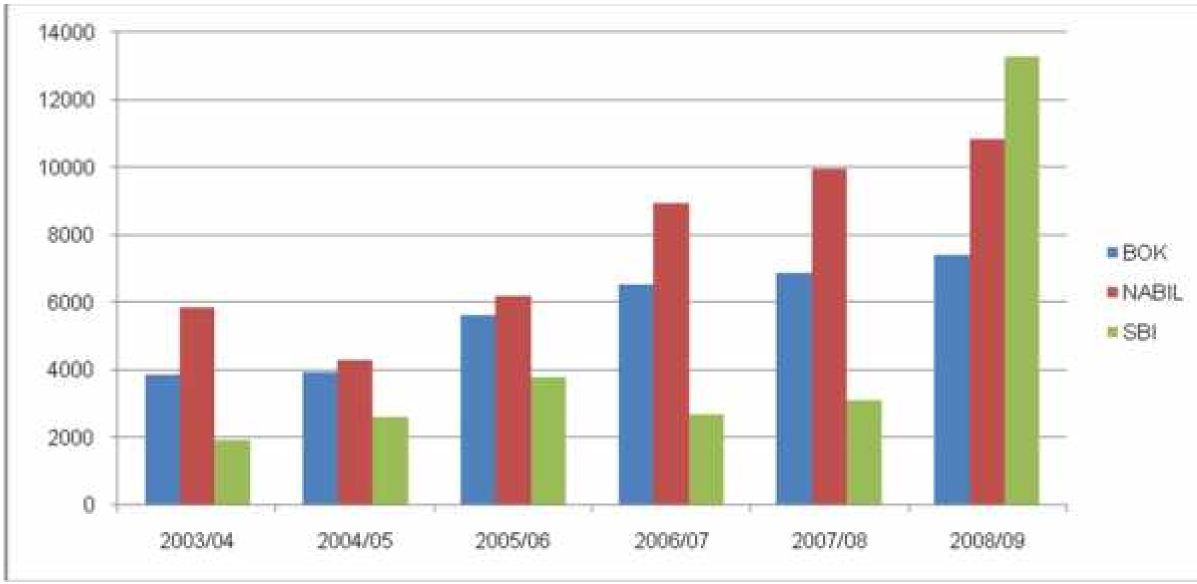
Table 4.23
Growth Ratio of Total Investment

(In Millions)

Bank	**Fiscal Year**						**Growth Rate(%)**
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	
BOK	3862.48	3934.19	5602.87	6505.68	6874.03	7399.81	13.89
NABIL	5835.95	4275.52	6178.53	8945.31	9939.78	10826.38	13.15
SBI	1907.52	2607.68	3758.98	2659.45	3088.89	13286.19	47.43

(Source: Annual Report of Bank)

Figure No: 4.3
Growth Ratio of Total Investment



The comparative table 4.23 & Figure no 4.3 shows that the growth ratio of SBI Investment is higher than that of other banks. SBI has able to maintain of 47.43%, whereas BOK and NABIL able to have maintained 13.89% and 13.15% respectively. SBI Bank has highest growth ratio due to grant huge investment in FY 2008/09 otherwise BOK & NABIL is better performance of year by year granting Investment.

Growth Ratio of Total Net Profit

The comparative table 4.24 shows that the growth ratio of BOK total net profit is higher than two banks. Net profit of NABIL is poor in comparison with BOK and SBI. BOK has able to maintain the growth ratio in average position. So it clear that BOK has high growth rate in comparison to other bank.

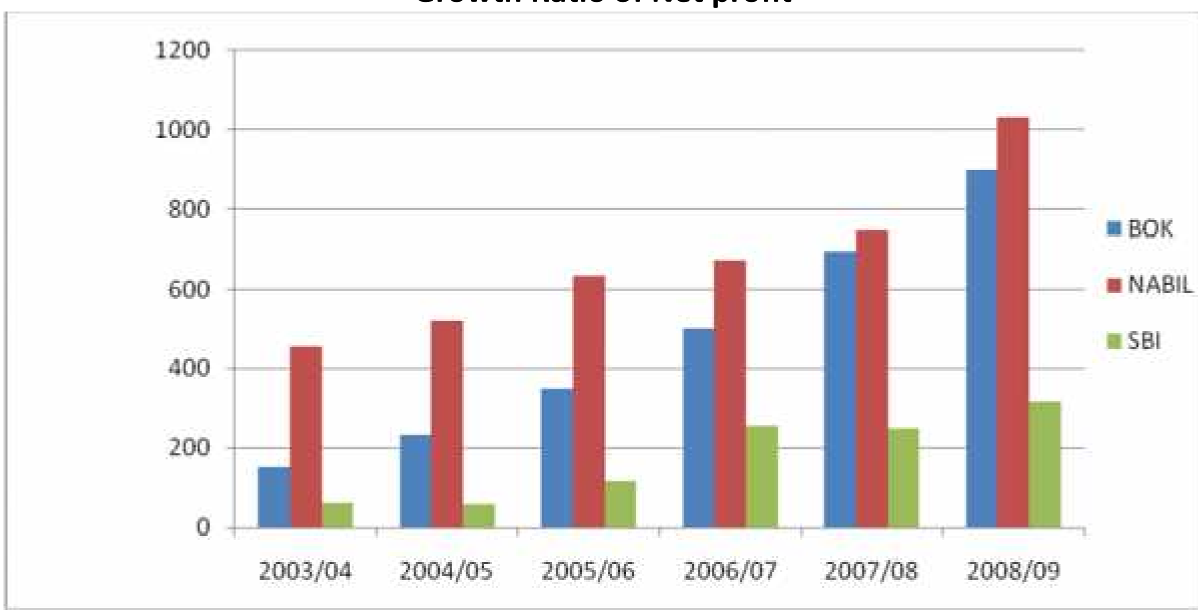
Table 4.24
Growth Ratio of Total Net Profit

(In Million)

Bank	Fiscal Year						Growth Ratio(%)
	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	
BOK	152.67	232.15	350.54	501.40	696.73	900.62	42.61
NABIL	455.31	520.11	635.26	673.96	746.47	1031.05	17.76
SBI	60.85	57.39	117.00	254.91	247.77	316.37	39.06

(Source: Annual Report of Bank)

Figure No: 4.4
Growth Ratio of Net profit



The comparative table 4.24 & Figure no 4.4 shows that the growth ratio of NABIL total net profit is higher than two banks BOK and SBI. Net profit of SBI is poor in comparison with NABIL and BOK. Although NABIL has able to maintain higher Net profit, the growth ratio of BOK & SBI is better position than NABIL. By measuring growth ratio BOK performance is better than other banks. Which is maintaining 42.61 % growth ratio.

From the above analysis of all tables, it can be concluded that BOK performance regarding the collection of deposit, granting loan and advances on total investment and net profit is comparatively better.

4.2 Statistical Tools

4.2.1 Trend Analysis of Total Deposit

Under this topic an efforts has been made to calculate the trend values of deposits of BOK, NABIL and SBI for five years from mid July 2003/04 to 2008/09 and forecast for next five years from the mid July 2008/09 to 2013/14.

Table 4.25
Trend Value of Total Deposit of BOK, NABIL and SBI

(Rs. In Millions)

Fiscal Year	Trend value of BOK	Trend value of NABIL	Trend value of SBI
2004	4406.73	6980.75	2834.49
2005	14732.14	15211.94	8081.66
2006	25057.54	23443.12	13328.84
2007	35382.95	31674.30	18576.02
2008	45708.35	39905.48	23823.19
2009	56033.76	48136.66	29070.37
2010	66359.16	56367.48	34317.54
2011	76684.56	64599.02	39564.72
2012	87009.97	72830.20	44811.89
2013	97335.37	81061.38	50059.07
2014	107660.78	89292.57	55306.25

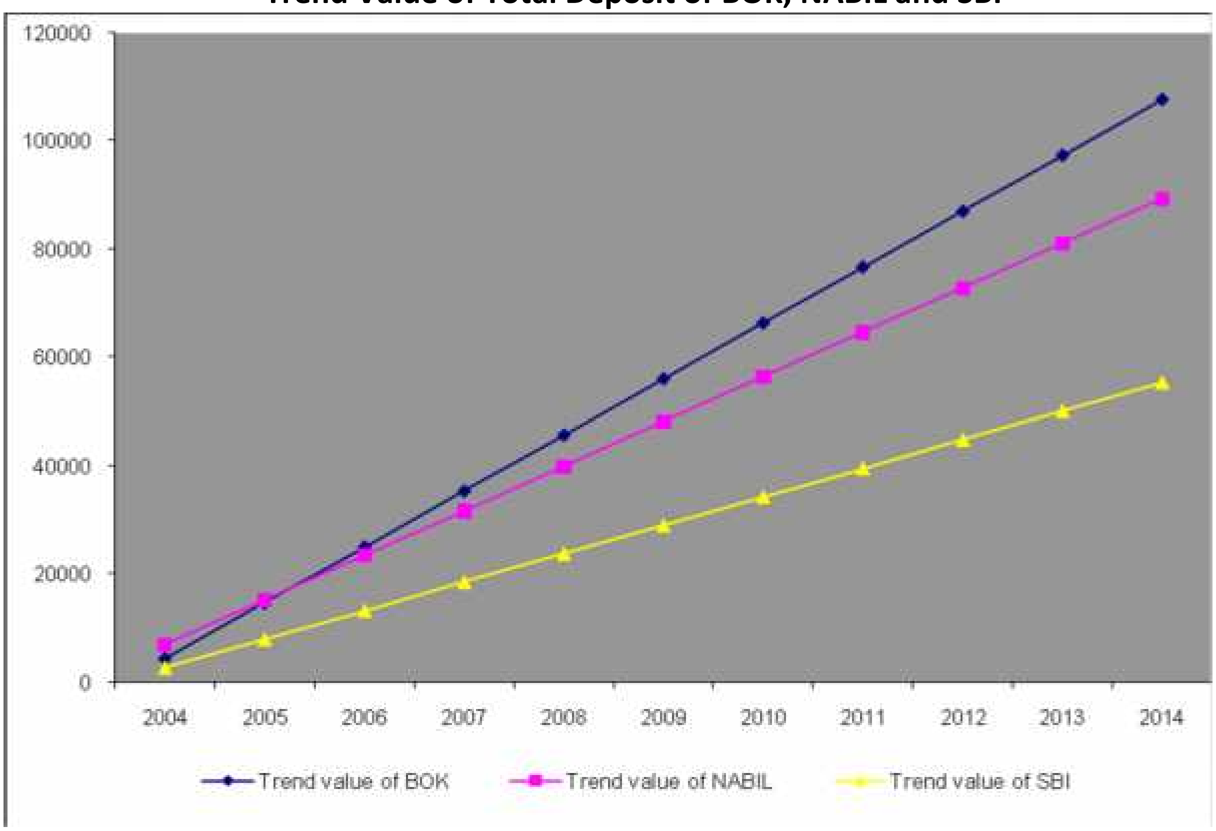
(Source: Appendix 1)

The table 4.25 shows the trend value of total deposit from 2008/09 to 2013/14 of three banks.

The total deposits of BOK, NABIL and SBI have in the increasing trend. If all other things remain the same the total deposits of the BOK will be highest deposit among the three banks, under the study period. Same as the total deposit of the SBI will be 55306.25 million in the mid July 2014. The total deposit of NABIL will be 89292.57 million in the mid July 2014. The total deposit of BOK will be 107660.78 Million.

By analyzing the above trend value, it is found that the total deposit position collection of BOK is better in comparison to SBI & NABIL. The deposit position NABIL, BOK and SBI are increasing in the same proportion

Figure 4.5
Trend Value of Total Deposit of BOK, NABIL and SBI



The comparative Figure no 4.5 shows that the trend value of Deposit. All three banks have increasing trend, if all other things remain the same the total deposits of the BOK will be highest deposit among the three banks, under the study period.

4.2.2 Trend Analysis of Loan and Advances

Here the trend values of loan and advances of BOK, NABIL and SBI have been calculated for five years from mid July 2003/04 to 2008/09. The forecast for next five years up to mid July 2014 have been done.

The table 4.26 reveals that the trend value of loan and advances of the three banks have been in increasing trend. If other things remain same, total loan and advances of NABIL will be 64066.74 million in FY 2013/014. Similarly the total loan and advances of SBI will be 35631.97 million. Total loan and advances of BOK will be 83949.80, which is the highest among the study period.

Table 4.26
Trend Values of Loan and Advances of BOK, NABIL and SBI

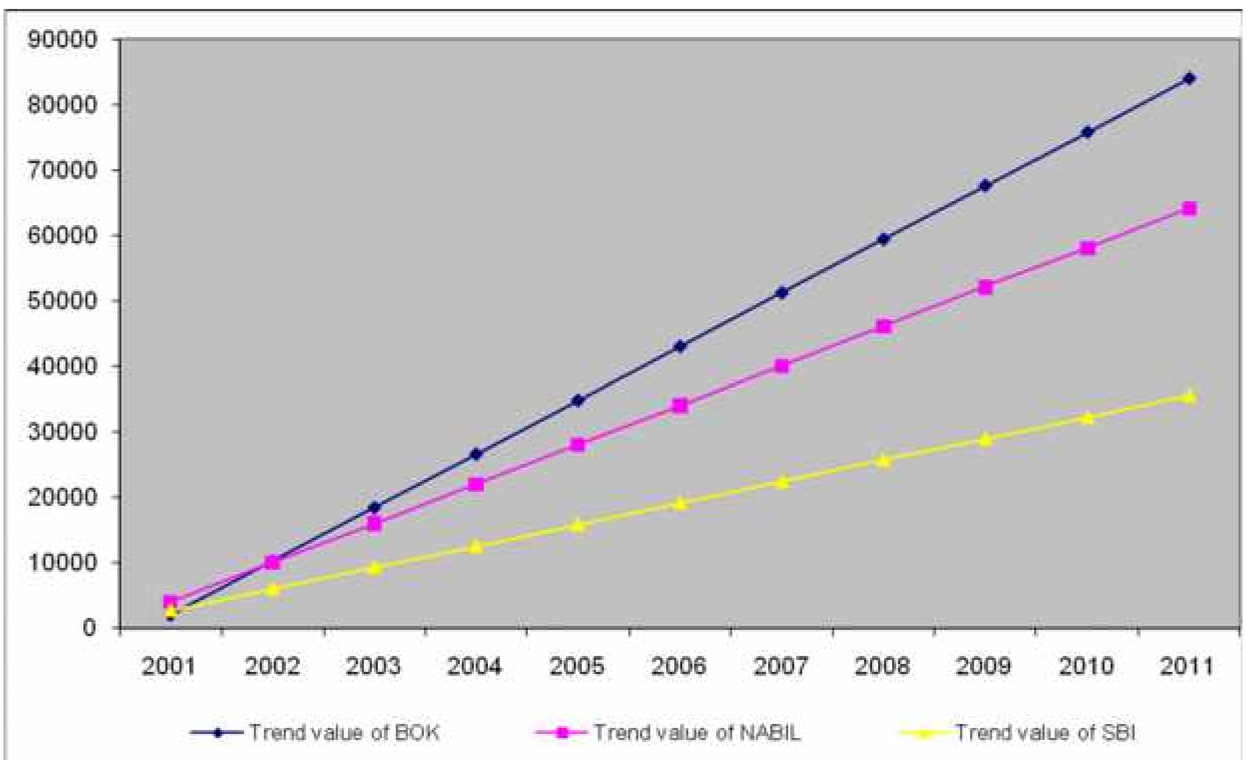
(Rs. In Millions)

Fiscal Year	Trend value of BOK	Trend value of NABIL	Trend value of SBI
2004	2045.37	4024.87	2694.13
2005	10235.74	10029.06	5987.91
2006	18426.12	16033.25	9281.70
2007	26616.49	22037.43	12575.48
2008	34806.86	28041.62	15869.27
2009	42997.23	34045.80	19163.05
2010	51187.60	40049.99	22456.83
2011	59377.97	46054.18	25750.62
2012	67568.34	52058.36	29044.40
2013	75758.71	58062.55	32338.19
2014	83949.08	64066.74	35631.97

(Source: Appendix 2)

From the above analysis it is found the loan and advances position of NABIL is comparatively lower than BOK and is better in comparison to SBI i.e. 83948.08 > 64066.74 < 35631.97 million respectively. NABIL and SBI may use the skill for the other option of secured loans that is quite appreciable. BOK is tilted towards the secured loan because of less risk due to the sufficient collateral of its clients.

