

Chapter-1

Introduction

1.1. Background of the Study

Financial analysis planning and forecasting is one of the important aspects of financial management. Financing, investment & dividend decision of the firms are made on the basis of financial analysis planning & forecasting. Financial analysis is the process of identifying the financial strength & weakness of the firm by properly establishing the relationship between the items of the balance sheet & the profit & loss account.

The financial planning involves analyzing the financial flows of a company, forecasting the consequences of various investments, financing & dividend decision & weighting the effect of various alternatives. The idea is to determine where the firm has been, where it is now, & where it is going-not only the most likely course of events but deviations from the most likely outcome.

Financial forecasting is a process of estimating future financial requirement of the firm. It predicts how much internal & external financing is required to support sales & production or purchasing fixed & current assets

Financial analysis can be undertaken by management of the firm or by parties outside the firm, viz., owners, creditors, investors, & others. The nature of analysis will differ depending on the purpose of the analyst.

The financial statements are prepared from the accounting records maintained by the firm. The generally accepted accounting principle & procedure are followed to prepare these statements.

1.2. Historical Development of the Commercial Banks in Nepal

In Nepal, efforts are being made to accelerate the pace of economic development after the adaptation of first five year plan in 1956, Nepal Bank Ltd, the first and oldest bank in modern banking history of Nepal, was established in 1937 A.D.(30 Kartik, 1994 B.S) , with 51% government equity. Nepal Bank Ltd also used to function as central bank of the country up to 2012 B.S. On 2013 B.S, Nepal Rastra Bank was established as central of Nepal under the Nepal Rastra Bank Act 2012. Government initiated some corrective measures to stabilize the economy with the assistance of IMF standby arrangement in mid 1980s. In FY 1985, in subsequently embarked upon the structured adjustment program encompassing measures to increase domestic resource mobilization, strengthen financial sectors, and liberalize industrial and trade policies.¹ Since then several financial institutions and commercial joint venture banks have been established in the process of development and liberalization policy for the economic development of the nation.

In the early 1980s, government permitted the establishment of foreign joint venture banks in Nepal. As a result, three joint venture banks; Nabil, NGLB, and NIBL came into existence by the end of the first half of the 1980s. Henceforth, a number of joint venture banks came into existence. The basic objective to allow foreign joint venture banks to operate in Nepal was mainly to develop the banking sector, to create

¹ World Bank, “*Trends in Developing Economy*”, 1992, p.381

healthy competition for the further development of already existing old banks, and to introduce new technological efficiency in the banking sectors. Similarly, the private sector also took initiative to establish the commercial banks in Nepal. Thus, the Nepalese investors have also established several commercial banks in their own initiative. At present, there are 27 commercial banks operating & many more other types of financial institutions.

1.3. Statement of the Problem

Nepal is a least developing country of the world. The economic development of the nation is in very slow pace. Only after the restoration of democracy in the early 90's, the country adopted the economic liberalization policy. The foreign investment in the country entered during these periods. Therefore, there is a lack of huge source of capital for the development activities in the country. The country is regularly facing the deficit trade balance & budget. But in recent years the banking industry have been flourishing & the activities in the secondary market of the country is also seen increasing due the capital increment in the commercial banks as directed by central bank. The study tries to analyses on performance analysis (ratio analysis) of the commercial banks of Nepal.

The study is also focused on the liquidity; efficiency and profitability position of the respective "A" class commercial banks operating within Nepal. But following question arises:

- Are the CBs financial healths in good situation?
- Are the shareholders of these CBs in safe side?
- Are the CBS are efficiently utilizing its assets or not?

1.4. Objectives of the Study

The main objective of the study is to analyze financial soundness of the commercial banks of Nepal. In addition, it also attempts to find out the relationship between the major indicators of the commercial banks of Nepal.

1.5. Limitations of the Study

The study has certain limitations which have been pointed below:

- The study is focused on the ratio analysis of the “A” class commercial banks of Nepal.
- The study has ignored the price-level change in the amount taken for the financial calculation.
- The study is completely based on the secondary data.
- It is difficult to decide on proper basis of comparison.
- The data used in the study are completely historical and limited for only five F/Y from F/Y 2060/61 to F/Y 2064/65.

1.6. Organization of the Study

The whole study will be divided into five chapters.

First chapter deals with introduction, which includes general background, focus of the study, statement of the problem, objective of the study, significance of the study and limitations of the study.

Second chapter deals with the review of available literature. It includes conceptual/theoretical review and review of related studies.

Third chapter explains the research methodology used in the study, which includes research design, population and sample, source of data, data collection techniques and limitation of the methodology.

Fourth chapter deals with data presentation and analysis, which includes the presentation and analysis of the data and major findings of the study.

Ultimately, fifth chapter discusses summary of main findings, conclusions and recommendations

Chapter-2

Review of Literature

2.1. Theoretical Framework

Every financial institution is established with certain objectives & vision. They have certain motto; mainly the profit maximization or wealth maximization is the major objective of the every organization. To evaluate the performance of the organization for the certain period of period, the manager tries to find out the performance of the organization. For this purposes, the ratio analysis is the main tool for the measurement of the performance of the organization.

2.1.1. Financial Analysis

Financial analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account. Financial analysis can be undertaken by management of the firm or by parties outside the firm, viz., owners, creditors, investors, and others. The nature of analysis will differ depending on the purpose of the analyst. **(Pandey, 1980:424)**

Through financial analysis, various stakeholders of the company try to seek answers to the following questions:

1. Is the firm in a position to meet its current obligations?
2. What sources of long-term finance are employed by the firm and what is the relationship between them? Is there any danger to the solvency of the firm due to the employment of excessive debt?
3. How efficiently does the firm use its assets?

4. Are the earnings of the firm adequate?
5. Do investors consider the firm profitable and safe for the purpose of investing their money in the shares of the firms?

Financial analysis may not provide exact answers to these questions, but it does indicate what can be expected in the future. (**Pandey, 1980:425**)

2.1.2. Users of Financial Analysis

Financial analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account. Financial analysis can be undertaken by management of the firm, or by parties outside the firm, viz. owners, creditors, investors and others. The nature of analysis will differ depending on the purpose of the analyst.

-) **Trade creditors** are interested in firm's ability to meet their claims over a very short period of time. Their analysis will, therefore, confine to the evaluation of the firm's liquidity position.
-) **Suppliers of long-term debt**, on the other hand, are concerned with the firm's long-term solvency and survival. They analyze the firm's profitability over time, its ability to generate cash to be able to pay interest and repay principal and the relationship between various sources of funds (capital structure relationships). Long-term creditors do analyze the historical financial statements, but they place more emphasis on the firm's projected, or *pro forma*, financial statements to make analysis about its future solvency and profitability.

-) **Investors**, who have invested their money in the firm's shares, are most concerned about the firm's earnings. They restore more confidence in those firms that show steady growth in earnings. As such, they concentrate on the analysis of the firm's present and future profitability. They are also interested in the firm's financial structure to the extent it influences the firm's earnings ability and risk.
-) **Management** of the firm would be interested in every aspect of the financial analysis. It is their overall responsibility to see that the resources of the firm are used most effectively and efficiently, and that the firm's financial condition is sound.
(Pandey, 2008:517)

2.1.3. Definition of Ratio Analysis

Ratio Analysis is a powerful tool of financial analysis. A ratio is defined as the indicated quotient of two mathematical expressions & as the relationship between two or more things. In another words, the relationship between two accounting figures, expressed mathematically, is known as a financial ratio (or simply as a ratio). This ratio helps the analyst to make a qualitative judgment about the firm's financial position & performance. For the financial analyst, a ratio is a yard-stick for evaluating the financial position & performance of a firm.

The ratio analysis involves comparison for a useful interpretation of the financial statements. A single ratio in itself does not indicate favorable or unfavorable condition. It should be compared with some standards. Standards of comparison may consist of:

-) Ratios calculated from the past financial statements of the same firm.
-) Ratios developed using the projected or pro-forma financial statement of the same firm.
-) Ratios of some selected firms, especially the most progressive & successful, at the same point in time.
-) Ratios of the industry to which the firm belongs.

The easiest way to evaluate the performance of a firm is to compare its present ratios with the past ratios. When financial ratios over a period of time are compared, it gives an indication of the direction of change & reflects whether the firm's financial position & performance has improved, deteriorated or remained constant over time. (**Pandey, 1980:425-426**)

2.1.4. Types of Financial Ratio

Financial ratio can be calculated from different points of view of liquidity, profitability, coverage & market value ratio, etc. No ratio gives us sufficient information by which to judge the financial condition & performance of the firm.