Figure 4.6
Trend Values of Loan and Advances of BOK, NABIL and SBI



The comparative Figure no 4.6 shows that the trend value of Loans & Advance. All three banks have increasing trend, if all other things remain the same the total lending of the BOK & SBI will be highest Lowest respectively among the three banks, under the study period.

4.2.3 Trend Analysis of Total Investment

In this topic, an effort has been made to calculate the trend values of total investment from the mid July 2003/04 to 2008/09 have been calculated and forecasted from mid July 2009 to mid July 2014. The table 4.27 shows the trend values of total investment from mid July 2003/04 to 2013/14 of the BOK, NABIL and SBI.

Table 4.27
Trend Values of Total Investment of BOK, NABIL and SBI

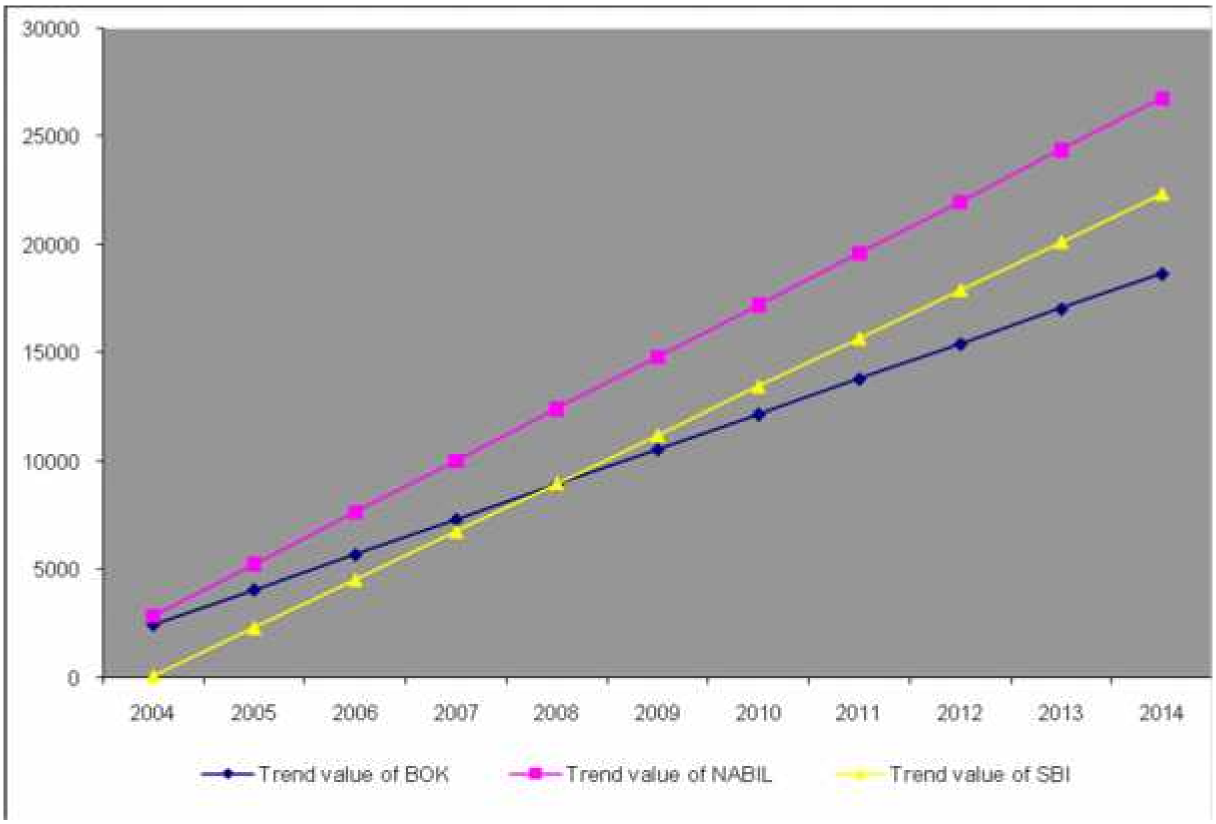
(Rs. In Million)

Fiscal Year	Trend value of BOK	Trend value of NABIL	Trend value of SBI
2004	2455.03	2892.53	101.65
2005	4075.77	5279.72	2326.55
2006	5696.51	7666.91	4551.45
2007	7317.25	10054.10	6776.35
2008	8937.99	12441.29	9001.25
2009	10558.72	14828.48	11226.15
2010	12179.46	17215.67	13451.05
2011	13800.20	19602.86	15675.95
2012	15420.94	21990.05	17900.85
2013	17041.68	24377.23	20125.74
2014	18662.41	26764.42	22350.64

(Source: Appendix 3)

Total investments of BOK, NABIL and SBI have the increasing trend value. The total investment of BOK will be 18662.41 million in the mid July 2014, which lowest in comparison with SBI and NABIL i.e. 18662.41 million < 22350.64 million < 26764.42 million.. The total investment trend of NABIL is satisfactory among the two banks. From the above analysis it can be concluded that BOK has not maintained well investment but in case of SBI and NABIL it is predicted to be good total investment trend up to the 2013/14 years.

Figure 4.7
Trend Value of Investment of BOK, NABIL and SBI



The comparative Figure no 4.7 shows that the trend value of Investment. All three banks have increasing trend but BOK investing pattern is decreasing growth rate .NABIL has invest highest investment in this study period.

4.2.4 Trend Analysis of Net Profit

Under this topic, an effort had been made to analyze net profit of BOK, NABIL and SBI from the mid July 2003/04 to 2008/09 and forecast from the mid July 2008/09 to 2013/14. The table 4.28 shows the trend values of net profit for eleven years from mid July 2003/04 to 2013/14 of BOK, NABIL and SBI.

Table 4.28
Trend Value Net Profit of BOK, NABIL and SBI

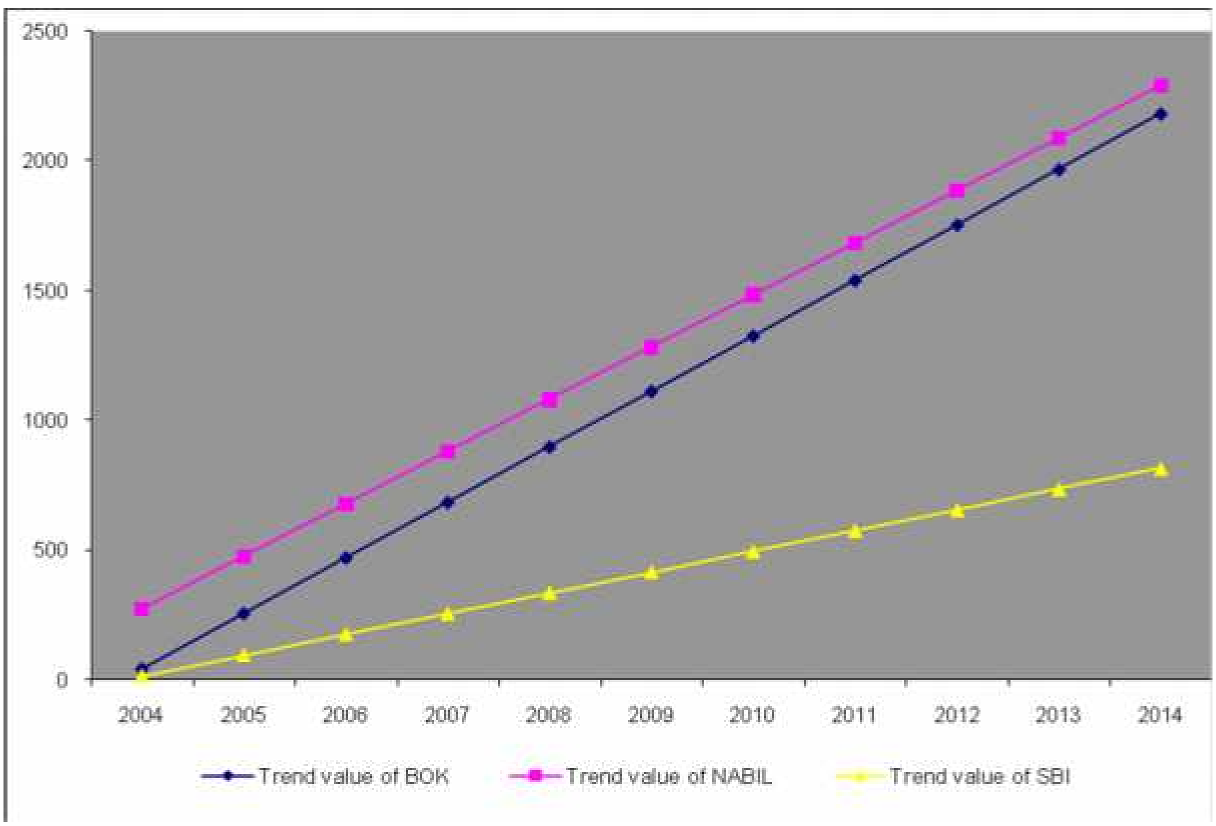
(Rs. In Million)

Fiscal Year	Trend value of BOK	Trend value of NABIL	Trend value of SBI
2004	45.06	273.94	15.67
2005	258.71	475.48	95.69
2006	472.35	677.03	175.72
2007	686.00	878.57	255.74
2008	899.64	1080.11	335.76
2009	1113.28	1281.66	415.79
2010	1326.93	1483.20	495.81
2011	1540.57	1684.74	575.84
2012	1754.21	1886.29	655.86
2013	1967.86	2087.83	735.89
2014	2181.50	2289.37	815.91

(Source: Appendix 4)

The above table 4.28 shows the net profit all three banks have the increasing trend value. The Net profit of BOK will be 2181.50 million in the mid July 2014. Similarly net profit of NABIL will be 2289.37 million, which is the highest amount among the three banks. Net profit of SBI will be 815.91 million, which is lowest value among three banks during the study period. From this trend analysis it can be said that the net profit of BOK in the medium among the banks which shows i.e. 2289.37 > 2181.50 > 815.91 million in the year 2014. The above calculated trend values of all three banks are fitted in the trend line.

Figure 4.8
Trend Value of Net Profit of BOK, NABIL and SBI



The comparative Figure no 4.8 shows that the trend value of Net profit. All three banks have increasing trend, if all other things remain the same the total Net of the NABIL will be highest profit among the three banks, BOK Growth rate will be higher under the study period.

4.2.5 Coefficient of Correlation Analysis

In this heading Karl Pearson coefficient of correlation (Direct Method) is used to find out the relationship between deposit and loan and advances. Deposit and total investment and outside assets and net profit and so on.

4.2.6 Coefficient of Correlation Between Outside Asset and Net Profit

It measures the degree of relationship between two variables. Here outside assets (x) are independent variables and net profit is dependent variable (y). The objective of computing coefficient of correlation between outside asset and net profit is to find out whether net profit is significantly correlated with respect to total assets or not.

The table 4.29 shows the value of ‘r’, r^2, P.Er, 6P.Er between outside asset and net profit of BOK, NABIL and SBI.

Table 4.29
Coefficient of Correlation between outside Asset and Net Profit

Banks	**Evaluation criterions**			
	r	**r^2**	**P.Er**	**6P.Er**
BOK	0.99726	0.99453	0.001504	0.0090252
NABIL	0.96425	0.929785	0.019334	0.116007
SBI	0.82669	0.68342	0.087174	0.523047

(Source: Appendix 5,6 &7)

The table 4.29 shows the value of r, r^2, P.Er, 6P.Er between deposit and loan and advances of BOK with comparison to NABIL and SBI for the study period 2003/04 to 2008/09. From this table, it has been found that the coefficient of correlation between total outside i.e. independent variable and net profit dependent variable is 0.99726 in case of BOK. It shows positive relationship between these variables. By considering the value of coefficient of determination (r^2), is 0.99453 indicated that 99.45% of the variation in the dependent variable has been explained by the independent variable. Similarly considering the value of r is greater than the value of 6P.Er, which reveals BOK is capable to earn net profit by mobilizing in total outside assets.

Likewise, the coefficient of correlation between total outside assets and net profit in the case of NABIL and SBI are 0.96425 and 0.82669. Again when we consider the value of coefficient determination (r^2) i.e. 0.929785 and 0.68342, it means 92.97% and 68.34% respectively in the dependent variable has been explained by the independent variable.

On the basis of comparison between the value of 'r' and 6P.Er there is significant correlation between two variables because the value of 'r' i.e. 0.96425 and 0.82669 is greater than that of the value 6P.Er i.e. 0.116007 and 0.523047. The above analysis clears that; the value of 'r' in case of BOK, NABIL & SBI all are significant correlation between mobilizations of funds return.

4.2.7 Coefficient of Correlation between Deposit and Net Profit

The coefficient of correlation between deposit and net profit measures the degree of relationship between these two variables. Here deposit (X) is independent variable and net profit (Y) is dependent variable. The objectives of computing between these two variables are to justify whether net profit is significantly correlated with deposits or not. The following table 4.32 shows the value of 'r', r^2, P.Er, 6P.Er between deposit and net profit of BOK, NABIL and SBI during the stuffy period.

Table 4.30
Coefficient of Correlation between Deposit and Net Profit

Banks	**Evaluation criterions**			
	r	**r^2**	**P.Er**	**6P.Er**
BOK	0.99446	0.988963	0.003039	0.018234
NABIL	0.95284	0.907909	0.025358	0.152149
SBI	0.79636	0.634204	0.100727	0.604360

(Source: Appendix 8, 9 &10)

From this table 4.30, it has been found that the coefficient of correlation between total deposits and net profit in the case of BOK is 0.99446, which indicated the position relationship between these variables. The coefficient of determination (r^2) is 0.988963 which indicates 98.89% of the variation of the dependent variable has been explained by the independent variable. Similarly, the value r is greater than the value of 6P.Er, i.e. 0.99446 > 0.018234, which states that there exists a significant relationship between deposits and net profit.

The coefficient of correlation between deposits and net profit in case of NABIL 0.95284 which indicated a positive relationship between deposit and net profit. The value of (r^2) is 0.907909 indicates that 90.79% of the variation of the dependent variable has been explained by the independent variable. The value of ‘r’ is greater than that of the value of 6P.Er. This states that there is significant relationship between these variables.

Similarly the coefficient of correlation between these variables in case of SBI is 0.79636, which indicated positive relation. The value of 6P.Er are lesser than the value of r i.e. 0.60436 < 0.79636 that means there is significant correlation relationship between two variation.

The above analysis clear that, the value of r in case of BOK is significant relationship between deposit and net profit. NABIL also shows the positive relationship. The value of (r2) in case of NABIL shows lower percentages of dependency than BOK and higher percentage of dependency than SBI i.e. 0.98896 > 0.907909 > 0.634204. The increase in net profit in case of BOK is due to effective mobilization of deposits and other factor have a less or role to play in increase in net profit. NABIL & SBI has not been more successful as BOK in mobilization of its deposits.

1.2.8 Coefficient of Correlation between Deposit and Interest Earned

The coefficient of correlation between deposits and interest earned measure the relationship between these two variables. Deposits are independent variable (X) and an interest earned is dependent variable (Y). The objectives of calculating r between two variables are to justify whether deposit is significantly used to earn interest or not. The table 4.31 shows the value of 'r', r^2, P.Er and 6P.Er of BOK, NABIL and SBI during the study period.

Table 4.31
Coefficient of Correlation between Deposit and Interest Earned

Banks	**Evaluation criterions**			
	r	**r^2**	**P.Er**	**6P.Er**
BOK	0.99724	0.994499	0.001514	0.0090875
NABIL	0.97714	0.9548184	0.012441	0.074648
SBI	0.97646	0.953485	0.012808	0.076849

(Source: Appendix 11, 12 &13)

The coefficient of correlation 'r' between deposit and interest earned in case of BOK is 0.99724, which indicates a positive relationship between these variables. When deposits increase the interest earned subsequently increased but when it fall the interest earned also fell. The coefficient of determination (r^2) is 0.99449 which indicate that 99.45% of the variation of dependent variable has been explained by independent variable. Similarly considering the value of 'r' and comparing with 6P.Er it has been found that the value of r is greater than the value of 6P.Er. This shows that it has significant relationship between deposit and interest earned.The coefficient of correlation 'r' between two variables in case of NABIL and SBI are 0.97714 and 0.97646 which indicates that 97.71% and 97.65% of the variation of dependent variable has been explained by independent variables. The value of 'r' in both bank's have higher than that of 6P.Er. This states that there is a significant relationship between deposit and interest earned.

After above analysis it can be concluded that the relationship between deposit and interest earned in case of BOK is highly significant with showing higher dependency. It has effectively mobilization of deposits which has had a major role to play in its earning; where as other factors are responsible in the earnings of NABIL & SBI.

4.2.9 Coefficient of Correlation between Loan and Advances and Interest Paid

It measures the relationships between these variables. Here, loan and advances is independent variables (X) and interest paid in dependent variable (Y). The purpose of calculating 'r' between these variables is to established whether increase in loan and advances has play any role in decreasing in interest expenses. The table 4.32 shows the values of 'r', r^2, P.Er and 6P.Er of BOK, NABIL and SBI during the study period.

Table 4.32
Coefficient of Correlation between Loan and Advances and Interest Paid

Banks	Evaluation criterions			
	r	**r^2**	**P.Er**	**6P.Er**
BOK	0.982665	0.965631	0.009464	0.05678
NABIL	0.982794	0.965884	0.009394	0.05636
SBI	0.941697	0.886794	0.031172	0.18703

(Source: Appendix 14, 15 &16)

The coefficient of correlation between loan and advances and interest paid in the case of BOK is 0.982665. It shows the positive relationship between two variables. The coefficient of determination (r^2) in case of NABIL shows a higher degree dependency than BOK and lower degree dependency than SBI. The value of r is greater than value of 6P.Er in case of BOK which states that there is significant relationship between loan and advances and interest paid.

Similarly the coefficient of correlation between loan and advances and interest paid in the case of NABIL and SBI are 0.98279 and 0.941697. They show there is significant relationship between these variables. The values of coefficient of determination (r^2) are 0.965884 and 0.886794 it means 96.58% and 88.68% of the variation in the dependent variable is explained by the independent variable. Again considering, the value of r and comparing with 6P.Er in both cases it is greater than 6P.Er which reveals that the value is significant relationship between two variables.

In conclusion, it can be clear that the relationship between loan and advances and interest in case of NABIL is highly significant than both other banks. It is successful to utilize the loan and advances. In case of BOK and SBI have no relationship could be established between the loan and advances and interest paid.

4.2.10 Coefficient of Correlation between Total Working Fund and Net Profit

The coefficient of correlation between the total working fund and net profit measures the degree of relationship between them. Here, total working fund is taken as independent variable (X) and net profit is taken as dependent variable(Y). The main purpose of calculating ‘r’ is to justify where total working fund is significantly used to generate earnings or in other words whether these variables are significantly correlated or not.

The table 4.33 shows the value of ‘r’, r^2, P.Er, 6P.Er between these two variables of BOK, NABIL and SBI.

Table 4.33
Coefficient of Correlation between Total Working Fund and Net Profit

	Evaluation criterions			
	r	r^2	P.Er	6P.Er
BOK	0.99389	0.98682	0.003628	0.021770
NABIL	0.95388	0.90988	0.024813	0.14888
SBI	0.830872	0.69034	0.085267	0.511599

(Source: Appendix 17, 18 & 19)

The coefficient of correlation 'r' between total working fund and net profit in case of BOK is 0.99389 which indicates positive relationship between these variables. The coefficient of determination (r^2) is 0.98682, which states that 98.68% of the variation of the dependent variable has been explained by independent variable. Similarly considering the value of 'r' 0.99389 and comparing it with 6P.Er 0.021770, the value of 'r' is greater than the value of 6P.Er, so it is significant relation between these variables.

Similarly the value of 'r' between these variables in case of NABIL is 0.95388, which shows the positive relationship. In case of SBI its value is 0.83087 that means it has significant relation between these variable. The coefficient of determination r^2 in case of NABIL and SBI are 0.90988 and 0.69034, which shows that only 90.98% and 69.03% of the variation of the dependent variables have been explained by independent variables. The value of 6P.Er is greater than 'r' i.e 0.14888< 0.95388 in case of NABIL. So there is significant relation. In case of SBI the value of 'r' is greater than 6P.Er in case of SBI, so there is significant relationship between these variables.

After analysis the conclusion can be drawn that BOK, NABIL and SBI are significant relationship between these variable, which indicated that total working fund is significantly used to generate earnings. In case of BOK there is significant relation so fell to generate earnings or in other words these variables are significant correlated.

4. 3 Test of Hypothesis

4.3.1 Test of Hypothesis on Loans and Advances to Total Deposits Ratio.

To test the ratios of loans and advances to total deposits of BOK, NABIL and SBI are taken under statistical tools t-test has been done.

Table 4.34

Loans and Advances to Total Deposits Ratios between BOK, NABIL and SBI

(In Million)

Fiscal Year	**BOK**			**NABIL**			**SBI**		
	x_1	X1	X_1^2	X_2	X2	X_2^2	X_3	X3	X_3^2
2003/04	61.87	-9.29	86.35	58.01	-9.46	89.45	71.46	-1.49	2.22
2004/05	71.04	-0.12	0.02	72.57	5.11	26.11	71.80	-1.15	1.32
2005/06	67.50	-3.66	13.39	66.79	-0.67	0.45	69.32	-3.63	13.14
2006/07	70.59	-0.57	0.33	66.60	-0.87	0.75	82.66	9.71	94.31
2007/08	78.36	7.20	51.84	66.94	-0.52	0.27	88.32	15.38	236.40
2008/09	77.61	6.45	41.56	73.87	6.41	41.05	54.12	-18.82	354.26
Total	426.96	0	193.48	404.79	0	158.09	437.68	0	701.66

(Source: Annual Report of Bank)

We have,

$\bar{X}_1 \text{ X} \frac{x_1}{n}$ $\bar{X}_2 \text{ X} \frac{x_2}{n}$ $\bar{X}_3 \text{ X} \frac{x_3}{n}$

= 426.96/6 = 404.79/6 = 437.68/6

= 71.16 = 67.46 = 72.59

Again, $X_1 = x_1 - \overline{X}_1$ $\quad X_2 = x_2 - \overline{X}_2$ $\quad X_3 = x_3 - \overline{X}_3$

Test of Significance of Difference between BOK and NABIL

To test the significant relationship between BOK and NABIL under statistical tool, t-test has been done.

***Null hypothesis* (H$_0$): μ≠μ0** (it is the hypothesis of no difference)

***Alternative hypothesis (H1)*: μ=μ0** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{Sp2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where,

$$S_p^2 = \frac{1}{n_1 + n_2 - 2}\left(x_1^2 + x_2^2\right)$$

$$= \frac{1}{6 + 6 - 2} \times (193.48 + 158.09)$$

= 35.15

Now,

Test statistics under H_0 is.

$$t = \frac{71.16 - 67.46}{\sqrt{35.15\left(\frac{1}{6} + \frac{1}{6}\right)}}$$

= 1.0809

With degree of frequency = $n_1 + n_2 - 2 = 6 + 6 - 2 = 10$

The calculated value of (t) = 1.0809

The calculated value of t at ∞ = 0.05 of 5% level of significance for one tailed test and for 10 degree of freedom is 1.8125 i.e. $t_{0.05}$ (10) = 1.8125

Decision, since the calculated value of t i.e. 1.0809 is less than the tabulated value 1.812, the null hypothesis (H_0) is accepted. This mean there is no significant difference between mean ratios of loans and advances to total deposit of BOK and NABIL.

Test of Significance Difference between BOK and SBI

To test the significant relationship between BOK and SBI under statistical tool, t-test has been done.

Null hypothesis **(H_0): µ≠µ0** (it is the hypothesis of no difference)

Alternative hypothesis (H1)**: µ=µ0** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X1}\ Z\overline{X3}}{\sqrt{Sp2 \ \frac{1}{n1} \Gamma \frac{1}{n3}}}$$

Where,

$$S_p^2 = \frac{1}{n_1 \Gamma n_3 \ Z2} \left(x_1^2 \ \Gamma \ x_3^2 \right)$$

$$= \frac{1}{6 \Gamma 6 \ Z2} \mid (193.48 \Gamma 701.66)$$

= 89.51

Now,

Test statistics under H_0 is

$$t = \frac{71.16 - 72.59}{\sqrt{89.51 \; \frac{1}{6} \Gamma \frac{1}{6}}}$$

t = -0.261795

With degree of frequency = $n_1 + n_3 - 2 = 6 + 6 - 2 = 10$

The calculated value of (t) = -0.261795

The tabulated value of at 5% level of significance for one tailed test and for 10 degree of freedom (D.F) is 1.8125 i.e. $t_{0.05}$ (10) = 1.8125

Decision, since the calculated value of t is -0.261795 is lesser than the tabulated value 1.8125, the null hypothesis (H_0) is accepted. This means there is no significant difference between mean ratios of loans and advances to total deposit of BOK and SBI.

4.3.2 Test of Hypothesis on Total Investment to Total Deposit Ratio.

This ratio of total investment to total deposit of BOK, NABIL and SBI are taken and carried out under t- test of significance difference.

***Null hypothesis* (H_0): $\mu \neq \mu 0$** (it is the hypothesis of no difference)

***Alternative hypothesis (H1)*: $\mu = \mu 0$** (it is the hypothesis of difference)

Table 4.35
Total Investment to Total Deposit Ratio of BOK, NABIL and SBI
(In Million)

Fiscal Year	**BOK**			**NABIL**			**SBI**		
	x_1	X1	X_1^2	X_2	X2	X_2^2	X_3	X3	X_3^2
2003/04	33.51	8.00	63.95	41.33	7.83	61.26	26.50	-4.18	17.47

2004/05	27.60	2.09	4.35	29.31	-4.19	17.58	30.13	-0.55	0.30
2005/06	29.60	4.09	16.70	31.93	-1.57	2.48	34.17	3.49	12.18
2006/07	26.57	1.06	1.12	38.32	4.82	23.20	23.24	-7.44	55.35
2007/08	19.95	-5.56	30.95	31.14	-2.36	5.59	22.52	-8.16	66.59
2008/09	15.85	-9.66	93.38	28.99	-4.51	20.37	47.52	16.84	283.59
Total	153.08	0	210.45	201.02	0	130.47	184.08	0	435.48

(Source: Annual Report of Bank)

We have,

$\bar{X}_1 \mathrm{X} \frac{x_1}{n}$ $\bar{X}_2 \mathrm{X} \frac{x_2}{n}$ $\bar{X}_3 \mathrm{X} \frac{x_3}{n}$

= 153.08/6 = 201.02/6 = 184.08/6

= 25.51 = 33.50 = 30.68

Again, $X_1 \mathrm{X} x_1 \mathrm{Z} \bar{X}_1$ $X_2 \mathrm{X} x_2 \mathrm{Z} \bar{X}_2$ $X_3 \mathrm{X} x_3 \mathrm{Z} \bar{X}_3$

Test of Significance Difference between BOK and NABIL

To test the significant relationship between BOK and NABIL under statistical tool, T-test has been done.

Null hypothesis **(H_0): $\mu \neq \mu 0$** (it is the hypothesis of no difference)

Alternative hypothesis (H1)**: $\mu = \mu 0$** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X1} - \overline{X2}}{\sqrt{Sp2\left(\frac{1}{n1} + \frac{1}{n2}\right)}}$$ with degree of frequency = $n_1 + n_2 - 2$

$$S_p^{\,2} = \frac{1}{n_1 + n_2 - 2}\left[\sum x_1^2 + \sum x_2^2\right]$$

$$= \frac{1}{6 + 6 - 2}\left[210.45 + 130.47\right]$$

= 34.09

Now, Test statistics under (H_0) is,

$$t = \frac{25.51 - 33.50}{\sqrt{34.09\left(\frac{1}{6} + \frac{1}{6}\right)}}$$

t = -2.370

With degree of frequency = $n_1 + n_2 - 2 = 6 + 6 - 2 = 10$

The calculated value of t = -2.370

The tabulated value of t at ∞ = 0.05 level of significance for one tailed test and for 10 degree of freedom is 1.8125 i.e. $t_{0.05}(10) = 1.8125$

Decision,

Since the calculated value of t i.e. -2.370 is less than the tabulated value i.e. 1.8125. The null hypothesis is accepted. This means there is no significance difference between mean ratios of total investment to total deposit of BOK and NABIL.

Test of Significance Difference between BOK and SBI

To test the significant relationship between BOK and SBI under statistical tool, t-test has been done.