Several ratios calculated from the accounting data, can be grouped into various classes according to the financial activity or function to be evaluated. As stated earlier, the parties interested in financial analysis are short-and long-term creditors, owners and management. Short-term creditors' main interest is in the liquidity position or the short-term solvency of the firm. Long-term creditors, on the other hand, are more interested in the long-term solvency and profitability of the firm. Similarly, owners concentrate on the firm's profitability and financial condition. Management is interested in evaluating every aspect of the

firm's performance. They have to protect the interests of all parties and see that the firm grows profitably. In view of the requirements of the various users of ratios, we may classify them into following:

-) Liquidity Ratio
-) Leverage Ratio
-) Activity Ratio
-) Profitability Ratio(*Pandey, 2008:518-19*)

2.1.4.1. Liquidity Ratio:

It is extremely essential for a firm to be able to meet its obligations as they become due. Liquidity ratios measure the ability of the firm to meet its current obligations (liabilities). In fact, analysis of liquidity needs the preparation of cash budgets and cash and fund flow statements; but liquidity ratios, by establishing a relationship between cash and other current assets to current obligations, provide a quick measure of liquidity. A firm should ensure that it does not suffer from lack of liquidity, and also that it does not have excess liquidity. The failure of a company to meet its obligations due to lack of sufficient liquidity, and also that it does not have excess liquidity. The failure of a company to meet its obligations due to lack of sufficient liquidity, will result in a poor credit worthiness, loss of creditors' confidence, or even in legal tangles resulting in the closure of the company. A very high degree of liquidity is also bad; idle assets earn nothing. The firm's funds will be unnecessarily tied up in current assets. Therefore, it is necessary to strike a proper balance between high liquidity and lack of liquidity. (*Pandey, 2008:520*)

Liquidity ratios are used to judge a firm's ability to meet short-term obligations. From them, much insight can be obtained into the present solvency of a company and its ability to remain solvent in the event of adversities. Essentially, it is wished to compare short-term obligations with the short-term resources available to meet these obligations. (*Van Horne, 2005:369*)

2.1.4.1.1. Current Ratio

Current ratio is calculated by dividing current assets by current liabilities:

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current assets include cash and those assets that can be converted into cash within a year, such as marketable securities, debtors and inventories. Prepaid expenses are also included in current assets as they represent the payments that will not be made by the firm in the future. All obligations maturing within a year are included in current liabilities. Current liabilities include creditors, bills payable, accrued expenses, short-term bank loan, income-tax liability and long-term debt maturing in the current year.

The current ratio is a measure of the firm's short-term solvency. It indicates the availability of current assets in rupees for every one rupee of current liability. A ratio of greater than one means that the firm has more current assets than current claims against them. As a conventional rule, a current ratio of 2 to 1 or more is considered satisfactory. (*Pandey, 2008:520*)

2.1.4.1.2. Quick Ratio

Quick ratio, also called acid-test ratio, establishes a relationship between quick or liquid assets and current liabilities. An asset is liquid if it can be converted into cash immediately or reasonably soon without a loss of value. Cash is the most liquid asset. Other assets that are considered to be relatively liquid and included in quick assets are debtors and bills receivables and marketable securities (temporary quoted investments). Inventories are considered to be less liquid. Inventories normally require some time for realizing into cash; their value also has a tendency to fluctuate. The quick ratio is found out by dividing quick assets by current liabilities.

$$\text{Quick Ratio} = \frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$$

Generally, a quick ratio of 1 to 1 is considered to represent a satisfactory current financial condition. Although quick ratio is a more penetrating test of liquidity than the current ratio, yet it should be used cautiously. A quick ratio of 1 to 1 or more does not necessarily imply sound liquidity position. It should be remembered that all debtors may not be liquid, and cash may be immediately needed to pay operating expenses. It should also be noted that inventories are not absolutely non-liquid. **(Pandey, 2008:520-521)**

2.1.4.1.3. **Cash Ratio**

Since cash is the most liquid asset, a financial analyst may examine cash ratio and its equivalent to current liabilities. Trade investment or marketable securities are equivalent of cash; therefore, they may be included in the computation of cash ratio:

$$\text{Cash Ratio} = \frac{\text{Cash+Marketable securities}}{\text{Current liabilities}} \text{ (Pandey, 2008:521)}$$

2.1.4.1.4. **Cash Position Ratio**

This indicator shows the ratio between cash and bank assets. It indicates that a greater proportion of cash implies that the bank is in a stronger position to handle immediate cash needs.

$$\text{Cash Position Ratio} = \frac{\text{Cash + Deposits due from depository}}{\text{Total assets}}$$

(Singh, 2007:185)

2.1.4.1.5. **Interval Measure**

Yet another ratio, which assesses a firm's ability to meet its regular cash expenses, is the interval measure. Interval measure relates liquid assets to average daily operating cash outflows. The daily operating expenses will be equal to cost of goods sold plus selling, administrative and general expenses less depreciation (and other non-cash expenditures) divided by number of days in the year (say 360).

$$\text{Interval Measure} = \frac{\text{Current assets} - \text{Inventory}}{\text{Average daily operating expenses}}$$

(Singh, 2007:185)

2.1.4.1.6. Net Working Capital Ratio

The difference between current assets and current liabilities excluding short-term bank borrowing is called net working capital (NWC) or net current assets (NCA). NWC is sometimes used as a measure of a firm's liquidity. It is considered that, between two firms, the one having the larger NWC has the greater ability to meet its current obligations. This is not necessarily so; the measure of liquidity is a *relationship*, rather than the difference between current assets and current liabilities. NWC, however, measures the firm's potential reservoir of funds. It can be related to net assets (or capital employed):

$$\text{NWC ratio} = \frac{\text{Net working capital (NWC)}}{\text{Net assets (NA)}} \text{ (Pandey, 2008:521)}$$

2.1.4.1.7. Capacity Ratio

This ratio shows the relationship between net loans and total assets of a bank. It is really a negative liquidity indicator, because the loans and leases are often among the most illiquid assets a bank can hold. It means greater the ratio, less the bank has liquidity.

$$\text{Capacity Ratio} = \frac{\text{Net loans+leases}}{\text{Total assets}} \text{ (Pandey, 2008:521)}$$

2.1.4.1.8. Liquid Securities Indicator

This compares the most marketable securities a bank can hold with the overall size of its asset portfolio; the greater the proportion of government securities, the more liquid the bank's position tends to be.

$$\text{liquid securities indicator} = \frac{\text{Government and marketable securities}}{\text{Total assets}}$$

(Singh, 2007:185)

2.1.4.2. Leverage Ratio

The short-term creditors, like bankers and suppliers of raw material, are more concerned with the firm's current debt-paying ability. On the other hand, long-term creditors, like debenture holders, financial institutions, etc are more concerned with the firm's long-term financial strength. In fact, a firm should have a strong short-as well as long-term financial position. To judge the long-term financial position of the firm, financial leverage, or capital structure ratios are calculated. These ratios indicate mix of funds provided by owners and lenders. As a general rule, there should be an approximate mix of debt and owners' equity in financing the firm's assets.

The manner in which assets are financed has a number of implications. *First*, between debt and equity, debt is more risky from the firm's point of view. The firm has a legal obligation to pay interest to debt holders, irrespective of the profits made or losses incurred by the firm. If the firm fails to pay to debt holders in time, they can take legal action against it to get payments and in extreme cases, can force the firm into liquidation. *Second*, use of debt is advantageous for shareholders in two ways: (a) they can retain control of the firm with a

limited stake and (b) their earning will be magnified, when the firm earns a rate of return on the total capital employed higher than the interest rate on the borrowed funds. The process of magnifying the shareholders' return through the use of debt is called "financial leverage" or "financial gearing" or "trading on equity". However, leverage can work in opposite direction as well. If the cost of debt is higher than the firm's overall rate of return, the earnings of shareholders will be reduced. In addition, there is threat of insolvency. If the firm is actually liquidated for non-payment of debt-holders' dues, the worst sufferers will be shareholders-the residual owners. Thus, use of debt magnifies the shareholders' earnings as well as increases their risk. *Third*, a highly debt-burdened firm will find difficulty in raising funds from creditors and owners in future. Creditors treat the owners' equity as a margin of safety; if the equity base is thin, the creditors risk will be high. Thus, leverage ratios are calculated to measure the financial risk and the firm's ability of using debt to shareholders' advantage.

Leverage ratios may be calculated from the balance sheet items to determine the proportion of debt in total financing. Many variations of these ratios exist; but all these ratios indicate the same thing-the extent to which the firm has relied on debt in financing assets. Leverage ratios are also computed from the profit and loss items by determining the extent to which operating profits are sufficient to cover the fixed charges. **(Pandey, 2008:522)**

2.1.4.2.1. Debt Ratio

Several debt ratios may be used to analyze the long-term solvency of a firm. The firm may be interested in knowing the proportion of the interest-bearing debt

(also called funded debt) in the capital structure. It may, therefore, compute debt ratio by dividing total debt (TD) by capital employed (CE) or net assets (NA). Total debt will include short and long-term borrowings from financial institutions, debentures/bonds, deferred payment arrangements for buying capital equipments, bank borrowings, public deposits and any other interest-bearing loan. Capital employed will include total debt and net worth (NW).

$$\text{Debt Ratio} = \frac{\text{Total debt (TD)}}{\text{Total debt(TD) + Net worth(NW)}}$$

$$= \frac{\text{Total debt (TD)}}{\text{Capital employed (CE)}}$$

Note that capital employed (CE) equals net assets (NA) that consist of net fixed assets (NFA) and net current assets (NCA). Net current assets are current assets (CA) minus current liabilities (CL) *excluding interest-bearing short-term debt for working capital*.