Null hypothesis **(H_0): μ≠μ0** (it is the hypothesis of no difference)

Alternative hypothesis (H1)**: μ=μ0** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X1} - \overline{X3}}{\sqrt{Sp2\left(\frac{1}{n1} + \frac{1}{n3}\right)}}$$

Where,

$$S_p^2 = \frac{1}{n_1 + n_3 - 2}\left(x_1^2 + x_3^2 \right)$$

$$= \frac{1}{6 + 6 - 2} \times (210.45 + 435.48)$$

= 64.59

Now, test statistics is,

$$t = \frac{25.51 - 30.68}{\sqrt{64.59\left(\frac{1}{6} + \frac{1}{6}\right)}}$$

= -1.1142

The calculating value of t = -1.1142

With degree of frequency = $n_1 + n_3 - 2 = 6 + 6 - 2 = 10$

The tabulating value of at 5% level of significance for ($n_1 + n_3 - 2$) degree of freedom in a one tailed test is 1.8125 i.e. $t_{0.05}(10) = 1.8125$

Decision,

Since the calculated value of t i.e. -1.1142 is less than the tabulated value 1.8125 So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of total investment to total deposit of BOK and SBI.

4.3.3 Hypothesis test of Investment of Government Securities to Current Assets Ratio.

To test the significant relationship between BOK, NABIL and SBI under statistical tool t-test has been done.

Table 4.36
Investment of Government Securities to Current Asset Ratio of BOK, NABIL & SBI

(In Million)

Fiscal Year	**BOK**			**NABIL**			**SBI**		
	x_1	X1	X_1^2	X_2	X2	X_2^2	X_3	X3	X_3^2
2003/04	99.40	13.59	184.55	154.22	33.37	1113.22	261.79	100.71	10142.17
2004/05	102.92	17.11	292.58	131.35	10.50	110.15	152.84	-8.24	67.93
2005/06	96.73	10.92	119.14	79.09	-41.77	1744.32	119.34	-41.74	1742.37
2006/07	107.14	21.33	454.76	194.25	73.40	5386.83	153.68	-7.40	54.78
2007/08	78.24	-7.58	57.38	88.85	-32.01	1024.32	148.17	-12.91	166.71
2008/09	30.46	-55.36	3064.18	77.37	-43.49	1890.95	130.67	-30.41	924.87
Total	514.89	0.00	4172.58	725.13	0.00	11269.77	966.49	0.00	13098.83

(Source: Annual Report of Bank)

We have,

$\bar{X}_1 = \frac{x_1}{n}$ $\bar{X}_2 = \frac{x_2}{n}$ $\bar{X}_3 = \frac{x_3}{n}$

= 514.89/6 = 725.13/6 = 966.49/6

= 85.82 = 120.86 = 161.08

Again, $X_1 = x_1 - \bar{X}_1$ $X_2 = x_2 - \bar{X}_2$ $X_3 = x_3 - \bar{X}_3$

Test of Significance of Difference between BOK and NABIL

To test the significant relationship between BOK and NABIL under statistical tool, T-test has been done.

Null hypothesis (H0)**: µ≠µ0** (it is the hypothesis of no difference)

***Alternative hypothesis (H1)*: µ=µ0** (it is the hypothesis of difference)

We have

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{Sp2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$ with degree of freedom = $n_1 + n_2 - 2$

Where,

$$S_p^2 = \frac{1}{n_1 + n_2 - 2}\left(x_1^2 + x_2^2 \right)$$

$$= \frac{1}{6 + 6 - 2} \times (4172.58 + 11269.77)$$

= 1544.24

Now,

Test statistics under null hypothesis H_0 is,

$$t = \frac{85.82\ Z120.86}{\sqrt{1544.24\ \frac{1}{6}\Gamma\frac{1}{6}}}$$

= -1.5444

The calculated value of t = -1.5444

With degree of frequency = $n_1 + n_2 - 2 = 6 + 6 - 2 = 10$

The tabulated value of t at 5% level of significance for $(n_1 + n_2 - 2)$ degree of freedom on a one tailed test is 1.8125 i.e. $t_{0.05}(10) = 1.8125$

Decision,

Since the tabulated value of i.e. -1.5444 is less than the tabulated value i.e. 1.8125. The null hypothesis is accepted. This means there is no significance difference between mean ratio if investment on government securities to current assets ratio of BOK and NABIL.

Test of significance of difference between BOK and SBI

To test the significant relationship between BOK and SBI under statistical tool, t-test has been done.

Null hypothesis **(H_0): μ≠μ0** (it is the hypothesis of no difference)

Alternative hypothesis (H1)**: μ=μ0** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X1}\ \overline{ZX3}}{\sqrt{Sp2\ \frac{1}{n1}\Gamma\frac{1}{n3}}}$$

Where,

$$S_p^2 = \frac{1}{n_1 + n_3 - 2}\left(x_1^2 + x_3^2 \right)$$

$$= \frac{1}{6 + 6 - 2} \times (4172.58 + 13098.83)$$

= 1727.14

Now,

Test statistics under H_0 is,

$$t = \frac{85.82 - 161.08}{\sqrt{1727.14\left(\frac{1}{6} + \frac{1}{6}\right)}}$$

t = -3.14

The calculated value of t = -3.14

With degree of frequency = $n_1 + n_3 - 2$ = 6 + 6 - 2 = 10

The tabulated value of t at 5% level of significance for ($n_1 + n_2 - 2$) degree of freedom on a one tailed test are 1.8125 i.e. $t_{0.05}$ (10) = 1.8125

Decision,

Since the tabulated value of t = -3.14 which is less than the tabulated value 1.8125. So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of investment on government securities to current assets ratio of BOK and SBI.

4.3.4 Hypothesis Test of Loans and Advances to Current Assets Ratio.

To test the significant relationship between loans and advances of BOK, NABIL and SBI under statistical tool, t-test has been done.

Table 4.37

Loans and Advances to Current Assets Ratio of BOK, NABIL and SBI

(In Million)

Fiscal Year	**BOK**			**NABIL**			**SBI**		
	x_1	X1	X_1^2	x_2	X2	X_2^2	x_3	X3	X_3^2
2003/04	354.19	-154.71	23936.22	343.91	-152.01	23106.03	387.65	-142.53	20314.33
2004/05	534.86	25.96	673.75	574.98	79.06	6251.01	426.38	-103.80	10774.09
2005/06	489.96	-18.94	358.85	444.10	-51.82	2684.97	481.66	-48.52	2354.03
2006/07	568.77	59.87	3584.02	628.01	132.09	17448.65	561.76	31.58	997.40
2007/08	669.47	160.57	25781.65	408.52	-87.40	7638.18	649.65	119.47	14273.48
2008/09	436.17	-72.73	5290.14	575.98	80.06	6410.14	673.97	143.79	20676.04
Total	3053.42	0.00	59624.62	2975.50	0.00	63538.97	3181.07	0.00	69389.37

(Source: Annual Report of Bank)

We have,

$\overline{X}_1 \mathrm{X} \frac{x_1}{n}$ $\qquad$ $\overline{X}_2 \mathrm{X} \frac{x_2}{n}$ $\qquad$ $\overline{X}_3 \mathrm{X} \frac{x_3}{n}$

= 3053.42/6 $\qquad$ = 2975.50/6 $\qquad$ = 3181.07/6

= 508.90 $\qquad$ = 495.92 $\qquad$ = 530.18

Again, $X_1 \mathrm{X} x_1 \mathrm{Z} \overline{X}_1$ $\qquad$ $X_2 \mathrm{X} x_2 \mathrm{Z} \overline{X}_2$ $\qquad$ $X_3 \mathrm{X} x_3 \mathrm{Z} \overline{X}_3$

Test of Significance of Difference between BOK and NABIL

To test the significant relationship between BOK and NABIL under statistical tool, t-test has been done.

Null hypothesis **(H_0): $\mu \neq \mu_0$** (it is the hypothesis of no difference)

***Alternative hypothesis (H1)*: $\mu = \mu_0$** (it is the hypothesis of difference)

We have

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{Sp^2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$ with degree of freedom = $n_1 + n_2 - 2$

Where,

$$S_p^2 = \frac{1}{n_1 + n_2 - 2}\left\{x_1^2 + x_2^2\right\}$$

$$= \frac{1}{6 + 6 - 2} \times \left\{59624.62 + 63538.97\right\}$$

= 12316.36

Now,

Test statistics is

$$t = \frac{508.90 - 495.92}{\sqrt{12316.36\left(\frac{1}{6} + \frac{1}{6}\right)}}$$

The calculated value of t = 0.20257

With degree of frequency = $n_1 + n_2 - 2 = 6 + 6 - 2 = 10$

The tabulated value of t at 5% level of significance for (n_1 + n_2 – 2) degree of freedom on a one tailed test is 1.8125 i.e. $t_{0.05}$ (10) = 1.8125

Decision,

Since the tabulated value of t = 0.20257 is less than the tabulated value 1.8125. So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of loan and advances to current assets ratio of BOK and NABIL.

Test of Significance of Difference between BOK and SBI

To test the significant relationship between BOK and SBI under statistical tool, t-test has been done.

***Null hypothesis* (H_0): μ≠μ0** (it is the hypothesis of no difference)

***Alternative hypothesis (H1)*: μ=μ0** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X1} - \overline{X3}}{\sqrt{Sp2\left(\frac{1}{n1} + \frac{1}{n3}\right)}}$$ with degree of freedom = $n_1 + n_2 - 2$

Where,

$$S_p^2 = \frac{1}{n_1 + n_3 - 2}\left\{ x_1^2 + x_3^2 \right\}$$

$$= \frac{1}{6 + 6 - 2} \mid \left\{59624.62 + 69389.37\right\}$$

= 12901.40

Now

Test statistics under (H_0) is

$$t = \frac{508.90\ Z530.18}{\sqrt{12901.40\ \frac{1}{6} \Gamma \frac{1}{6}}}$$

t = -0.32454

The calculated value of t = -0.32454

With degree of frequency = $n_1 + n_3 - 2 = 6 + 6 - 2 = 10$

The tabulated value of t at 5% level of significance for ($n_1 + n_3 - 2$) degree of freedom on a one tailed test is 1.8125 i.e. $t_{0.05}$ (10) = 1.8125.

Decision,

Since the tabulated value of t = -0.32454 is less than the tabulated value i.e. 1.8125 So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of loan and advances to current assets ratio of BOK and SBI.

4.3.5 Hypothesis Test of Return on Loans and Advances Ratio of BOK, NABIL and SBI.

The ratios of return on loans and advances of BOK, NABIL and SBI are taken and under t- test of significance difference.

Table 4.38

Return on Loans and Advances Ratio of BOK, NABIL and SBI.

(In Million)

Fiscal Year	**BOK**			**NABIL**			**SBI**		
	x_1	X1	X_1^2	X_2	X2	X_2^2	x_3	X3	X_3^2

2003/04	2.14	-0.38	0.15	5.56	1.07	1.14	1.18	-0.56	0.32
2004/05	2.29	-0.23	0.05	4.91	0.42	0.17	0.92	-0.82	0.68
2005/06	2.74	0.22	0.05	4.92	0.43	0.18	1.53	-0.21	0.05
2006/07	2.90	0.38	0.14	4.34	-0.15	0.02	2.69	0.95	0.90
2007/08	2.58	0.06	0.003	3.49	-1.00	1.01	2.05	0.31	0.09
2008/09	2.49	-0.03	0.0011	3.74	-0.75	0.57	2.09	0.35	0.12
Total	15.14	0.00	0.39	26.96	0.00	3.09	10.46	0.00	2.15

(Source: Annual Report of Bank)

We have,

$\overline{X}_1 \mathrm{X} \frac{x_1}{n}$ $\overline{X}_2 \mathrm{X} \frac{x_2}{n}$ $\overline{X}_3 \mathrm{X} \frac{x_3}{n}$

= 15.14/6 = 26.96/6 = 10.46/6

= 2.52 = 4.49 = 1.74

Again, $X_1 \mathrm{X} x_1 \mathrm{Z} \overline{X}_1$ $X_2 \mathrm{X} x_2 \mathrm{Z} \overline{X}_2$ $X_3 \mathrm{X} x_3 \mathrm{Z} \overline{X}_3$

Test of Significance Difference between BOK and NABIL

To test the significant relationship between BOK and NABIL under statistical tool, t-test has been done.

Null hypothesis **(H_0): μ≠μ0** (it is the hypothesis of no difference)

Alternative hypothesis (H1)**: μ=μ0** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{Sp2\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \qquad \text{with degree of freedom} = n_1 + n_2 - 2$$

Where,

$$S_p^{\,2} = \frac{1}{n_1 + n_2 - 2}\left[\quad x_1^2 + \quad x_2^2\right]$$

$$= \frac{1}{6 + 6 - 2} \times \left[0.39 - 3.09\right]$$

$$= -0.27$$

Now,

Test statistics of (H_0) is

$$t = \frac{2.52 - 4.49}{\sqrt{-0.27\left(\frac{1}{6} + \frac{1}{6}\right)}}$$

$$t = 6.5667$$

The calculated value of t = 6.5667

With degree of frequency = $n_1 + n_2 - 2 = 6 + 6 - 2 = 10$

The tabulated value of t at 5% level of significance for ($n_1 + n_2 - 2$) degree of freedom on a one tailed test is 1.812 i.e. $t_{0.05}(10) = 1.812$

Decision,

Since the tabulated value of t = 6.5667 is higher than the tabulated value i.e. 1.8125. So the null hypothesis is rejected. There is significance difference between mean ratio of return on loan and advances ratio of BOK and SBI

Test of Significance Difference between BOK and SBI

To test the significant relationship between BOK and SBI under statistical tool, t-test has been done.

***Null hypothesis* (H_0): μ≠μ0** (it is the hypothesis of no difference)

***Alternative hypothesis (H1)*: μ=μ0** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X1} - \overline{X3}}{\sqrt{Sp2\left(\frac{1}{n1} + \frac{1}{n3}\right)}}$$ with degree of freedom = $n_1 + n_3 - 2$

Where,

$$S_p^2 = \frac{1}{n_1 + n_3 - 2}\left(x_1^2 + x_3^2\right)$$

$$= \frac{1}{6 + 6 - 2} \times (0.39 + 2.15)$$

= 0.254

$$t = \frac{2.52 - 1.74}{\sqrt{0.254\left(\frac{1}{6} + \frac{1}{6}\right)}}$$

t = 2.6813

The calculated value of t = 2.6813

With degree of frequency = $n_1 + n_3 - 2 = 6 + 6 - 2 = 10$

The tabulated value of t at 5% level of significance for ($n_1 + n_3 - 2$) degree of freedom on a one tailed test is 1.8125 i.e. $t_{0.05}$ (10) = 1.8125

Decision,

Since the tabulated value of t = 2.6813 is higher than the tabulated value i.e. 1.8125. So the null hypothesis is rejected i.e. there is significance difference between mean ratio of return on loan and advances of BOK and SBI.

4.3.6 Hypothesis Test of Total Interest Earned to Total outside Assets Ratio of BOK, NABIL and SBI

The ratio of total interest earned to total outside assets of BOK, NABIL and SBI are taken and carried out under (t- test) of significance difference.

Table 4.39
Total Interest Earned to Total outside Assets Ratio of BOK, NABIL and SBI

(In Million)

Fiscal Year	**BOK**			**NABIL**			**SBI**		
	x_1	X1	X_1^2	x_2	X2	X_2^2	x_3	X3	X_3^2
2003/04	6.65	-0.01	0.0001	7.14	0.26	0.07	7.00	0.64	0.41
2004/05	6.31	-0.35	0.12	7.19	0.31	0.10	6.56	0.20	0.04
2005/06	6.38	-0.28	0.08	6.86	-0.02	0.0003	6.22	-0.14	0.02
2006/07	6.66	0.00	0.00	6.48	-0.40	0.16	6.86	0.50	0.25
2007/08	6.48	-0.18	0.03	6.32	-0.56	0.31	6.38	0.02	0.0004
2008/09	7.49	0.83	0.69	7.28	0.40	0.16	5.14	-1.22	1.49
Total	39.97	0.00	0.92	41.27	0.00	0.80	38.16	0.00	2.21

(Source: Annual Report of Bank)

We have,

$\overline{X}_1 = \frac{x_1}{n}$ $\overline{X}_2 = \frac{x_2}{n}$ $\overline{X}_3 = \frac{x_3}{n}$

= 39.97/6 = 41.27/6 = 38.16/6

= 6.66 = 6.88 = 6.36

Again, $X_1 = x_1 - \overline{X}_1$ $X_2 = x_2 - \overline{X}_2$ $X_3 = x_3 - \overline{X}_3$

Test of Significance Difference between BOK and NABIL.

To test the significant relationship between BOK and SBI under statistical tool, t-test has been done.

Null hypothesis **(**H_0**): μ≠μ0** (it is the hypothesis of no difference)

Alternative hypothesis (H1)**: μ=μ0** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X1} - \overline{X2}}{\sqrt{Sp2\left(\frac{1}{n1} + \frac{1}{n2}\right)}}$$

with degree of freedom = $n_1 + n_2 - 2$

Where,

$$S_p^{\,2} = \frac{1}{n_1 + n_2 - 2}\left(x_1^2 + x_2^2 \right)$$

$$= \frac{1}{6 + 6 - 2} \times (0.92 + 0.80)$$

= 0.172

Now,

Test statistics under (H_0) is

$$t = \frac{6.66\,Z\,6.88}{\sqrt{0.172\ \frac{1}{6}\,\Gamma\,\frac{1}{6}}}$$

$= -0.9189$

The calculated value of t = -0.9189

With degree of frequency = $n_1 + n_2 - 2 = 6 + 6 - 2 = 10$

The tabulated value of t at 5% level of significance for ($n_1 + n_2 - 2$) degree of freedom in one tailed test is 1.8125 i.e. $t_{0.05}(10) = 1.8125$

Decision,

Since the tabulated value of t = -0.9189 is less than the tabulated value i.e. 1.8125. So the null hypothesis is accepted i.e. there is no significant difference between mean ratio of total interest earned to total outside assets ratio of BOK and SBI

Test of Significance Difference between BOK and NABIL

To test the significant relationship between BOK and NABIL under statistical tool, t-test has been done.

Null hypothesis **(H_0): $\mu \neq \mu 0$** (it is the hypothesis of no difference)

Alternative hypothesis (H1)**: $\mu = \mu 0$** (it is the hypothesis of difference)

We have

$$t = \frac{\overline{X1}\ \overline{Z X3}}{\sqrt{Sp2\ \frac{1}{n1}\,\Gamma\,\frac{1}{n3}}}$$ with degree of freedom = $n_1 + n_3 - 2$

Where, $S_p^2 = \frac{1}{n_1 + n_3 - 2}\left(x_1^2 + x_3^2 \right)$

$$= \frac{1}{6 + 6 - 2} \times (0.92 + 2.21)$$

$$= 0.313$$

$$T = \frac{6.66 - 6.36}{\sqrt{0.313\left(\frac{1}{6} + \frac{1}{6}\right)}}$$

$$t = 0.92879$$

The calculated value of t = 0.92879

With degree of frequency = $n_1 + n_3 - 2 = 6 + 6 - 2 = 10$

The tabulated value of t at 5% level of significance for ($n_1 + n_3 - 2$) degree of freedom on a two tailed test is 1.8125 i.e. $t_{0.05}(10) = 1.8125$

Decision,

Since the tabulated value of t = 0.92879 is less than the tabulated value i.e. 1.8125. So the null hypothesis is accepted i.e. there is no significance difference between mean ratio of return on loan and advances of BOK and SBI.

4.4 Regression Analysis

4.4.1Regression of working fund and Net Profit

Regression is the statistical tool which is used to determine the statistical relationship between two or more variables and so make estimate of one variable on the basis of the other variable. Regression is the line which gives the best estimate of one variable for any given value of the other variable. The regression line of Y on X estimate the most probable values of Y for given values of X.

X is independent variable

Y in dependent variable

The regression equation of Y on X expressed as Y = a + bx

Where, a and b are parameters of the line.

To find out the exact relationship between different variable simple regressions analysis has been done and results of the analysis have been table.

Table 4.40
Calculation of Regression Equation between Net Profits on Total Working Fund

Banks	Regression equation	Value (a) constant	Regression coefficient (b)
BOK	Y= -61.48+0.018804 X	a = -61.48	b = 0.018804
NABIL	Y =197.903+0.017487X	a = 197.903	b = 0.017487
SBI	Y = -3.4944+0.01146 X	a = -3.4944	b = 0.01146

Source: Appendix 20.

The table shows the regression equation of net profit and net working fund in BOK, NABIL and SBI. According to the table regression equation of net profit on net working fund Y= -61.48 + 0.018804X in BOK is negative. The regression coefficient is positive i.e. 0.018804 which indicates the positive relationship exists between net profit and net working fund. In other word, one million increase in net working funds leads to average about 0.018804 million increase in net profit. The value of constant (a) is relatively low. The value of (a) indicates that if net working fund is 0 then the value of net profit is -61.48 million. So from analysis it shows that the net profit will be decrease and net working fund also decrease.

On the other hand, regression coefficient of (b) is positive in case of NABIL which indicates that one million increase in net working fund lead to an average about Rs. 0.017487 increases in net profit. According to the above table regression equation of net profit on net working fund regression coefficient is positive which reveals the positive relationship between net and working fund.

Similarly regression equation of net profit on net working fund Y= -3.4944 + 0.01146X in SBI is negative. The regression coefficient is positive i.e. 0.01146 which indicates the positive relationship exists between net profit and net working fund. In other word, one million increase in net working funds leads to average about 0.01146 million increases in net profit. So from analysis it shows that the net profit will be decrease and net working fund also decrease.

The test of t statistics helps us to conclude that in all three cases the results are not statistically significant at 5% level of significance since the value of t is small than tabulated value.

Table 4.41
Calculation of Regression Equation between Net Profits on Total Deposit

Banks	Regression equation	Value (a) constant	Regression coefficient (b)
BOK	Y = 361.096+0.00444X	a = 361.096	b = 0.00444
NABIL	Y = 198.084+0.02043X	a = 198.084	b = 0.02043
SBI	Y = 18.568+0.01179X	a = 18.568	b = 0.01179

(Source: Appendix 21)

The above table is the collection of major output of simple regression analysis of net profit on total deposit.

The regression equation of net profit (Y) dependent variable on total deposit (X) independent variable Y = 361.096+0.00444X in BOK is positive i.e. 0.00444 which indicates the positive relationship exists between net profit and total deposit or it can be said that one million increase in total deposit leads to average 0.00444 million increase in net profit. The value of constant (a) is relatively high. Similarly in case of NABIL & SBI the regression coefficient is positive or in other words one million increases in total deposit leads to average 0.02043 million & 0.01179 million respectively increase in net profit. The value of constant (a) indicates that the net profit can be increase and total deposit also increase. The regression coefficient is positive which reveals the positive relationship between net profit and total deposit.

From the test of't' statistics it can be concluded that in all three cases the results are not statistically significant at 5% level of significance since the value of t is smaller than tabulated value.

4.5 Major Findings of the Study

1. The cash and bank balances to total deposit ratio of all three bank has been fluctuating trend. The mean ratio of the BOK is higher than NABIL and SBI which indicates that its liquidity position is better to serve its customers deposits withdrawal demands. The C.V. between the ratios is found to be 21.62%, which shows that the ratios of BOK aren't consistent and more variable.

2. The mean ratio of investment on government securities to current asset of NABIL is average in compared to BOK and SBI, which states that its investment on government securities is slightly poor than that of SBI. In the year 2003/046 SBI bank has invested 261.79% of its fund in the government securities which maximum percentages during the study period. On the basis of C.V the ratio of NABIL are more volatile and in consistent.

3. Investment to total deposit of all three banks has in fluctuating trend during the study period. The mean ratio of total investment to total deposit of BOK is in between the NABIL and SBI. The highest ratio is 33.51% and lowest is 15.85% with mean ratio 25.51% and C.V of 23.28%. It is in between NABIL and SBI so the ratio is less consistent and more variable. Its overall figure suggests that the banks have not mobilized significant amount of fund on the government securities and shares and debentures of other companies.

4. The loans and advances to total working fund of ratio SBI is slightly lower than NOBL and higher than NABIL. NABIL Bank's C.V is 7.73% which is lowest than that of other two banks shows the ratios is consistent over the study period. Loan and advances is the most risk and most productive asset of the bank. From the study shows two third of the asset taken optimum risk towards the mobilization of its fund to risky assets.

5. The investment on shares and debenture to total working fund of all three bank's have been fluctuating trend. The mean ratio of NABIL is found to be 0.17 with 26.21% C.V between the other compared banks. It shows the ratio of NABIL is very stable over the study period.

6. Total off balance sheet operation to loan and advances ratios of all three banks have been fluctuating trend. The mean of the ratio of SBI is found to be 32.35 with C.V 36.35%. It has highest C.V. than that of others compared a bank which indicates that the ratio is not consistent during the study period. The analysis of the ratios shows that OBS operation of the bank is in decreasing trend. It may be due to competition in the banking sector or bank is not getting enough attention towards non-funded business.

7. The loan loss ratio of all banks has decreasing trend. The mean ratio of NABIL found to be 2.70% with C.V of 35.97%, which is lowest than that of the other compared banks, It shows that the bank manages its loan and advances and makes effort for timely recovered of loan. The variability of the ratio of NABIL is lower than that of other compared banks. The increasing trend of loan loss provision indicates that the quality of loans becoming degrading year by year.

8. The mean ratio of return on loans and advances ratio of BOK is higher than SBI and is lower than NABIL. The mean of the ratio is found to be 2.52% with C.V of 10.15%, which indicates that the ratios are less variable. The average ratio of 2.52% suggests that the earning capacity of the bank's loan and advances is satisfactory.

9. The total interest paid to working fund ratios has fluctuating trend during the study period. The mean ratio of total interest paid to total working fund of BOK is higher than

NABIL lower than SBI, which means it has paid more average interest than NABIL and SBI. The total interests paid to working fund ratios are lesser than to total interest earned to total fund ratio. This indicates that the bank is in profitability position as it is earning higher return than it interest cost.

10. The analysis of the growth ratio of total deposits of BOK in comparison with NABIL and SBI during the study period shows that the total deposits of the bank is in increasing trend with the net growth rate of 38.43%. It has maintained growth rate highest that other compared banks. This means the performance of BOK to collect deposit in comparison to other banks is better year by year.

11. The total investment of studies banks are fluctuating trend during the study period. The growth ratio of BOK total investment is in between the NABIL and SBI. BOK has maintained growth ratio of 13.89%, which is lesser than SBI (47.43%) and higher than NABIL (13.15%). It shows that BOK has moderate successful in investing.

12. The total net profit of studies banks are also in increasing trends during the study periods. The growth ratio of BOK net profit is highest of all. It has the rate of 42.61% whereas NABIL and BOK have 17.76% and 39.06% respectively. It means the performance of SBI to earn profit is better year by year.

13. The trend analyses of total deposit of BOK, NABIL and SBI have increasing trend. From the trend analysis it is forecasted that the total deposit of BOK in 2013/14 will be forecast Rs. 107660.78 million. Similarly the total deposit of NABIL and SBI will be 89292.57 and 55306.25 million in the third mid July of 2014 respectively. The deposit collection of BOK is better than that of NABIL and SBI.

14. The net profits of all three banks have the increasing trend. The net profit of NABIL by the FY 2013/14 is projected to be 2289.37million, which is the highest value under the study period. Similarly the total net profit of BOK and SBI will be 2181.50 and 815.91 million respectively. The Net profit of NABIL id better than BOK & SBI.

CHAPTER –V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The prosperity of every developing country can only be ensured by its economic growth. The role of Commercial Banks in the economic growth of the nation can be fairly estimated to be very prominent. By mobilizing the scattered idle resources from the savers, commercial bank pools the fund in a sizable volume in order to feed to the fund requirement of productive sector of the economy. Such investments in the productive sector promote trade and industrialization in the country. Thereby raising the employment opportunities and earning to the labours, materials and service providers to such industries and trades, which as a chain effect, promotes saving into the banks and more saving means more funds available in the banks for further investment. In this way, as the chain moves rolling on, the economy of the nation also grows. To remain as the major contribution factor to the growth of the nation's economy, the banks also have to have sustainable existence and growth of themselves. For the sustainable existence and growth of a bank, it must ensure reasonable profitability. As the banks are formed as joint stock companies promoted by shareholder's investment, it must give reasonable return on the fund of the shareholders. Further by the profit made by the bank, it may choose to increase its capital base to make it stronger and more sustainable for facing nay future threat that may come up. A profit earning organization can better feed to their employee, thereby enhancing the morale of the employees and motivate them for better performance. Therefore, profit for commercial organization has been defined as the life-blood for them. A commercial bank also, being a commercial institution, has to plan for the reasonable profit earnings. Profit planning, in short, is the planning of activities in such a way that it helps in increasing the income at a minimum possible cost or at optimum cost.

The income and profit of the bank depends upon its lending procedure, lending policy and investment of its fund utilize in different securities. Commercial banks able to utilize its deposits properly i.e. providing loans and advances or lending for a profitable project, the reason behind it is lack of sound investment policy. The main objective of this study is to evaluate the profit planning policies adopted by BOK, NABIL and SBI. The study is totally based on secondary sources of data and required data have been collected by using various published and unpublished sources.

There are 27 commercial banks have been operating in Nepal which are considered to be the population of the study and out of them three commercial banks i.e. BOK, NABIL, SBI has been taken as a sample of the study and the collected data have been analyzed by using various financial tools and statistical tools like ratio analysis, correlation coefficient, regression equation etc.

Regarding the profit planning policies of commercial banks there are basically five basic principles of the bank follow while providing the loans i.e. liquidity, profitability, security and suitability diversification. Various process while making investment decision are applied in the study i.e. set investment process, security analysis, portfolio construction, revision, performance evaluation .The data obtained from annual reports of the concerned banks, likewise the financial statements of six years (from 2003/04 to 2008/09) were selected for the purpose of evaluation.