These relationships are:

$$\text{NFA} + \text{CA} = \text{NW} + \text{TD} + \text{CL}$$

$$\text{NFA} + \text{CA} - \text{CL} = \text{NW} + \text{TD}$$

$$\text{NFA} + \text{NCA} = \text{NW} + \text{TD}$$

$$\text{NA} = \text{CE}$$

Because of the equality of capital employed and net assets, debt ratio can also be defined as total debt divide by net assets:

$$\text{Debt Ratio} = \frac{\text{Total debt(TD)}}{\text{Net Assets(NA)}} \text{ (Pandey, 2008:522)}$$

2.1.4.2.2. Debt-Equity Ratio

The relationship describing the lenders' contribution for each rupee of the owners' contribution is called debt-equity ratio. Debt-equity (DE) ratio is directly computed by dividing total debt by net worth:

$$\text{Debt – Equity Ratio} = \frac{\text{Total debt (TD)}}{\text{Net worth (NW)}} \text{ (Pandey, 2008:522)}$$

2.1.4.2.3. Capital Employed to Net Worth Ratio

There is yet another alternative way of expressing the basic relationship between debt and equity. One may want to know: How much funds are being contributed together by lenders and owners for each rupee of the owners' contribution? Calculating the ratio of capital employed or net assets to net worth can find this out:

$$\text{CE – to – NW Ratio} = \frac{\text{Capital employed (CE)}}{\text{Net worth (NW)}}$$

$$\text{or NA – to – NW Ratio} = \frac{\text{Net assets (CNA)}}{\text{Net worth (NW)}}$$

Note that CE/NW ratio is simply one plus debt-equity ratio:

$$\frac{\text{CE}}{\text{NW}} = \frac{\text{NW+TD}}{\text{NW}} = 1 + \frac{\text{TD}}{\text{NW}} \text{ (Pandey, 2008:522-523)}$$

2.1.4.3. Activity Ratio

Funds of creditors and owners are invested in various assets to generate sales and profits. The better the management of assets, the larger the amount of sales. Activity ratios are employed to evaluate

the efficiency with which the firm manages and utilizes its assets. These ratios are also called turnover ratios because they indicate the speed with which assets are being converted or turned over into sales. Activity ratios, thus, involve a relationship between sales and assets. A proper balance between sales and assets generally reflects that assets are managed well. Several activity ratios can be calculated to judge the effectiveness of asset utilization. (**Pandey, 2008:524**)

2.1.4.3.1. Inventory Turnover

Inventory turnover indicates the efficiency of the firm in producing and selling its product. It is calculated by dividing the cost of goods sold by the average inventory:

$$\text{Inventory Turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

The average inventory is the average of opening and closing balance of inventory. (**Pandey, 2008:524**)

2.1.4.3.2. Debtors Turnover

A firm sells goods for cash and credit. Credit is used as a marketing tool by a number of companies. When the firm extends credits to its customers, debtors (accounts receivables) are created in the firm's accounts. Debtors are convertible into cash over a short period and, therefore, are included in current assets. The liquidity position of the firm depends on the quality of debtors to a great extent. Financial analysts apply three ratios to judge the quality or liquidity of debtors:

$$\text{Debtors Turnover} = \frac{\text{Credit Sales}}{\text{Average debtors}}$$

$$\text{Average collection period (ACP)} = \frac{360}{\text{Debtors turnover}} = \frac{\text{Debtors}}{\text{Sales}} \times 360$$

2.1.4.4. Assets Management (Turnover) Ratio

Assets are used to generate sales. Therefore, a firm should manage its assets efficiently to maximize sales. The relationship between sales and assets is called assets turnover. Several assets turnover ratios can be calculated. *(Pandey, 2008:527)*

2.1.4.4.1. Net Assets Turnover Ratio

The firm can compute net assets turnover by dividing sales by net assets (NA).

$$\text{Net Assets Turnover} = \frac{\text{Sales}}{\text{Net assets}}$$

It may be recalled that net assets (NA) include net fixed assets (NFA) and net current assets (NCA), that is, current assets (CA) minus current liabilities (CL). Since net assets equal capital employed, net assets turnover may also be called capital employed turnover.

Some analysts exclude intangible assets like goodwill, patents, etc., while computing the net assets turnover.

Similarly, fictitious assets, accumulated losses or deferred expenditures may also be excluded for calculating the net assets turnover ratio. (**Pandey, 2008:527**)

2.1.4.4.2. Total Assets Turnover Ratio

Some analysts like to compute the total assets turnover in addition to or instead of the net assets turnover. This ratio shows the firm's ability in generating sales from all financial resources committed to total assets. Thus,

$$\text{Total Assets Turnover} = \frac{\text{Sales}}{\text{Total assets}}$$

Total assets (TA) include net fixed assets (NFA) and current assets (CA) (TA=NFA+CA) (**Pandey, 2008:527**)

2.1.4.4.3. Fixed and Current Assets Turnover Ratio

The firm may wish to know its efficiency of utilizing fixed assets and current assets separately.

$$\text{Fixed Assets Turnover} = \frac{\text{Sales}}{\text{Net fixed assets}}$$

$$\text{Current Assets Turnover} = \frac{\text{Sales}}{\text{Current assets}} \text{ (Pandey, 2008:527-528)}$$

2.1.4.4.4. Working Capital Turnover Ratio

A firm may also like to relate net current assets (or net working capital gap) to sales. It may thus compute net working capital turnover by dividing sales by net working capital.

$$\text{Net Current Assets Turnover} = \frac{\text{Sales}}{\text{Net current assets}} \text{ (Pandey, 2008:527-528)}$$

2.1.4.5. Profitability Ratio

A company should earn profits to survive and grow over a long period of time. Profits are essential, but it would be wrong to assume that every action initiated by management of a company should be aimed at maximizing profits, irrespective of concerns for customers, employees, suppliers or social consequences. It is unfortunate that the word 'profit' is looked upon as a term of abuse since some firms always want to maximize profits at the cost of employees, customers and society. Except such infrequent cases, it is a fact that sufficient profits must be earned to sustain the operations of the business to be able to obtain funds from investors for expansion and growth and to contribute towards the social overheads for the welfare of the society.

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

Generally, two major types of profitability ratios are calculated:

-) Profitability in relation to sales
-) Profitability in relation to investment. (**Pandey, 2008:528**)

2.1.4.5.1. Gross Profit Margin

The first profitability ratio in relation to sales is the gross profit margin (or simply gross margin ratio). It is calculated by dividing the gross profit by sales.

A high gross profit margin ratio is a sign of good management and vice-versa. **(Pandey, 2008:529)**

2.4.4.5.2. Net Profit Margin

Net profit is obtained when operating expenses, interest and taxes are subtracted from the gross profit. The net profit margin ratio is measured by dividing profit after tax by sales. **(Pandey, 2008:529)**

It is the net income after-tax divided by a bank's total operating revenue. This ratio is very important to evaluate the efficiency of the management in present competitive banking market. **(Singh, 2007:109)**

$$\text{Net Profit Margin} = \frac{\text{Net profit after taxes}}{\text{Total operating revenues}}$$

2.4.4.5.3. Return on Assets

It is the ratio of a bank's net after-tax income divided by its total assets. ROA ratio is primarily an indicator of managerial efficiency. It indicates how capably the management of the bank has been converting the institution's assets into net earnings. **(Singh, 2007:109)**

$$\text{Return on Assets} = \frac{\text{Net profit after taxes}}{\text{Total Assets}}$$

2.4.4.5.4. Return on Equity

Common or ordinary shareholders are entitled to the residual profits. The rate of dividend is not fixed; the earnings may be distributed to shareholders or retained in the business. Nevertheless, the net profits after taxes represent their return. A return on shareholders' equity is calculated to see the profitability of owners' investment. The shareholders' equity or net worth will include paid-up share capital, share premium and reserves and surplus less accumulated losses. Net worth can also be found by subtracting total liabilities from total assets.

The return on equity is net profit after taxes divided by shareholders' equity which is given by net worth:

$$\text{Return on Equity} = \frac{\text{Net profit after taxes}}{\text{Net worth (Equity)}}$$

ROE indicates how well the firm has used the resources of owners. In fact, this ratio is one of the most important relationships in financial analysis. The earning of a satisfactory return is the most desirable objective of a business. The ratio of net profit to owners' equity reflects the extent to which this objective has been accomplished. This ratio is, thus, of great interest to the present as well as the prospective shareholders and also of great concern to management, which has the responsibility of maximizing the owners' welfare.

The returns on owners' equity of the company should be compared with the ratios for other similar companies and

the industry average. This will reveal the relative performance and strength of the company in attracting future investments. *(Pandey, 2008:531-532)*

2.4.4.5.5. Net Interest Margin

Net interest margin shows the interest revenue less interest expenses divided by a bank's total asset. This ratio measures how far the management has been able to achieve the objectives by close control over the bank's earning assets and the pursuit of the cheapest sources of funding. *(Singh, 2007:109)*

$$\text{Net Interest Margin} = \frac{\text{Interest income from loans and security investments} - \text{Interest expenses on deposits and other debt issued}}{\text{Total Assets}}$$

2.4.4.5.6. Return on Investment

The term investment may refer to total assets or net assets. The funds employed in net assets is known as capital employed. Net assets equal net fixed assets plus current assets minus current liabilities excluding bank loans. Alternatively, capital employed is equal to net worth plus total debt.

The conventional approach of calculating return on investment (ROI) is to divide PAT by investment. Investment represents pool of funds supplied by shareholders and lenders, while PAT represent residue income of shareholders; therefore, it is conceptually unsound to use PAT in the calculation of ROI. Also, as discussed earlier, PAT is affected by capital structure. It

is, therefore more appropriate to use one of the following measures of ROI for comparing the operating efficiency of firms:

$$\text{ROI} = \text{ROTA} = \frac{\text{EBIT}(1 - T)}{\text{Total Assets}} = \frac{\text{EBIT}(1 - T)}{\text{TA}}$$
$$\text{ROI} = \text{RONA} = \frac{\text{EBIT}(1 - T)}{\text{Net Assets}} = \frac{\text{EBIT}(1 - T)}{\text{NA}}$$

Where ROTA and RONA are respectively return on total assets and return on net assets. RONA is equivalent of return on capital employed, i.e. ROCE.

Since taxes are not controlled by management, and since firm's opportunities for availing tax incentives differ, it may be more prudent to use before-tax measure of ROI. Thus, the before-tax ratios are:

$$\text{ROI} = \text{ROTA} = \frac{\text{EBIT}}{\text{TA}}$$
$$\text{ROI} = \text{ROTA} = \frac{\text{EBIT}}{\text{NA}}$$

Many companies use EBIDTA (instead of EBIT) to calculate ROI. (*Pandey, 2008:531*)

2.1.4.6 Coverage Ratio

Coverage ratio is another type of leverage ratio which is calculated from the information of profit and loss account and income statement.

2.1.4.6.1. Interest Coverage

Debt ratios described above are static in nature, and fail to indicate the firm's ability to meet interest (and other fixed-charges) obligations. The interest coverage ratio or

the times-interest-earned is used to test the firm's debt-servicing capacity. The interest coverage ratio is computed by dividing earnings before interest and taxes (EBIT) by interest charges:

$$\text{Interest Coverage} = \frac{\text{EBIT}}{\text{Interest}}$$

The interest coverage ratio shows the number of times the interest charges are covered by funds that are ordinarily available for their payment. Since taxes are computed after interest, interest coverage is calculated in relation to before tax earnings. Depreciation is a non-cash item. Therefore, funds equal to depreciation are also available to pay interest charges. We can thus calculate the interest average ratio as earnings before interest taxes, depreciation and amortization (EBITDA) divided by interest:

$$\text{Interest Coverage} = \frac{\text{EBITDA}}{\text{Interest}}$$

This ratio indicates the extent to which earnings may fall without causing any embarrassment to the firm regarding the payment of the interest charges. A higher ratio is desirable; but too high a ratio indicates that the firm is very conservative in using debt, and then it is not using credit to the best advantage of shareholders. A lower ratio indicates excessive use of debt, or inefficient operations. The firm should make efforts to improve the operating efficiency, or to retire debt to have a comfortable coverage ratio.

The limitation of the interest coverage ratio is that it does not consider repayment of loan. Therefore, a more inclusive ratio-the fixed-charges coverage- is calculated. This ratio is calculated by dividing EBITDA by interest plus principal repayment:

$$\text{Fixed – charges coverage ratio} = \frac{\text{EBITDA}}{\text{Interest} + \frac{\text{Loan repayment}}{1 - \text{Tax rate}}}$$

In above equation all variables are on before-tax basis. Since only the after-tax earnings are available to repay principal, the principal repayment is converted to a before-tax basis by dividing it by 1-tax rate. Depreciation and other non-cash charges are added to the numerator to provide a coverage measure in terms of cash flow rather than earnings. The above equation can be extended to include other fixed obligations such as preference dividends and lease rentals. Thus, the fixed-charges coverage ratio will be:

$$\text{Fixed – charges coverage ratio} = \frac{\text{EBITDA}}{\text{Interest} + \text{Lease rentals} + \frac{\text{PDIV} + \text{Loan repayment}}{1 - \text{Tax rate}}}$$

It should be obvious that a high level of debt is a problem for a company only if its future cash flows (earnings being a large component) are uncertain. An analyst, therefore, may analyze the variability of the company's cash flows (or earnings) overtime. This may be done by calculating the standard deviation of yearly changes in cash flows (or earnings) relative to the average level of cash flows (or earnings). (*Pandey, 2008:524*)

Dividend coverage ratio measure the ability of a firm to pay dividend on preference share which carry a stated rate of return.

$$\text{Dividend Coverage} = \frac{\text{EAT}}{\text{IPreference Dividend}} \text{ (Sharma, 2058:22)}$$

2.1.4.7. Valuation/Market Value Ratio

The ratios which examine the stock price relative to earning and the market value of the firm relative to the book value are the valuation ratios which reflect results of overall performance of the company. **(Pradhan, 1992:41)**

To find out the value of a firm in the market, we calculate market value ratio.

2.1.4.7.1. Earning Per Share(EPS)

The profitability of the shareholders' investment can also be measured in many other ways. One such measure is to calculate the earnings per share. The earnings per share (EPS) is calculated by dividing the profit after taxes by the total number of ordinary shares outstanding.

$$\text{EPS} = \frac{\text{Profit after tax}}{\text{Number of share outstanding}}$$

EPS calculations made over years indicate whether or not the firm's earnings power on per-share basis has changed over that period. The EPS of the company should be compared with the industry average and the earnings per share of other firms. EPS simply shows the profitability of the firm on a per-share basis; it does not reflect

how much is paid as dividend and how much is retained in the business. But as a profitability index, it is a valuable and widely used ratio. **(Pandey, 2008:532)**

2.1.4.7.2. DPS

The net profits after taxes belong to shareholders. But the income, which they really receive, is the amount of earnings distributed as cash dividends. Therefore, a large number of present and potential investors may be interested in DPS, rather than EPS. DPS is the earnings distributed to ordinary shareholders divided by the number of ordinary shares outstanding:

$$\text{DPS} = \frac{\text{Earnings paid to shareholders (dividends)}}{\text{Number of ordinary share outstanding}} \quad (\text{Pandey, 2008:532})$$

2.1.4.7.3. Payout Ratio

The dividend-payout ratio or simply payout ratio is DPS (or total equity dividends) divided by the EPS (or profit after tax):

$$\text{Payout Ratio} = \frac{\text{Equity dividends}}{\text{Profit after tax}} = \frac{\text{DPS}}{\text{EPS}}$$

Earnings not distributed to shareholders are retained in the business. Thus, retention ratio is: 1- Payout Ratio. If this figure is multiplied by the return on equity (ROE), we can know the growth in the owners' equity as a result of retention policy.

Growth in equity=Retention Ratio × ROE
or, $g=b \times \text{ROE}$ (*Pandey, 2008:532*)

2.1.4.7.4. **Dividends and Earning Yields**

The dividend yield is the dividends per share divided by the market value per share, and the earnings yield is the earnings per share divided by the market value per share. That is:

$$\text{Dividend yield} = \frac{\text{DPS}}{\text{MV}}$$

$$\text{Earning yield} = \frac{\text{EPS}}{\text{MV}}$$

The dividend yield and earnings yield evaluate the shareholders' return in relation to the market value of the share. The earnings yield is also called the earnings-price (E/P) ratio. The information on the market value per share is not generally available from the financial statements; it has to be collected from external sources, such as the stock exchanges or the financial newspapers. (*Pandey, 2008:533*)

2.1.4.7.5. **Price-Earnings Ratio**

The reciprocal of the earnings yield is called the price-earnings (P/E) ratio. Thus:

$$\text{Price – earnings ratio} = \frac{\text{Market value per share}}{\text{Earnings per share}} = \frac{\text{MV}}{\text{EPS}}$$

The price earnings ratio is widely used by the security analysts to value the firm's performance as expected by

investors. It indicates investors' judgment or expectations about the firm's performance. Management is also interested in this market appraisal of the firm's performance and will like to find the causes if the P/E ratio declines.

P/E ratio reflects investors' expectations about the growth in the firm's earnings. Industries differ in their growth prospects; accordingly, the P/E ratios for industries vary widely. (*Pandey, 2008:533*)

2.1.4.7.6. Market Value-to-Book Value(MV-BV) Ratio

Market value-to-book value (M/B) ratio is the ratio of share price to book value per share:

$$\text{M/B Ratio} = \frac{\text{Market value per share}}{\text{Book Value per share}}$$

2.1.5. Utility of Ratio Analysis²

The ratio analysis is the most powerful tool of the financial analysis. As stated in the beginning, many diverse groups of people are interested in analyzing the financial information to indicate the operating and financial efficiency, and growth of the firm. These people use ratios to determine those financial characteristics of the firm in which they are interested. With the help of ratios, one can determine:

) The ability of the firm to meet its current obligations;

² Pandey, I.M. (Ninth Edition, Reprint 2008). *Financial Management*. 576, Masjid Road, Jangpur, New Delhi: Vikas Publication House Pvt. Ltd.pp.538-539

-) The extent to which the firm has used its long-term solvency by borrowing funds;
-) The efficiency with which the firm is utilizing its assets in generating sales revenue, and
-) The overall operating efficiency and performance of the firm.

Performance analysis As stated previously, a short-term creditor will be interested in the current financial position of the firm, while a long-term creditor will pay more attention to the solvency of the firm. The long-term creditor will also be interested in the profitability of the firm. The equity shareholders are generally concerned with their return and may bother about the firm's condition only when their earnings are depressed. In fact, it has to be realized that the short-and long-term financial position and the profitability of the firm are tested in every kind of financial analysis, but the emphasis would differ. Some ratios are more important in one kind of analysis than others. If a short-term creditor analyses only the current position and finds it satisfactory, he/she cannot be certain about the safety of his/her claim if the firm's long-term financial position or profitability is unfavorable. The satisfactory current position would become adverse in future if the current resources are consumed by the unfavorable long-term financial condition. Similarly, the 'good' long-term financial position is no guarantee for the long-term creditors' claims if the current position or the profitability of the firm is 'bad'.