5.2 Conclusion

The liquidity position of BOK is comparatively better than that of NABIL and SBI. In spite of the current ratio is average among the other two banks BOK has maintained the cash and bank balance to meet the customers demand. All the three banks have met the normal standard current assets ratio to meet the short term obligation of its customers. SBI has invested highest sectors like government securities than BOK & NABIL. SBI had mobilized lots of its funds in order to gain the high profit.

From the analysis of assets management ratio it can be found that BOK is in better position as compared to that of NABIL and SBI. The loans and advances to total deposit ratio, loan and advances to total working fund ratio of BOK lies In between those of NABIL and SBI. SBI 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. It takes low credit risk and has sufficient deposits of none bearing interest which can be used in a creation period. Anyhow BOK has also trying to best in loan loss provision. Investment on shares and debentures to total working fund ratio is higher in SBI.

The interest earned to total outside assets and return on total working fund ratio of SBI is lowest of all. But overall analysis of profitability ratios, BOK is average profitable in comparison to other compared bank i.e. NABIL and SBI. To make the profit SBI is taking highest risk by providing the higher portion of its deposit as a loan.

The return on loan and advances ratio and return on assets of SBI is lowest of all. The ratio suggests that the earning capacity of the bank's loan and advances is satisfactory. The return on assets of the bank is good in average; it indicates the good earning capacity of the bank assets and good utilization of its assets.

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 BOK. 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 provides for the assurance of consistency of the degree of risk. BOK 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 BOK shows better position than that of NABIL and SBI.

5.3 Recommendations

On the basis of the findings of the study, following recommendations can be drawn:-

1. In commercial banks the liquidity position affects external and internal factors such as saving for investment situations, central banks requirements, the leading policies management capacity etc. In this study it should try to lower the current liabilities to improve its liquidity position. Current ratio of all three banks is satisfactory. It is above its

standard rate 2:1. So the banks are suggested to maintain this current ratio & invest in short term obligation of its current assets to gain short term profit. The ratio of cash and bank balance to total deposit and current assets of BOK is higher than that of NABIL and SBI. It means BOK has higher cash and bank balance which decrease profit of bank, so it is recommended to mobilize cash and bank balance in profitable loan and advances.

2. From the study it is found that BOK has not invested sufficient funds in government securities than that of other banks. BOK liquidity position shows that it has kept relatively funds as cash and bank balance which doesn't earn any return. This ultimately affects profitability of bank. Investment in government securities i.e. TBs development bonds. Saving certificate are free of risk and highly in nature. So BOK is recommended to invest its fund in government securities instead of keeping them idle. "Something is better than nothing".

3. In practice joint ventured banks are urban based; service quite a few elite, a fluent big customer are heavily dependent on free based activities. To overcome its situation they should be accessible to rural areas and possible loan and advances to its deposit. So the customers is enjoying by getting deposit borrowing and other services.

4. BOK has invested it's more of the funds that is total investment on total deposit ratio but the percentages of investment on share and debenture is nominal. So it is suggested to invest more of its fund in share and debenture of different companies.

5. NABIL loan and advances to total deposit ratio is lowest in compared to other banks. To overcome from the situation it is recommended to follow liberal lending policy and invest more and more of total deposit in loan and advances and maintain stability on the investment policy.

6. BOK and SBI's loan loss ratio is higher than NABIL. So these banks are recommended that before providing the loan make sure that your clients is in good character and able to pay its loan or may take the collateral which is nearly two times more than that of your guaranteed.

7. Profitability ratios of banks are not satisfactory, if resources held idle bank have to bearded more cost and result would be lower profit margin. So portfolio condition of a bank should be regularly revised from time to time. It should always try to maintain the equilibrium in the portfolio condition of the bank. The bank should use its funds in more portfolio sectors. It should utilize its risky assets and shareholders' funds and it should reduce its express and should try to collect cheaper fund being more profitable.

8. It is seen that NABIL has invested much of its fund in total outside assets but it has not achieved the desired result. So NIBIL should play tactfully while investing its fund keeping in mind the interest rate.

9. NABIL has taken the low credit risk as NABIL is one of the largest commercial bank in Nepal. It must also interest as BOK and SBI do. The risk taken by BOK from the angle of credit risk and capital risk are in an average but the consistencies of the same are highly volatile which may result higher loss. So it should not test such risk on an experiment basis it should carefully study it so as to achieve higher return from the above risk.

10. In the light of growing competition in the banking sector the business of the bank is customer oriented. It should strengthen and active its marketing function, as it is an effective tool of attracting and retaining customers. The bank should develop on “Innovative approach to bank marketing and formulate new strategies of serving customers in a more convenient way.

11. The investment policy of BOK is good in every aspect as studied above but the consistency in the above investment sectors is in equilibrium states. It is found that at time bank focuses much of its attention to one sector leaving other sector untouched, so it is recommended to touch all the sectors and balance it effectively as to have the optimal performance of the bank.

12. The ‘Global Economic Crisis 2008’ started from banking sector of USA this crisis may affects to Nepalese financial sectors too so the all banks suggested to make some policy to be safe from this crises.

13. Financial institutions increasing day by day in Nepal it grows the competition with the banks so banks should make some policy to keep its position as before among the Nepalese financial institutions.
14. Nepal's accession to the WTO would permit international banks to operate in Nepal so banks need to make their business plan and strategy accordingly which can convert challenges in to opportunities.
15. People in rural area of Nepal still out of banking services so bank is suggested to take bold steps to expand and upgrade its network to reach such area with their products and services.
16. Nepali Banks are allowed to expand its services to abroad from 2010 AD. So the banks need to make their business plan and strategy which to take bold steps to expand and upgrade its network to reach such area with their products and services.
17. Nepal Rastra Bank are allowed to banks operate Branch Less Banking (GHAR DAILO BANKING) in Nepal so banks need to make their business plan and strategy accordingly which can convert challenges in to opportunities.

The size of Nepali banking market is increasing day by day. The increase in number of financial institutions indicates the increasing competition in financial market. To monitor 167 with proper regulation this even more, the government had to bring new strategies. Moreover, foreign banks are allowed to operate in Nepal from 2010 A.D there will be more challenge for Nepalese financial institutions. The central bank of Nepal (NRB) should make some policies toward the banking sector to comfort and able to compete with this ever increasing financial institutions.

The research report is concluded with the above mentioned major findings, summary, conclusions, and recommendations.

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APPENDIX

Trend analysis

Appendix:-1

Trend analysis of total deposit of BOK

(Rs. In million)

Year (t)	Total Deposit (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	11524.68	-2	4	-23049.40	4406.73
2005	14254.58	-1	1	-14254.60	14732.14
2006	18927.31	0	0	0	25057.54
2007	24488.86	1	1	24488.86	35382.95
2008	34451.73	2	4	68903.46	45708.35
2009	46698.10	3	9	140094.30	56033.76
Total	150345.26		19	196182.70	

$a \,\mathrm{X} \frac{y}{n} \,\mathrm{X} \frac{150345.25}{6} \,\mathrm{X}\, 25057.54$ $\qquad$ $b \,\mathrm{X} \frac{xy}{x^2} \,\mathrm{X} \frac{196182.70}{19} \,\mathrm{X}\, 10325.40$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	66359.16
2011	5	76684.56
2012	6	87009.97
2013	7	97335.37

2014	8	107660.78

Trend analysis of total deposit of NABIL

(Rs. In million)

Year (t)	Total Deposit (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	14119.03	-2	4	-28238.10	6980.75
2005	14586.67	-1	1	-14586.70	15211.94
2006	19347.40	0	0	0	23443.12
2007	23342.29	1	1	23342.29	31674.30
2008	31915.05	2	4	63830.10	39905.48
2009	37348.26	3	9	112044.80	48136.66
Total	140658.70		19	156392.40	

$$a \,\mathrm{X}\, \frac{y}{n} \,\mathrm{X}\, \frac{140658.70}{6} \,\mathrm{X}\, 23443.12$$

$$b \,\mathrm{X}\, \frac{xy}{x^2} \,\mathrm{X}\, \frac{156392.40}{19} \,\mathrm{X}\, 8231.18$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	56367.48

2011	5	64599.02
2012	6	72830.20
2013	7	81061.38
2014	8	87292.57

Trend analysis of total deposit of SBI

(Rs. In million)

Year (t)	Total Deposit (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	7198.32	-2	4	-14396.60	2834.49
2005	8654.77	-1	1	-8654.77	8081.66
2006	11002.04	0	0	0	13328.84
2007	11445.29	1	1	11445.29	18576.02
2008	13715.40	2	4	27430.80	23823.19
2009	27957.22	3	9	83871.66	29070.37
Total	79973.04		19	99696.34	

$$a = \frac{\sum y}{n} = \frac{79973.04}{6} = 13328.84 \qquad b = \frac{\sum xy}{\sum x^2} = \frac{99696.34}{19} = 5247.18$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	34317.54
2011	5	39564.72
2012	6	44811.89

2013	7	50059.07
2014	8	55306.25

Appendix:-2

Trend analysis of Loans & Advance of BOK

(Rs. In million)

Year (t)	Loans & Advance (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	7130.13	-2	4	-14260.30	2045.37
2005	10126.06	-1	1	-10126.10	10235.74
2006	12776.21	0	0	0	18426.12
2007	17286.43	1	1	17286.43	26616.49
2008	26996.65	2	4	53993.30	34806.86
2009	36241.21	3	9	108723.60	42997.23
Total	110556.69		19	155617.73	

$$a \,X\, \frac{y}{n} \,X\, \frac{110556.69}{6} \,X\, 18426.12$$

$$b \,X\, \frac{xy}{x^2} \,X\, \frac{155617.73}{19} \,X\, 8190.37$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	51187.60
2011	5	59377.97
2012	6	67568.34

2013	7	75758.71
2014	8	83949.08

Trend analysis of Loans & Advance of NABIL

(Rs. In million)

Year (t)	Loans & Advance (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	8189.99	-2	4	-16380.00	4024.87
2005	10586.17	-1	1	-10586.20	10029.06
2006	12922.54	0	0	0	16033.25
2007	15545.78	1	1	15545.78	22037.43
2008	21365.06	2	4	42730.12	28041.62
2009	27589.93	3	9	82769.79	34045.80
Total	96199.47		19	114079.50	

$$a \mathrm{X} \frac{y}{n} \mathrm{X} \frac{96199.47}{6} \mathrm{X} 16033.25$$

$$b \mathrm{X} \frac{xy}{x^2} \mathrm{X} \frac{114079\ .50}{19} \mathrm{X}\ 6004\ .19$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	40049.99
2011	5	46054.18
2012	6	52058.36
2013	7	58062.55
2014	8	64066.74

Trend analysis of Loans & Advance of SBI

(Rs. In millions)

Year (t)	Loans & Advance (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	5143.66	-2	4	-10287.30	2694.13
2005	6213.88	-1	1	-6213.88	5987.91
2006	7626.74	0	0	0	9281.70
2007	9460.45	1	1	9460.45	12575.48
2008	12113.70	2	4	24227.40	15869.27
2009	15131.75	3	9	45395.25	19163.05
Total	55690.18		19	62581.90	

$$a X \frac{y}{n} X \frac{55690.18}{6} X 9281.70 \qquad b X \frac{xy}{x^2} X \frac{62581.90}{19} X 3293.78$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	22456.83
2011	5	25750.62
2012	6	29044.40
2013	7	32338.19
2014	8	35631.97

Appendix:-3

Trend analysis of total investment of BOK

(Rs. In millions)

Year (t)	Total Investment (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	3862.48	-2	4	-7724.96	2455.03
2005	3934.19	-1	1	-3934.19	4075.77
2006	5602.87	0	0	0	5696.51
2007	6505.68	1	1	6505.68	7317.25
2008	6847.03	2	4	13748.06	8937.99
2009	7399.81	3	9	22199.43	10558.72
Total	34179.06		19	30794.02	

$$a \, X \frac{y}{n} \, X \frac{34179.06}{6} \, X 5696.51 \qquad\qquad b \, X \frac{xy}{x^2} \, X \frac{30794.02}{19} \, X 1620.74$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	12179.46
2011	5	13800.20
2012	6	15420.94
2013	7	17041.68
2014	8	18662.41

Trend analysis of total investment of NABIL

(Rs. In millions)

Year (t)	Total Investment (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	5835.95	-2	4	-11671.90	2892.53

2005	4257.52	-1	1	-4257.52	5279.72
2006	6178.53	0	0	0	7666.91
2007	8945.31	1	1	8945.31	10054.10
2008	9939.78	2	4	19879.56	12441.29
2009	10826.38	3	9	32479.14	14828.48
Total	46001.47		19	45356.59	

$$a \text{ X} \frac{y}{n} \text{ X} \frac{46001.47}{6} \text{ X} 7666.91$$

$$b \text{ X} \frac{xy}{x^2} \text{ X} \frac{45356.59}{19} \text{ X } 2387.19$$

Project trend values of total deposit for next five years

Year (t)	**X = t-2006**	**Y_c = a + bx**
2010	4	17215.67
2011	5	19602.86
2012	6	21990.05
2013	7	24377.23
2014	8	26764.42

Trend analysis of total investment of SBI

(Rs. In millions)

Year (t)	**Total Investment (Y)**	**X = t-2006**	**X^2**	**XY**	**Y_c = a + bx**
2004	1907.52	-2	4	-3815.04	101.65
2005	2607.68	-1	1	-2607.68	2326.55

2006	3758.98	0	0	0	4551.45
2007	2659.45	1	1	2659.45	6776.35
2008	3088.89	2	4	6177.78	9001.25
2009	13286.19	3	9	39858.57	11226.15
Total	27308.71		19	42273.08	

$$a \text{ X } \frac{y}{n} \text{ X } \frac{27308.71}{6} \text{ X } 4551.45 \qquad b \text{ X } \frac{xy}{x^2} \text{ X } \frac{42273.08}{19} \text{ X } 2224.90$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	13451.05
2011	5	15675.95
2012	6	17900.85
2013	7	20125.74
2014	8	22350.64

Appendix:-4

Trend analysis of Net Profit of BOK

(Rs. In millions)

Year (t)	Net Profit (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	152.67	-2	4	-305.34	45.06
2005	232.15	-1	1	-232.15	258.71
2006	350.54	0	0	0	472.35
2007	501.40	1	1	501.40	686.00
2008	696.73	2	4	1393.46	899.64
2009	900.62	3	9	2701.86	1113.28
Total	2834.11		19	4059.23	

$$a \text{ X} \frac{y}{n} \text{ X} \frac{2834.11}{6} \text{ X} 472.35 \qquad b \text{ X} \frac{xy}{x^2} \text{ X} \frac{4059.23}{19} \text{ X } 213.64$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	1326.93
2011	5	1540.57
2012	6	1754.21
2013	7	1967.86
2014	8	2181.50

Trend analysis of Net Profit of NABIL

(Rs. In millions)