Credit analysis In credit analysis, the analyst will usually select a few important ratios. He may use the current ratio or quick-asset ratio to judge the firm's liquidity or debt-paying ability; debt-equity ratio to determine the stake of the owners in the business and the firm's capacity to survive in the long run and any one of the profitability

ratios, for example, return on capital employed, to determine the firm's earnings prospects. If the profitability is high, the current ratio is low and the debt equity ratio is high (unreasonable), the extension of credit may be approved to the firm, because a profitable company will grow and will have improvement in its current ratio and other ratios.

Security analysis The ratio analysis is also useful in security analysis. The major focus in security analysis is on the long-term profitability. Profitability is dependent on a number of factors and , therefore, the security analyst also analyses other ratios. He would certainly be concerned with the efficiency with which the firm utilizes its assets and the financial risk to which the firm is exposed. Therefore, besides analyzing the profitability ratios meticulously, he will also analyze activity ratios and leverage ratios. The detailed analysis of the earning power is important for security analysis.

Competitive analysis The ratios of a firm by themselves do not reveal anything. For meaningful interpretation, the ratios of a firm should be compared with the ratios of similar firms and industry. This comparison will reveal whether the firm is significantly out of line with its competitors. If it is significantly out of line, the firm should undertake a detailed analysis to spot out the trouble areas.

Trend analysis The ratio analysis will reveal the financial condition of the firm more reliably when trends in ratios overtime are analyzed. Ratios at a point of time can mislead the analyst, because they may be high or low for some exceptional circumstances at hat point of time. An impressive present financial position may be improving at a rapid rate over time. Thus, the trend analysis of the ratios adds considerable significance to the financial analysis because it studies

ratios of several years and isolates the exceptional instances occurring in one or two periods. Although the trend analysis of the company's ratios itself is informative, but it is more informative to compare the trends in the company's ratios with the trends in industry ratios. This comparison indicates how well the company has been operating over time relative to its competitors and may also help to explain the trends in the company's ratios. For example, if the company's return on capital employed (net assets) shows a declining trend, the comparison can reveal whether this decline is characteristic of the firm only or there is a general declining trend in the industry.

Management has to protect the interests of all concerned parties, creditors, owners and others. They have to ensure some minimum operating efficiency and keep the risk of the firm at a minimum level. Their survival depends upon their operating performance. From time to time, management uses ratio analysis to determine the firm's financial strengths and weaknesses, and accordingly takes actions to improve the firm's position. Management is in a better position to analyze the firm's position. Management is in a better position to analyze the firm's financial position as it has access to internal information, which is not available to the credit analyst or the security analyst.

2.1.6. Cautions in Using Ratio Analysis³

The ratio analysis is a widely used technique to evaluate the financial position and performance of a business. But there are certain

³ Pandey, I.M. (Ninth Edition, Reprint 2008). *Financial Management*. 576, Masjid Road, Jangpur, New Delhi: Vikas Publication House Pvt. Ltd.pp.540-541

problems in using ratios. The analyst should be aware of these problems. The following are some of the limitations of the ratio analysis:

-) It is difficult to decide on the proper basis of comparison.
-) The comparison is rendered difficult because of differences in situations of two companies or of one company over years.
-) The price level changes make the interpretations of ratios invalid.
-) The differences in the definitions of items in the balance sheet and the profit and loss statement make the interpretation of ratio difficult.
-) The ratios calculated at a point of time are less informative and defective as they suffer from short-term changes.
-) The ratios are generally calculated from past financial statements and, thus, are no indicators of future.

Standards for comparison Ratios of a company have meaning only when they are compared with some standards. It is difficult to find out a proper basis of comparison. Usually, it is difficult to find out a proper basis of comparison. Usually, it is recommended that ratios should be compared with industry averages. But the industry averages are not easily available.

Company differences Situations of two companies are never same. Similarly, the factors influencing the performance of a company in one year may change in another year. Thus, the comparison of the ratios of two companies becomes difficult and meaningless when they are operating in different situations.

Price level changes The interpretation and comparison of ratios are also rendered invalid by the changing value of money. The accounting figures, presented in the financial statements, are expressed in the monetary unit, which is assumed to remain constant. In fact, price change over years, which affects accounting earnings. At least three effects of inflation can be identified. *First*, the nominal value of inventory increases n account of rising prices. This results into '*inventory profit*'. A firm will lose in real terms if the general price level increases faster than appreciation in the value of inventory. *Second*, assets are stated at original cost (less depreciation) in the balance sheet. Because of inflation, their current value or replacement cost will be much higher than book value. Thus, depreciation calculated on book value will be very low. *Third*, inflation affects accounting profits of the firms, which borrow, If the interest rate is fixed, shareholders gain at the cost of lenders. The real value of the lenders' obligation is reduced by inflation. The accounting profits do not recognize the gain from borrowing arising due to inflation. Since firms will differ in terms of the nature of their inventory, age and type of assets and debt policy, inflation will affect them differently.

Different definitions of variables In practice, differences exist as to the meaning of certain terms. Diversity of views exists as to what should be included in net worth or shareholders' equity, current assets or current liabilities. Whether preference share capital and current liabilities should be included in debt in calculating the debt-equity ratio? Should intangible assets be excluded to calculate the rate of return on investment? If intangible assets have to be included,

how will they be valued? Similarly, profit means different things to different people.

Changing situations The ratios do not have much use if they are not analyzed over years. The ratios at a moment of time may suffer from temporary changes. This problem can be resolved by analyzing trends of ratios over years. Although trend analysis is more useful but still the analysis is static to an extent. The balance sheets, prepared at different points of time are static in nature. They do not reveal the changes, which have taken place between dates of two balance sheets. The statements of changes in financial position reveal this information.

Historical data The basis to calculate ratios are historical financial statements. The financial analyst is more interested in what happens in future, while the ratios indicate what happened in the past. Management of the company has information about the company's future plans and policies and, therefore, is able to predict future happening to a certain extent. But the outside analyst has to rely on the past ratios, which may not necessarily reflect the firm's financial position and performance in the future.

2.1.7. Predictive Power of Financial Ratios

Reliance on certain ratios depends on the analyst's perception of their predictive power relative to the problem at hand—a perception based on either subjective beliefs or empirical analysis. In predicting the future value of a stock, an investor might feel that the return on investment ratio and various profits margin ratios would be the greatest help. Most estimates of the predictive power of financial ratios are based on the analyst's past experience with them. By their

very nature, then, these estimates tend to be subjective and differ from one analyst to the next.

A number of empirical studies have tested the predictive power of financial ratios. In many of these studies, financial ratios are used to predict business failure. Others have tested the power of financial ratios to predict corporate bond ratings. With these ratios as the dependent variable, regression analysis and discriminate analysis have been employed, using various financial ratios for a sample of companies. The best ratios for predictive purposes are debt-to-equity, cash-flow-to-debt, net operating profit margin, debt coverage and its stability, return on investment, size, and earnings stability. On the basis of these studies, it appears that a handful of ratios can be used to predict the long-term credit standing of a firm. (**Van Horne, 2005:383-384**)

2.1.7.1. Predicting Financial Distress

Financial distress is the event of particular interest. Beaver was first to use statistical techniques to predict corporate failure.⁴ He found that financial ratios for failed companies deteriorated markedly as failure approached. In a similar type of study, Altman employed multiple discriminate analyses to predict bankruptcy, using various financial ratios.⁵ He found that five financial ratios were able to discriminate rather effectively between bankrupt and non-bankrupt companies, beginning up to 5 years prior to the bankruptcy event.

The Z-score model itself was the following:

⁴ Beaver, William H. , “Financial Ratios as Predictors of Failure”, *Empirical Research in Accounting: Selected Studies, supplement to Journal of Accounting Research*, 41(1996), 71-111.

⁵ Altman, Edward I, “Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy,” *Journal of Finance*, 23 (September 1968), 589-609.

$$Z=1.2X_1 + 1.4X_2 + 3.3X_3 + .6X_4 + 1.0X_5$$

Where, X_1 =working capital to total assets

X_2 =cumulative retained earnings to total assets

X_3 =earnings before interest and taxes to total assets

X_4 =market value of equity to book value of total liabilities

X_5 =sales to total assets

The Z ratio is the overall index of the multiple discriminant functions. Altman found that companies with Z scores below 1.81 (including negative amounts) always went bankrupt, whereas Z scores above 2.99 represented healthy firms. Firms with Z scores in between were sometimes misclassified, so this represents an area of gray. On the basis of these cutoffs, Altman suggests that one can predict whether or not a company is likely to go bankrupt in the near future.

This model was expanded by Altman and others into what is known as the Zeta model. This model is more accurate in prediction, but unfortunately the coefficients are not published. It was developed for private sale by ZETA Services, Inc., and the output consists of Zeta scores for thousands of companies. As a result of this and other work, financial ratio analysis has become more scientific and objective. It now focuses on those ratios that really have underlying predictive ability. Expert systems have been developed on the basis of such models where computer software mimics the reasoning process of experienced financial analysts. (*Van Horne, 2005:384*)

2.1.8. Size, Location and Regulatory Bias in Analyzing Bank Performance

Generally, the size of bank is often measure by its total asset deposits or equity capital. The size of bank can have a significant impact on the measurement of performance and profitability. Thus, when we compare the performance of one bank with another, it is best to compare banks of similar size. One reason is that similar size banks tend to offer the similar services. So, we can be a little more confident that our performance comparisons have more validity. To conduct even more valid performance comparisons, we should also compare banks serving the same or similar market areas. The performance of a bank is usually greatly influenced by the geographic areas. It should also be noted whether it operates in a major financial centre, smaller city, or rural area. The best performance comparison of all is to choose banks of similar size serving the same market area.

Unfortunately, in some small communities, it is very difficult to find another banking firm comparable in size. In this condition, the financial analyst has to look for another community with a similar-size bank. If possible, the analysts choose the community housing similar-type businesses because the character of a bank's customer base significantly affects how ell it performs.

It must be taken in mind that the comparison will be even better if the banks compared are subject to similar regulations. But each bank regulator has a slightly different set of rules for the banks to follow. The rules imposed by the government can be a profound impact on bank performance. This is why; comparisons of banks in different countries are often so difficult. Therefore, it should be done with great attention.

If a bank is an affiliate of a holding company, it is far better to compare its performance with other holding company affiliated banks. There is an old saying about avoiding comparing apples and oranges because of their obvious differences. The same is true in banking sector. It will be biased to compare it with independent bank.

No two banks are ever exactly alike in size, location, service menu, or customers' base. The bank performance analysis must make their best effort to find the most comparable institutions. **(Singh, 2007:110)**

2.2. Review of the Past Studies

Shrestha (1990) stated that the D/E ratio of commercial bank's are more than 100% in most of the time period (even 15 times sometimes) which is highly leveraged to take high risk in firm's operation. In her same book, she has concluded that a depository institute while making investment decisions assesses the return and the risk involved. There is various return and risk measures that have to be compared among similar function organization. The management always needs to balance the trade off between return and risk level so as to maximize the income of the organization.

Timilisia (2001) in his paper on *Capital Market Development and Stock Price Behavior in Nepal* mainly focuses in tracing out the historical events contributing to the development process of capital market in Nepal. Implications of macro-economic fundamentals such as monetary policy, fiscal policy, major financial and economic incidents and/or announcements affecting the market prices of shares are examined in brief. The objective of the study is to find out the fair market prices of equities and test whether the present behavior (i.e. from 1993/94* to 1999/2000) of equity prices will remain stable.

Coefficients of correlation between the Earning per share and corresponding Market price on the one hand and Dividend per share and corresponding Market price on the other are also computed to know which one EPS or degree of explanatory power of the two is influencing the market price of share. Regression equations of Market Price(Y) on EPS as well as on DPS are drawn. Regression results are statistically tested to derive the conclusion.

Sherpa (2001) in his study on *Corporate Information Disclosure and Its Effect on Share Price* collected 59 informational items, classified according to their importance & calculated mean value after the collection of primary data. He selected 33 listed companies, used their annual reports & calculated disclosure scores, which was followed by use of various statistical tools to attain his objectives. From the analysis, he found that most of companies do not disclose adequate & qualitative information on their annual reports & most of disclosed information consisted of only relationship between disclosure scores & variables like earning margins, assets size, etc. The important finding of his research is that there is positive relationship between market price of share & disclosure score. In other words, the company having greater disclosure score had the higher prices of stock.

Shrestha (2002) stated that in every stage of policy-making and planning for CBs, there is a high need of financial analysis. He pointed out that the financial (ratio) analysis has been an important tool for not only the CBs but also to the general public, ministries, central bank, planning commission, researchers, the World Bank and other stakeholders. He stated that on analysis of the ratios calculated help to interpret the actual position of a respective bank. These ratios

reflect the financial health of the respective banks. For the financial analysis of banks and financial institutions, he recommended ratio analysis, fund flow analysis & trend analysis as useful tools.

Pradhan (2002) has carried out a study on the objectives and scope of on-site inspection done by NRB. He has detailed explained the importance & uses of CAMELS principle of doing the performance evaluation of the CBs. He has discussed on detail about how capital adequacy, assets quality, earnings and profitability, liquidity, bank growth, interest rate sensitivity and off-balance sheet risk are used in the process of doing the inspection of the commercial banks by the central bank of the country. He concluded that by doing the CAMELS analysis, the off-site supervision can bring out the actual situation and the comparative development with the competitor banks operating in the same banking market.

Yadav (2003) has done the ratio analysis of two joint venture commercial banks namely: Nabil Bank Ltd. and Nepal Bangladesh Bank Ltd. He has found the higher liquidity position of Nepal Bangladesh Bank Ltd. Than that of Nabil. Current ratio of Nepal Bangladesh Bank Ltd. was also seen higher than of Nabil. Return on Shareholders Equity, capital employed and ROA were seen higher for Nabil Bank. Interest coverage was seen higher for Nepal Bangladesh Bank Ltd. Total debt to TA & total deposit and total equity were also seen higher of Nepal Bangladesh Bank Ltd. EPS, DPS & payout ratio of Nabil was seen higher than that of Nepal Bangladesh Bank Ltd. during the study period. Similarly, other major financial indicators of Nabil were in better position than that of Nepal Bangladesh Bank Ltd. during the study period. He recommended for the maintenance of the

standard ratio by the banks. Improvement of capital norms should be made in coming days. Proper portfolio management was also seen to be done by the commercial banks.

Singh (2004) in her study on two joint venture commercial banks namely: Bank of Kathmandu and Nabil Bank Ltd. found that the liquidity position of Nabil was seen well than that of Bank of Kathmandu during the review period. Under activity ratio, the position of Bank of Kathmandu was seen more uniform than that of the Nabil. Profitability and return on total working fund was negative for the Bank of Kathmandu but was in good position for Nabil. ROE, EPS, dividend payment ratio & ROI were seen in very good position for Nabil than that of bank of Kathmandu. Under the Altman's Z score, she found Nabil had a rare chance to go to bankruptcy than bank of Kathmandu. She had recommended for risk-free investment on government securities & takes the good collateral in loan disbursement & to use the funds on profitable sectors.

Tuladhar (2005) in her study has done the liquidity, activity, profitability & value ratio analysis of NSBIBL & HBL from Mid-July 1999 to Mid-July 2003. She found the current ratio were below the conventional standard or negative. The majority of the activity ratios of HBL were seen well than that of NSBIBL. The interest incomes & other incomes of NSBIBL were seen higher than that of HBL. EPS of HBL was seen higher than NSBIBL during the study period. P/E ratio & MV-BV Ratio of NSBIBL was seen well than that of HBL. But dividend pay-out ratio of HBL was seen well than of NCBIBL. She recommended investing certain part of the banks profit-earnings loans & advances & risk-free government securities.

Mandal (2007) in his article has discussed the uses and importance of ROA & ROE in an analysis of any company; He has discussed & examined the use of The Du Pont Formula especially on ROA. He pointed out ROA could be changing either the company is more profitable than it was, or it has begun to operate on a smaller asset base relative to sales. He also discussed on ROE and pointed out that it inevitably operates on low margin & higher turnover with perhaps moderate usage of leverage. He has pointed out that the use of end-of-the-year value in calculating ratio is a real danger as it does not reflect the activities of whole period. He recommended for the use of average value in calculating the ratio.

Khadka (2009) examined and evaluated the performance of Nabil Bank from F/Y 2059/60 to F/Y 2063/64. He found the average liquidity ratio of 1.10 times during the study period. The total liability to equity ratio was seen fluctuating for Nabil Bank. The debt ratio of the bank was seen higher, the average interest coverage ratio was seen 3.23%, ROA was very low and EPS of Nabil Bank was seen increasing during the period. He has recommended stabilizing the fluctuating ratios. The bank should always abide the directives given by central bank, Nepal Rastra Bank.

2.3. Research Gap

) Large numbers of researches have been carried out to analyze position of various firms and companies in different period. But this research is different from the previous study on the following grounds. The previous study was done taking the sample of two companies for just a dual comparative study. The previous studies were also focused only in single types of analysis under the ratio analysis using single financial institution

and analyzing the result on the basis of time. Thus, this study analyzes financial analysis of the overall types of ratio to measure the as far as feasible. The present study has tried to measure and compare the overall performance of commercial banks of Nepal.

Chapter-3

Research Methodology

This chapter presents the short outline of the methods applied in the process of ratio analysis of selected commercial banks. It is a systematic method of finding out solution to a problem whereas research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objective in view.

3.1 Research Design

For ratio analysis of selected commercial banks, analytical as well as descriptive designs are applied to achieve the objective of the research.

3.2 Population and Sample

Population

All the commercial banks operating in Nepal from the permission of Nepal Rastra Bank & Government of Nepal are considered as the population for the research. Thus, following banks are the population of the study:

1.	Nepal Bank Ltd.
2.	Rastriya Banijya Bank
3.	Nabil Bank Ltd.
4.	Nepal Investment Bank Ltd.
5.	Standard Chartered Bank Nepal Ltd.
6.	Himalayan Bank Limited
7.	Nepal Bangladesh Bank Ltd.
8.	Nepal SBI Bank
9.	Everest Bank Ltd.
10.	Bank of Kathmandu
11.	Nepal Credit & Commerce Bank Ltd.
12.	Lumbini Bank Ltd.
13.	Nepal Industrial & Commercial Bank Ltd.
14.	Machhapuchhre Bank Ltd.
15.	Kumari Bank Ltd.
16.	Laxmi Bank Ltd.