Year (t)	Net Profit (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	455.31	-2	4	-910.62	273.94
2005	520.11	-1	1	-520.11	475.48
2006	635.26	0	0	0	677.03
2007	673.96	1	1	673.96	878.57
2008	746.47	2	4	1492.94	1080.11
2009	1031.05	3	9	3093.15	1281.66
Total	4062.16		19	3829.32	

$$a \text{ X} \frac{y}{n} \text{ X} \frac{4062.16}{6} \text{ X} 677.03 \qquad b \text{ X} \frac{xy}{x^2} \text{ X} \frac{3829.32}{19} \text{ X } 201.54$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	$Y_c = a + bx$
2010	4	1483.20
2011	5	1684.74
2012	6	1886.29
2013	7	2087.83
2014	8	2289.37

Trend analysis of Net Profit of SBI

(Rs. In millions)

Year (t)	Net Profit (Y)	X = t-2006	X^2	XY	$Y_c = a + bx$
2004	60.85	-2	4	-121.70	15.67

2005	57.39	-1	1	-57.39	95.69
2006	117.00	0	0	0	175.72
2007	254.91	1	1	254.91	255.74
2008	247.77	2	4	495.54	335.76
2009	316.37	3	9	949.11	415.79
Total	1054.29		19	1520.47	

$$a \ \mathrm{X} \frac{y}{n} \mathrm{X} \frac{1054.29}{6} \mathrm{X} 175.72 \qquad b \ \mathrm{X} \frac{xy}{x^2} \mathrm{X} \frac{1520.47}{19} \mathrm{X}\ 80.02$$

Project trend values of total deposit for next five years

Year (t)	X = t-2006	Y_c = a + bx
2010	4	495.81
2011	5	575.84
2012	6	655.86
2013	7	735.89
2014	8	815.91

Appendix:-5

Coefficient of correlation between Outside assets and Net Profits of BOK

(Rs. In million)

Year	Outside Assets (X)	Net profit (Y)	X^2	Y^2	XY
2003/04	10992.62	152.67	120837694.46	23308.13	1678243.30

2004/05	14060.24	232.15	197690348.86	53893.62	3264084.72
2005/06	18379.08	350.54	337790581.65	122878.29	6442602.70
2006/07	23792.11	501.40	566064498.25	251401.96	11929363.95
2007/08	33870.68	696.73	1147222963.66	485432.69	23598718.88
2008/09	43641.02	900.62	1904538626.64	811116.38	39303975.43
Total	144735.75	2834.11	4274144713.52	1748031.08	86216988.98

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 86216988.98) - (144735.75 \times 2834.75)}{\sqrt{(6 \times 4274144713.52) - (144735.75)^2}\sqrt{(6 \times 1748031.08) - (2834.11)^2}} = 0.997264959$$

Coefficient of Determination (r^2) = 0.997264959 × 0.997264959 = 0.994537399

$$\Pr obable(P.Er) = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-0.994537399}{\sqrt{6}} = 0.001504201$$

6 (P.Er) = 0.009025205

Appendix:-6

Coefficient of correlation between Outside assets and Net Profits of NABIL

(Rs. In million)

Year	Outside	Net profit (Y)	X^2	Y^2	XY

	Assets (X)				
2003/04	14025.94	455.31	196726992.88	207307.19	6386150.74
2004/05	14861.70	520.11	220870126.89	270514.41	7729718.79
2005/06	19101.08	635.26	364851257.17	403555.27	12134152.08
2006/07	24491.09	673.96	599813489.39	454222.08	16506015.02
2007/08	31304.84	746.47	979993007.43	557217.46	23368123.91
2008/09	38416.32	1031.05	1475813642.34	1063064.10	39609146.74
Total	142200.97	4062.16	3838068516.10	2955880.52	105733307.28

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 105733307.28) - (142200.97 \times 4062.16)}{\sqrt{(6 \times 3838068516.10) - (142200.97)^2}\sqrt{(6 \times 2955880.52) - (4062.16)^2}} = 0.964253895$$

Coefficient of Determination (r^2) =0.964253895× 0.964253895= 0.929785574

$$\Pr obable\ (P.Er) = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-0.929785574}{\sqrt{6}} = 0.01933448$$

6 (P.Er) = 0.116006929

Appendix:-7

Coefficient of correlation between Outside assets and Net Profits of SBI

(Rs. In million)

Year	Outside Assets (X)	Net profit (Y)	X^2	Y^2	XY
2003/04	7051.18	60.85	49719139.39	3702.72	429064.30
2004/05	8821.56	57.39	77819920.83	3293.62	506269.33
2005/06	11385.72	117.00	129634619.92	13689.00	1332129.24
2006/07	12119.91	254.91	146892218.41	64979.11	3089486.26
2007/08	15202.59	247.77	231118742.71	61389.97	3766745.72
2008/09	28417.93	316.37	807578745.48	100089.98	8990580.51
Total	82998.89	1054.29	1442763386.75	247144.39	18114275.37

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 18114275.37) - (82998.89 \times 1054.29)}{\sqrt{(6 \times 1442763386.75) - (82998.89)^2}\sqrt{(6 \times 247144.39) - (1054.29)^2}} = 0.826692348$$

Coefficient of Determination (r^2) = 0.8226692348× 0.8226692348 = 0.683420

6 (P.Er) = 0.523047

Appendix:-8

Coefficient of correlation between total deposit and Net Profits of BOK

(Rs. In million)

Year	Total deposit X	Net profit Y	X^2	Y^2	XY
2003/04	11524.68	152.67	132818249.10	23308.13	1759472.90
2004/05	14254.58	232.15	203193050..98	53893.62	3309200.75
2005/06	18927.31	350.54	358243063.84	122878.29	6634779.25
2006/07	24488.86	501.40	599704264.10	251401.96	12278714.40
2007/08	34451.73	696.73	1186921699.99	485432.69	24003553.84
2008/09	46698.10	900.62	2180712543.61	811116.38	42057242.82
Total	150345.26	2834.11	4661592871.62	1748031.08	90042963.96

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 90042963.96) - (150345.26 \times 2834.11)}{\sqrt{(6 \times 4661592871.62) - (150345.26)^2}\sqrt{(6 \times 1748031.08) - (2834.11)^2}} = 0.994466282$$

Coefficient of Determination (r^2) = 0.994466282 × 0.994466282 = 0.988963187

$$\Pr obable(P.Er) = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-0.988963187}{\sqrt{6}} = 0.003039$$

6 (P.Er) = 0.018234

Appendix:-9

Coefficient of correlation between total deposit and Net Profits of NABIL

(Rs. In million)

Year	Total deposit X	Net profit Y	X^2	Y^2	XY
2003/04	14119.03	455.31	199347008.1014	207307.19	6428535.55
2004/05	14586.67	520.11	212770941.69	270514.41	7586672.93
2005/06	19347.40	635.26	374321886.76	403555.27	12290629.32
2006/07	23342.29	673.96	544862502.44	454222.08	15731769.77
2007/08	31915.05	746.47	1018570417.50	557217.46	23823627.37
2008/09	37348.26	1031.05	1394892525.03	1063064.10	38507923.47
Total	140658.70	4062.16	3744765280.56	2955880.52	104369158.42

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 104369158.42) - (140658.70 \times 4062.16)}{\sqrt{(6 \times 3744765280.56) - (140658.70)^2}\sqrt{(6 \times 2955880.52) - (4062.16)^2}} = 0.952842935$$

Coefficient of Determination (r^2) = 0.952842935 × 0.952842935 = 0.907909659

$$\text{Probable}(P.Er) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - 0.907909659}{\sqrt{6}} = 0.025358316$$

6 (P.Er) = 0.152149896

Appendix:-10

Coefficient of correlation between total deposit and Net Profits of SBI

(Rs. In million)

Year	Total deposit X	Net profit Y	X^2	Y^2	XY
2003/04	7198.32	60.85	51815810.82	3702.72	438017.77
2004/05	8654.77	57.39	74905043.75	3293.62	496697.25
2005/06	11002.04	117.00	121044884.16	13689.00	1287238.68
2006/07	11445.29	254.91	130994663.18	64979.11	2917518.87
2007/08	13715.40	247.77	188112197.16	61389.97	3398264.66
2008/09	27957.22	316.37	781606150.13	100089.98	8844825.69
Total	79973.04	1054.29	1348478749.21	247144.39	17382562.93

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 17382562.93) - (79973.04 \times 1054.29)}{\sqrt{(6 \times 1348478749.21) - (79973.04)^2}\sqrt{(6 \times 247144.39) - (1054.29)^2}} = 0.796369651$$

Coefficient of Determination (r^2) = 0.796369651 × 0.796369651 = 0.634204622

$$\Pr obable(P.Er) = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-0.634204622}{\sqrt{6}} = 0.100726685$$

6 (P.Er) = 0.604360112

Appendix:-11

Coefficient of correlation between Total Deposit and Interest Earned of BOK

(Rs. In million)

Year	Total Deposit (X)	Interest Earned (Y)	X^2	Y^2	XY
2003/04	11524.68	731.40	132818249.10	534945.96	8429150.95

2004/05	14254.58	886.80	203193050..98	786414.24	12640961.54
2005/06	18927.31	1172.75	358243063.84	1375342.56	22197002.80
2006/07	24488.86	1584.99	599704264.10	2512193.30	38814598.21
2007/08	34451.73	2194.28	1186921699.99	4814864.72	75596742.10
2008/09	46698.10	3267.95	2180712543.61	10679497.20	152607055.90
Total	150345.26	9838.17	4661592871.62	20703257.98	310285511.51

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - \left(\sum x\right)^2}\sqrt{n\sum y^2 - \left(\sum y\right)^2}} = \frac{(6 \times 310285511.51) - (150345.26 \times 9838.17)}{\sqrt{(6 \times 4661592871.62) - 150345.26^2}\sqrt{(6 \times 20703257.98) - (9838.17)^2}} = 0.997246044$$

Coefficient of Determination (r^2) = 0.997246044 × 0.997246044 = 0.994499672

$$\text{Probable}(P.Er) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - 0.994499672}{\sqrt{6}} = 0.001514589$$

6 (P.Er) = 0.009087536

Appendix:-12

Coefficient of correlation between Total Deposit and Interest Earned of NABIL

(Rs. In million)

Year	Total Deposit (X)	Interest Earned (Y)	X^2	Y^2	XY
2003/04	14119.03	1001.61	199347008.1014	1003222.59	14141761.64
2004/05	14586.67	1068.75	212770941.69	1142226.56	15589503.56
2005/06	19347.40	1310.00	374321886.76	1716100.00	25345094.00
2006/07	23342.29	1587.76	544862502.44	2520981.82	37061954.37
2007/08	31915.05	1978.70	1018570417.50	3915253.69	63150309.44
2008/09	37348.26	2798.49	1394892525.03	7831546.28	104518732.13
Total	140658.70	9745.31	3744765280.56	18129330.94	259807355.13

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 259807355.13) - (140658.70 \times 9745.31)}{\sqrt{(6 \times 3744765280.56) - (140658.70)^2}\sqrt{(6 \times 18129330.94) - (9745.31)^2}} = 0.977148108$$

Coefficient of Determination (r^2) =0.977148108× 0.977148108= 0.954818426

$$\text{Probable } (P.Er) = 0.6745 \times \frac{1-r^2}{\sqrt{n}} = 0.6745 \times \frac{1-0.954818426}{\sqrt{6}} = 0.01244135$$

6 (P.Er) = 0.074648131

Appendix:-13

Coefficient of correlation between Total Deposit and Interest Earned of SBI

(Rs. In million)

Year	Total Deposit (X)	Interest Earned (Y)	X^2	Y^2	XY
2003/04	7198.32	493.60	51815810.82	243640.96	3553090.75
2004/05	8654.77	578.37	74905043.75	334511.86	5005659.32
2005/06	11002.04	708.72	121044884.16	502284.04	7797365.79
2006/07	11445.29	831.11	130994663.18	690743.83	9512294.97
2007/08	13715.40	970.51	188112197.16	941889.66	13310932.85
2008/09	27957.22	1460.45	781606150.13	2132914.20	40830121.95
Total	79973.04	5042.76	1348478749.21	4845984.55	80009465.64

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 80009465.64) - (79973.04 \times 5042.76)}{\sqrt{(6 \times 1348478749.21) - (79973.04)^2}\sqrt{(6 \times 4845984.55) - (5042.76)^2}} = 0.97646595$$

Coefficient of Determination (r^2) = 0.97646595 × 0.97646595 = 0.953485752

6 (P.Er) = 0.076849949

Appendix:-14

Coefficient of correlation between Loans & Advance and Interest Paid of BOK

(Rs. In million)

Year	Loans &Advance (X)	Interest Paid (Y)	X^2	Y^2	XY
2003/04	7130.13	326.20	50838753.82	106406.44	2325848.41
2004/05	10126.06	354.55	102537091.10	125705.70	3590194.57
2005/06	12776.21	490.95	163231542.00	241031.90	6272480.30
2006/07	17286.43	685.53	298820662.10	469951.38	11850366.36
2007/08	26996.65	992.16	728819111.20	984381.46	26784996.26
2008/09	36241.21	1686.98	1313425302.00	2845901.52	61138196.45
Total	110556.69	4536.37	2657672463.00	4773378.41	111962082.35

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - \left(\sum x\right)^2}\sqrt{n\sum y^2 - \left(\sum y\right)^2}} = \frac{6 \times 111962082.35 - 110556.69 \times 4536.37}{\sqrt{6 \times 2657672463 - (110556.69)^2}\sqrt{6 \times 4773378.41 - (4536.37)^2}} = 0.9826654$$

Coefficient of Determination (r^2) = 0.9826654 × 0.9826654 = 0.9656313

$$\text{Probable}(P.Er) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - 0.9656313}{\sqrt{6}} = 0.009463884$$

6 (P.Er) = 0.056783307

Appendix:-15

Coefficient of correlation between Loans & Advance and Interest Paid of NABIL

(Rs. In million)

Year	Loans &Advance (X)	Interest Paid (Y)	X^2	Y^2	XY
2003/04	8189.99	282.95	67075936.20	80060.70	2317357.67
2004/05	10586.17	243.54	112066995.30	59311.73	2578155.84
2005/06	12922.54	357.16	166992040.10	127563.26	4615414.39
2006/07	15545.78	555.71	241671275.80	308813.60	8638945.40
2007/08	21365.06	758.44	456465788.80	575231.23	16204116.11
2008/09	27589.93	1153.28	761204237.40	1330054.76	31818914.47
Total	96199.47	3351.08	1805476274.00	2481035.29	66172903.88

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 66172903.88) - (96199.47 \times 3351.08)}{\sqrt{(6 \times 1805476274) - (142200.97)^2}\sqrt{(6 \times 2481035.292) - (3351.08)^2}} = 0.982794148$$

Coefficient of Determination (r^2) =0.982794148× 0.982794148= 0.965884337

$$\Pr obable\ (P.Er)\ \mathrm{X}\, 0.6745\ |\ \frac{1\,\mathrm{Z}\, r^2}{\sqrt{n}}\ \mathrm{X}\, 0.6745\ |\ \frac{1\,\mathrm{Z}\, 0.965884337}{\sqrt{6}}\ \mathrm{X}\, 0.009394207$$

6 (P.Er) = 0.056365244

Appendix:-16

Coefficient of correlation between Loans & Advance and Interest Paid of SBI

(Rs. In million)