17.	Siddhartha Bank Ltd.
18.	Agriculture Development Bank Ltd.
19.	Global Bank Ltd.
20.	Citizen Bank International Ltd.
21.	Prime Commercial Bank Ltd.
22.	Sunrise Bank Ltd.
23.	Bank of Asia
24.	Development Credit Bank Ltd.
25.	NMB Bank Ltd.
26.	Kist Bank Ltd.
27.	Megha Bank Ltd.

Sample

The sample used in this research is purposive in nature. Of 27 commercial banks there are 15 “A” class commercial banks which covers 55.56% of the total “A” class population. Thus, five “A” class commercial banks has been taken for the research purpose. It covers 18.52% i.e. $\frac{5}{26} \times 100$ of the total population. They are:

1. Nabil Bank Ltd.
2. Nepal Investment Bank Ltd.
3. Himalayan Bank Ltd.
4. Nepal SBI Bank Ltd.
5. Everest Bank Ltd.

3.3 Sources of Data

This research is based on secondary data. Required data is collected from published financial statements of the joint venture banks listed in Security Board of Nepal. The basic sources of data used are as follows:

- a. Annual Reports.
- b. Published materials from concerned CBs.

- c. Financial statements of concerned CBs.
- d. Related books and journals.
- e. Official websites of the sample CBs.

3.4 Research Variables

In this study, the following financial variables are used as research variables.

3.4.1. Liquidity Ratio

Liquidity ratio is used to judge a firm's ability to meet short term obligation. One of the first concerns of most financial analysis is liquidity. It measures the firm's ability to meet current obligation.

3.4.2. Leverage Ratio

It is called capital structure/leverage/debt management/long-term solvency ratio. To judge the long-term financial position of the firm's financial leverage or capital structure ratio are calculated. As a general rule, there should be an approximate mix of debt and owner's equity in financing the firm's assets. This ratio measures the ability of firm to meet its long term obligation. This ratio reflects the relative claims of creditors and shareholders against the assets of the firm.

3.4.3. Activity Ratio

Activity ratio is employed to evaluate with which the firm manage & utilize its assets. These ratios are called turnover ratio because they indicate the speed with which assets are being converted or turnover into sales. Activity ratio thus involves a relationship between sales and assets.

3.4.3.1. Credit Deposit Ratio

If 75% of amount deposited by the customers are invested in various sectors, it is considered satisfactory. It is good sign. This ratio shows the efficiency of the CB to use the liquidity during a particular time. The ratio helps to find out the liquidity position as well as the prediction for the need of additional capital for the CBs. If the given ratio is not maintained by the CBs, there is a scarcity of cash & there is a lack of capital, it is not a good sign.
(Bhandari, 2003:222)

3.4.4. Assets Management Ratio

The ratios grouped as assets management ratios measure the effectiveness of assets utilization, reflecting the management's efficiency to use available resources. Assets are used to generate sales. Therefore, a firm should manage its assets efficiently to maximize sales.

3.4.5. Profitability Ratio

A company should earn profits to survive & grow over a long period of time. Profits are essential, but it would be wrong to assume that every action initiated by management of a company should be aimed at maximizing profits, irrespective of social consequences.

Profit is the difference between total revenues & total expenses over a period of time. Profit is the ultimate output of a company, & it will have no future, if it fails to make sufficient profits. The

profitability ratios are calculated to measure the operating efficiency of the company.

3.4.6. Coverage Ratio

Coverage ratio is another type of leverage ratio which is calculated from the information of profit & loss account & income statement. Also known as the times-interest-earned is one of the most conventional coverage ratios used to test the firm's debt-servicing capacity.

3.4.7. Valuation/Market Value Ratio

To find out the value of a firm in the market, we calculate market value ratio. The ratios which examine the stock price relative to earning and the market value of the firm relative to the book value are the valuation ratios which reflect results of overall performance of the company.

3.5 Methods of Data Analysis

In this study, the following statistical tools are used as method of data analysis.

3.5.1 Mean

The most public and widely used measure of representing the entire data by one value is what most laymen set of observation is their sum divided by the number of observation in general X_1, X_2, \dots, X_n are the given "n" observation then their arithmetic mean adding together the entries item and dividing this total by numbers of item obtained its value. The arithmetic mean is also known as averages. The mean is an appropriate term than saying

average. The mean of data is biased toward extreme values. The mean is the figure we get when the total of all the values in a distribution is divided by the number of values in the distribution. The arithmetic mean is also known as the average. It should, however, be remembered that the mean can only be calculated for numerical data. The mean is an appropriate term than saying average. The mean of data is biased toward extreme values. The mean is suitable when the scores are distributed symmetrically about the center of the distribution. This is calculated by using following formulae:

$$\text{Mean (A.M.) } \bar{X} = \frac{\sum X}{n}$$

3.5.2 t-statistics

To test the validity of our assumption, if the sample size is less than 30, t-test is used. For applying t-test in context of small sample the t-value is calculated first & compared with the t-value on table at certain level of significance for given degree of freedom. If calculated value of “t” exceeds the table value (say 0.05) we can say that the difference is significant at 5% level, but if calculated value is less than the concerning values the difference is not treated as significant. The value is calculated by using following formula:

$$t = \frac{\bar{X} - \mu}{\frac{S}{\sqrt{n}}} \quad \text{or} \quad t = \frac{\bar{d}}{\frac{S_d}{\sqrt{n}}}$$

3.5.3. F-statistics

The analysis of variance frequently referred to by the contraction, ANOVA is a statistical technique especially designed to test whether the means of more than two quantitative populations are equal. It is applied to find out whether the two samples may be regarded as drawn from the normal populations having the same variance.

The value of “F” is calculated as:

$$F = \frac{\text{Larger estimate of variance}}{\text{Smaller estimate of variance}}$$

The calculated value of “F” is compared with the table value for V_1 & V_2 at 5% or 1% level of significance.

Chapter-4

Data Presentation and Analysis

4.1. Analysis of Liquidity

Liquidity ratios measure the ability of the firm to meet its current obligations (liabilities). In fact, analysis of liquidity needs the preparation of cash budgets and cash and fund flow statements; but liquidity ratios, by establishing a relationship between cash and other current assets to current obligations, provide a quick measure of liquidity.

4.1.1. Current Ratio

The current ratio is a measure of the firm's short-term solvency. It indicates the availability of current assets in rupees for every one rupee of current liability.

**Table No.4.1.
Current Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	1.07:1	1.04:1	1.04:1	1.07:1	1.06:1
2061/62	1.08:1	1.06:1	0.11:1	1.02:1	1.07:1
2062/63	1.08:1	1.08:1	1.06:1	1.09:1	1.08:1
2063/64	1.07:1	1.08:1	1.06:1	1.10:1	1.07:1
2064/65	1.06:1	1.04:1	1.08:1	1.09:1	1.07:1

Source: Annex-I

The current ratio less than 2:1 is said to be in the better position. The ratio with 2:1 or even higher ratios may be struggling to meet their obligations. This ratio measures the quantity as also said as a test of quantity but it does not measure the quality of assets. The current ratio of HBL during the F/Y 2062/63 is seen the best among the sample CBs with 0.11:1.

4.1.2.Quick Ratio

Quick ratio, also called acid-test ratio, establishes a relationship between quick or liquid assets and current liabilities.

**Table No.4.2.
Quick Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	1.07:1	1.04:1	1.04:1	1.07:1	1.06:1
2061/62	1.08:1	1.06:1	0.11:1	1.02:1	1.07:1
2062/63	1.08:1	1.08:1	1.06:1	1.09:1	1.08:1
2063/64	1.07:1	1.08:1	1.06:1	1.10:1	1.07:1
2064/65	1.06:1	1.04:1	1.08:1	1.09:1	1.07:1

Source: Annex-I

Since the value of the stock for the respective sample CBs were seen minimal there are no changes in the quick ratio as from the current ratio.

4.1.3.Cash Ratio

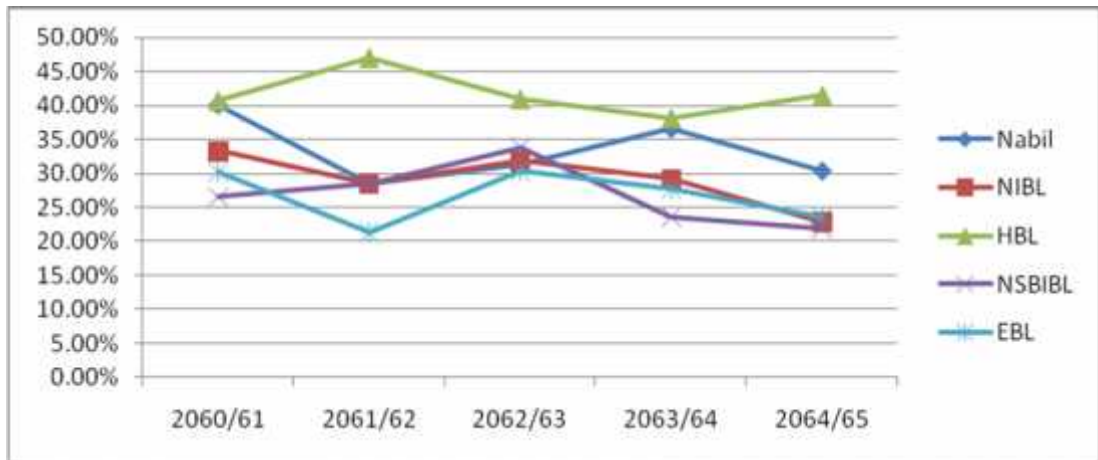
Cash ratio examines the cash and its equivalent to current liabilities. It is also an important liquidity ratio to be calculated for the CBs.