Year	Loans &Advance (X)	Interest Paid (Y)	X^2	Y^2	XY
2003/04	5143.66	255.92	26457238.20	65495.05	1316365.47
2004/05	6213.88	258.43	38612304.65	66786.06	1605853.01
2005/06	7626.74	334.77	58167163.03	112070.95	2553203.75
2006/07	9460.45	412.26	89500114.20	169958.31	3900165.12
2007/08	12113.70	454.92	146741727.70	206952.21	5510764.40
2008/09	15131.75	824.70	228969858.10	680130.09	12479154.23
Total	55690.18	2541.00	588448405.80	1301392.67	27365505.97

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 27365505.97) - (55690.18 \times 2541)}{\sqrt{(6 \times 588448405.80) - (55690.18)^2}\sqrt{(6 \times 1301392.67) - (2541)^2}} = 0.941697602$$

Coefficient of Determination (r^2) = 0.941697602 × 0.941697602 = 0.886794374

6 (P.Er) = 0.187036165

Appendix:-17

Coefficient of correlation between Working Fund and Net Profit of BOK

(Rs. In million)

Year	Working Fund (X)	Net Profit (Y)	X^2	Y^2	XY
2003/04	13225.49	152.67	175708015.14	23308.13	2023715.66
2004/05	16274.06	232.15	264845028.88	53893.62	3778023.03
2005/06	21330.14	350.54	454974872.42	122878.29	7477067.28
2006/07	27590.85	501.40	761255003.72	251401.96	13834052.19
2007/08	38873.31	696.73	1511134230.36	485432.69	27084201.28

2008/09	53010.81	900.62	2810145977.86	811116.38	47742595.70
Total	170334.66	2834.11	5978063127.38	1748031.08	101939655.13

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - \left(\sum x\right)^2}\sqrt{n\sum y^2 - \left(\sum y\right)^2}} = \frac{(6 \times 101939655.13) - (170334.66 \times 2834.11)}{\sqrt{(6 \times 5978063127.38) - (170334.66)^2}\sqrt{(6 \times 1748031.08) - (2834.11)^2}} = 0.99338976$$

Coefficient of Determination (r^2) = 0.99338976 × 0.99338976 = 0.986823215

$$\Pr obable(P.Er) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - 0.986823215}{\sqrt{6}} = 0.003628405$$

6 (P.Er) = 0.021770431

Appendix:-18

Coefficient of correlation between Working Fund and Net Profit of NABIL

(Rs. In million)

Year	Working Fund (X)	Net Profit (Y)	X^2	Y^2	XY
2003/04	16745.49	455.31	280411435.34	207307.20	7624389.05
2004/05	17064.08	520.11	291182826.25	270514.41	8875198.65
2005/06	22329.97	635.26	498627560.20	403555.27	14185336.74
2006/07	27253.40	673.96	742747811.56	454222.08	18367701.46

2007/08	37132.76	746.47	1378841865.22	557217.46	27718491.36
2008/09	43867.40	1031.05	1924348782.76	1063064.10	45229482.77
Total	164393.10	4062.16	5116160281.33	2955880.52	122000600.03

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 122000600.03) - (164393.10 \times 4062.16)}{\sqrt{(6 \times 5116160281.33) - (164393.10)^2}\sqrt{(6 \times 2955880.52) - (4062.16)^2}} = 0.953880553$$

Coefficient of Determination (r^2) =0.953880553× 0.953880553= 0.90988811

$$\Pr obable\ (P.Er) = 0.6745 \times \frac{1 - r^2}{\sqrt{n}} = 0.6745 \times \frac{1 - 0.90988811}{\sqrt{6}} = 0.024813523$$

6 (P.Er) = 0.148881138

Appendix:-19

Coefficient of correlation between Working Fund and Net Profit of SBI

(Rs. In million)

Year	Working Fund (X)	Net Profit (Y)	X^2	Y^2	XY
2003/04	8440.41	60.85	71240520.97	3702.72	513598.95
2004/05	10345.37	57.39	107026680.44	3293.61	593720.78
2005/06	13035.84	117.00	169933124.51	13689.00	1525193.28

2006/07	13901.20	254.91	193243361.44	64979.11	3543554.89
2007/08	17187.45	247.77	295408437.50	61389.97	4258534.49
2008/09	30916.67	316.37	955840483.89	100089.98	9781106.89
Total	93826.94	1054.29	1792692608.74	247144.39	20215709.28

Coefficient of Correlation (r):

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\sqrt{n\sum y^2 - (\sum y)^2}} = \frac{(6 \times 20215709.28) - (93826.94 \times 1054.29)}{\sqrt{(6 \times 1792692608.74) - (93826.94)^2}\sqrt{(6 \times 247144.39) - (1054.29)^2}} = 0.830872341$$

Coefficient of Determination (r^2) = 0.830872341 × 0.830872341 = 0.690348847

6 (P.Er) = 0.5115997

Appendix no:-20

Regression equation between net profit on total working fund of BOK

(Rs. In million)

Year	Working fund X	Net profit Y	X^2	Y^2	XY
2003/04	13225.49	152.67	175708015.14	23308.13	2023715.66
2004/05	16274.06	232.15	264845028.88	53893.62	3778023.03
2005/06	21330.14	350.54	454974872.42	122878.29	7477067.28
2006/07	27590.85	501.40	761255003.72	251401.96	13834052.19
2007/08	38873.31	696.73	1511134230.36	485432.69	27084201.28
2008/09	53010.81	900.62	2810145977.86	811116.38	47742595.70
Total	170334.66	2834.11	5978063127.38	1748031.08	101939655.13

X= independent variable

Y= dependent variable

Let the regression equation of Y on X is

$Y = a + bx$ ……………………………………………………..…equation (i)

To find the value of a and b we have two normal equation

$\sum y = na + b\sum x$ ………………………………………………...equation (ii)

$\sum xy = a\sum x + b\sum x^2$ …………………………………………equation (iii)

Substituting the value of $n, \sum x, \sum y, \sum x^2, \sum xy$ in equation (ii) and (iii) we get,

2834.11= 6a + 170334.66 b………………………………………..equation (iv)

101939655.13 = a 170334.66 + 5978063127.38b …………………..equation (v)

Now multiplying equation iv by 28389.11 then subtracting v we get

80457860.54 = 170334.66a +4835649399.55 b

-101939655.13 = _- a 170334.66 +- 5978063127.38b

-21481794.56 = -1142413727.83b

b = 0.018804

Putting the value of b in equation (iv) then we get

2834.11= 6a + 170334.66 x 0.018804

a = -61.48

Appendix no:-20

Regression equation between net profit on total working fund of NABIL

(Rs. In millions)

Year	Working fund X	Net *profit* Y	X^2	Y^2	XY
2003/04	16745.49	455.31	280411435.34	207307.20	7624389.05
2004/05	17064.08	520.11	291182826.25	270514.41	8875198.65
2005/06	22329.97	635.26	498627560.20	403555.27	14185336.74
2006/07	27253.40	673.96	742747811.56	454222.08	18367701.46

2007/08	37132.76	746.47	1378841865.22	557217.46	27718491.36
2008/09	43867.40	1031.05	1924348782.76	1063064.10	45229482.77
Total	164393.10	4062.16	5116160281.33	2955880.52	122000600.03

X= independent variable

Y= dependent variable

Let the regression equation of Y on X is

$Y \, \mathrm{X} a \, \Gamma bx$ ………………………………………………………equation (i)

To find the value of a and b we have two normal equation

$y \, \mathrm{X} na \, \Gamma b \quad x$ ………………………………………………..equation (ii)

$xy \, \mathrm{X} a \quad x \, \Gamma b \quad x^2$ ………………………………………..equation (iii)

Substituting the value of $n, \quad x, \quad y, \quad x^2, \quad xy$ in equation (ii) and (iii) we get,

4062.16 = 6a + 164393.10b…………………………………………..equation (iv)

122000600.03= 164393.10a + 5116160281.33b ………………………..equation (v)

Now multiplying equation (iv) by 27398.85 then subtracting (v) we get

111298512.52= 164393.10a +4504181887.93b

<u>-122000600.03= -164393.10a +- 5116160281.33b</u>

-10702087.50 = -611978393.40 b

b = 0.017487

Putting the value of b in equation (iv) then we get

4062.16 = 6a + 164393.10 x 0.017487

a = 197.903

Appendix no:-20

Regression equation between net profit on total working fund of SBI

(Rs. In millions)

Year	Working fund (X)	Net profit (Y)	X^2	Y^2	XY
2003/04	8440.41	60.85	71240520.97	3702.72	513598.95
2004/05	10345.37	57.39	107026680.44	3293.61	593720.78
2005/06	13035.84	117.00	169933124.51	13689.00	1525193.28
2006/07	13901.20	254.91	193243361.44	64979.11	3543554.89
2007/08	17187.45	247.77	295408437.50	61389.97	4258534.49
2008/09	30916.67	316.37	955840483.89	100089.98	9781106.89
Total	93826.94	1054.29	1792692608.74	247144.39	20215709.28

X= independent variable

Y= dependent variable

Let the regression equation of Y on X is

$Y = a + bx$ ……………………………………………………..equation (i)

To find the value of a and b we have two normal equation

$\sum y = na + b\sum x$ ………………………………………………..equation (ii)

$\sum xy = a\sum x + b\sum x^2$ ………………………………………..equation (iii)

Substituting the value of $n, \sum x, \sum y, \sum x^2, \sum xy$ in equation (ii) and (iii) we get,

1054.29 = 6a + 93826.94 b…………………………………………equation (iv)

20215709.28 = a 93826.94 + b 1792692608.74………………………equation (v)

Now multiplying equation(iv) by 93826.94 and equation (v) by 6 then subtracting (v) we get

98920804.57 = 562961.64a + 8803494669.76b

-121294255.68 = -562961.64a + 10756155652.40b

-22373451.11 = -1952660982.64b

b = 0.01146

Putting the value of b in equation (iv) then we get

1054.29 = 6a + 93826.94 x 0.01146

a = -3.4944

Appendix no:-21

Regression equation between net profit on total deposit of BOK

(Rs. In million)

Year	Total deposit X	Net profit Y	X^2	Y^2	XY
2003/04	11524.68	152.67	132818249.10	23308.13	1759472.90
2004/05	14254.58	232.15	203193050..98	53893.62	3309200.75
2005/06	18927.31	350.54	358243063.84	122878.29	6634779.25
2006/07	24488.86	501.40	599704264.10	251401.96	12278714.40
2007/08	34451.73	696.73	1186921699.99	485432.69	24003553.84
2008/09	46698.10	900.62	2180712543.61	811116.38	42057242.82
Total	150345.26	2834.11	4661592871.62	1748031.08	90042963.96

X= independent variable

Y= dependent variable

Let the regression equation of Y on X is

$Y = a + bx$ ……………………………………………………equation (i)

To find the value of a and b we have two normal equation

$\sum y = na + b\sum x$ ………………………………………………..equation (ii)

$\sum xy = a\sum x + b\sum x^2$ ………………………………………equation (iii)

Substituting the value of $n, \sum x, \sum y, \sum x^2, \sum xy$ in equation (ii) and (iii) we get

2834.11 = 6a + 150345.26b…………………………………………..equation (iv)

90042963.96= 150345.26a + 4661592871.62b ……………………….equation (v)

Now multiplying equation (iv) by 150345.26 and equation(v) by 6 then subtracting (v) we get

426095004.82= 902071.56a +2260369720.44 b

-540257783.76= -902071.56a +- 27969557229.70b

-114162778.94 = -25709187509.30.b

b = 0.00444

Putting the value of b in equation (iv) then we get

2834.11 = 6a + 150345.26 x 0.00444

a = **361.096**

Appendix no:-21

Regression equation between net profit on total deposit of NABIL

(Rs. In million)

Year	Total deposit X	Net profit Y	X^2	Y^2	XY
2003/04	14119.03	455.31	199347008.1014	207307.19	6428535.55
2004/05	14586.67	520.11	212770941.69	270514.41	7586672.93
2005/06	19347.40	635.26	374321886.76	403555.27	12290629.32
2006/07	23342.29	673.96	544862502.44	454222.08	15731769.77
2007/08	31915.05	746.47	1018570417.50	557217.46	23823627.37
2008/09	37348.26	1031.05	1394892525.03	1063064.10	38507923.47
Total	140658.70	4062.16	3744765280.56	2955880.52	104369158.42

X= independent variable

Y= dependent variable

Let the regression equation of Y on X is

$Y = a + bx$ ………………………………………………….…equation (i)

To find the value of a and b we have two normal equation

$\sum y = na + b \sum x$ ………………………………………………..equation (ii)

$\sum xy = a \sum x + b \sum x^2$ ………………………………………….equation (iii)

Substituting the value of $n, \sum x, \sum y, \sum x^2, \sum xy$ in equation (ii) and (iii) we get

4062.16 = 6a + 140658.70 b………………………………………..equation (iv)

104369158.42 = 140658.70 a+3744765280.56.b ……………………….equation (v)

Now multiplying equation (iv) by 140658.70 and equation (v) by 6 then subtracting (v) we get

571378144.79 = 843952.20a + 19784869885.60 b

-626214950.52 = -843952.20a +- 22468591683.30b

-54836805.73 = -2683721797.7

b = 0.02043

Putting the value of b in equation (iv) then we get

4062.16 = 6a + 140658.70 x 0.02043

a = 198.084

Appendix no:-21

Regression equation between net profit on total deposit of SBI

(Rs. In million)

Year	Total deposit X	Net profit Y	X^2	Y^2	XY
2003/04	7198.32	60.85	51815810.82	3702.72	438017.77
2004/05	8654.77	57.39	74905043.75	3293.62	496697.25
2005/06	11002.04	117.00	121044884.16	13689.00	1287238.68
2006/07	11445.29	254.91	130994663.18	64979.11	2917518.87
2007/08	13715.40	247.77	188112197.16	61389.97	3398264.66
2008/09	27957.22	316.37	781606150.13	100089.98	8844825.69
Total	79973.04	1054.29	1348478749.21	247144.39	17382562.93

X= independent variable

Y= dependent variable

Let the regression equation of Y on X is

$Y = a + bx$ ……………………………………………………..equation (i)

To find the value of a and b we have two normal equation

$\sum y = na + b \sum x$ ………………………………………………..equation (ii)

$\sum xy = a \sum x + b \sum x^2$ ………………………………………..equation (iii)

Substituting the value of $n, \sum x, \sum y, \sum x^2, \sum xy$ in equation (ii) and (iii) we get,

1054.29 = 6a +79973.04 b………………………………………..equation (iv)

17382562.93=79973.04 a +1348478749.21 b ……………………….equation (v)

Now multiplying equation (iv) by 13328.84 then subtracting (v) we get

$$14052462.73 = 79973.04a + 1065947854.47\ b$$

$$\underline{-17382562.93 = -79973.04\ a\ + -1348478749.21\ b}$$

$$-3330100.20 = -282530894.74b$$

$$b = 0.01179$$

Putting the value of b in equation (iv) then we get

$$1054.29 = 6a + 79973.04 \times 0.01179$$

$$a = 18.568$$