**Table No.4.3.
Cash Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	40.11%	33.35%	40.72%	26.48%	30.21%
2061/62	28.42%	28.54%	46.95%	28.49%	21.36%
2062/63	31.37%	31.84%	40.95%	33.77%	30.35%
2063/64	36.58%	29.18%	38.18%	23.50%	27.69%
2064/65	30.33%	22.86%	41.52%	21.81%	23.60%
Average	33.36%	29.15%	41.66%	26.81%	26.64%

Source: Annex-I

**Figure No.4.1.
Cash Ratio**



HBL has a good level of cash ratio with the average of 41.66%. The lowest cash ratio was seen for EBL with the average of 26.64%. The cash ratio for the Nabil Bank was also seen in better position other than HBL with the average ratio of 33.36%. The least cash ratio for the CBs in such a competitive market might create a liquidity crisis.

4.1.4. Cash Position Ratio

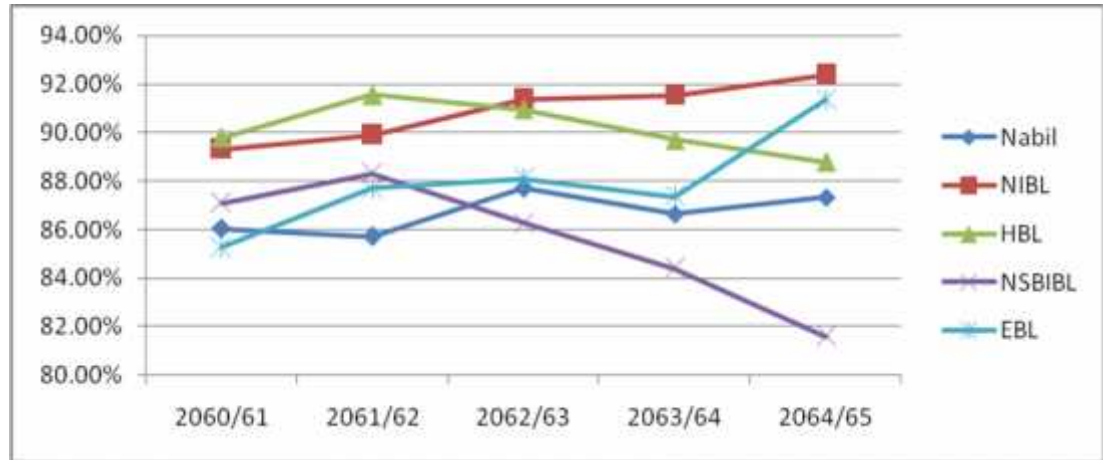
This indicator shows the ratio between cash and bank assets.

**Table No.4.4.
Cash Position Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	86.03%	89.32%	89.79%	87.10%	85.26%
2061/62	85.72%	89.89%	91.55%	88.31%	87.71%
2062/63	87.71%	91.37%	90.96%	86.27%	88.11%
2063/64	86.64%	91.53%	89.70%	84.40%	87.35%
2064/65	87.33%	92.39%	88.79%	81.59%	91.34%
Average	86.69%	90.90%	90.16%	85.53%	87.95%

Source: Annex-I

**Figure No.4.2.
Cash Position Ratio**



This indicator shows the ratio between cash and bank assets. It indicates that a greater proportion of cash implies that the bank is in a stronger position to handle immediate cash needs. The highest level of average cash position ratio is seen for NIBL with 90.90%. Similarly, the ratio was seen well for HBL with the average ratio of 90.16%. The least cash position was seen for NSBIBL with the average ratio of 85.53%. The ratio is also seen declining.

4.1.5. Net Working Capital Ratio

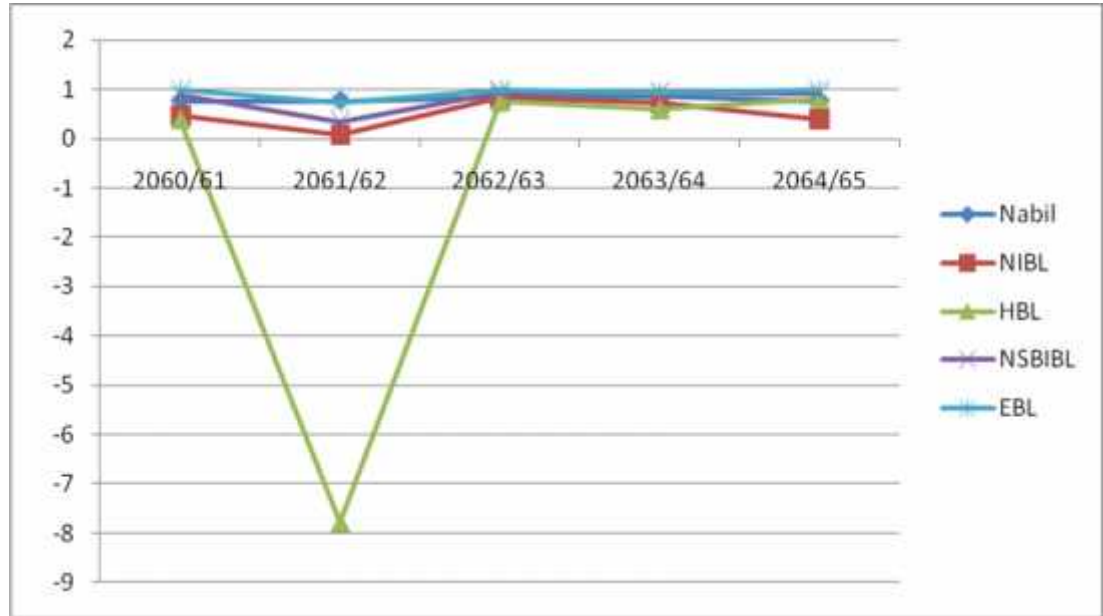
NWC, however, measures the firm's potential reservoir of funds. It can be related to net assets (or capital employed)

**Table No.4.5.
Net Working Capital Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	0.77	0.47	0.39	0.90	0.99
2061/62	0.78	0.07	-7.79	0.35	0.73
2062/63	0.83	0.83	0.75	0.95	0.99
2063/64	0.86	0.72	0.59	0.94	0.95
2064/65	0.78	0.38	0.81	0.93	0.99
Average	0.804	0.494	-1.05	0.814	0.93

Source: Annex-I

**Figure No.4.3.
Net Working Capital Ratio**



NWC ratio measures the CBs potential reservoir of funds. The average NWC of NIBL is seen in the best position with the least ratio of 0.494. The situation might turn deteriorating for HBL with the negative ratio of -1.05.

4.1.6. Capacity Ratio

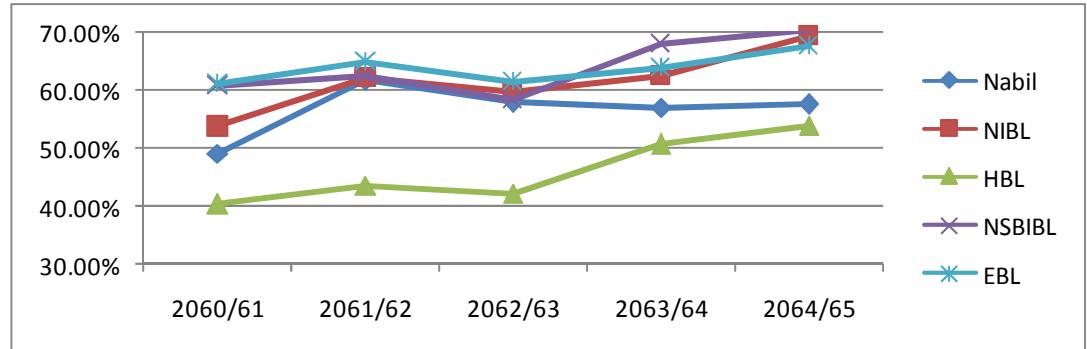
This ratio shows the relationship between net loans and total assets of a bank.

**Table No.4.6.
Capacity Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	49.01%	53.79%	40.30%	60.94%	61.27%
2061/62	61.70%	62.22%	43.59%	62.37%	64.98%
2062/63	57.93%	59.90%	42.17%	58.51%	61.51%
2063/64	57.09%	62.65%	50.71%	68.05%	63.84%
2064/65	57.60%	69.45%	53.90%	70.48%	67.83%
Average	56.67%	61.60%	46.13%	64.07%	63.89%

Source: Annex-I

**Figure No.4.4.
Capacity Ratio**



This ratio shows the relationship between net loans and total assets of a bank. It means greater the ratio, less the bank has liquidity. The highest average ratio was seen of NSBIBL with 64.07% and the lowest ratio was seen of HBL with 46.13%. The ratio of the sample CBs are seen increasing in the study periods. This also reflects that as the liquidity of the CBs is decreasing, the profitability of the CBs ultimately can be predicted of increasing as they have the inverse relationship.

4.1.7. Liquid Securities Indicator

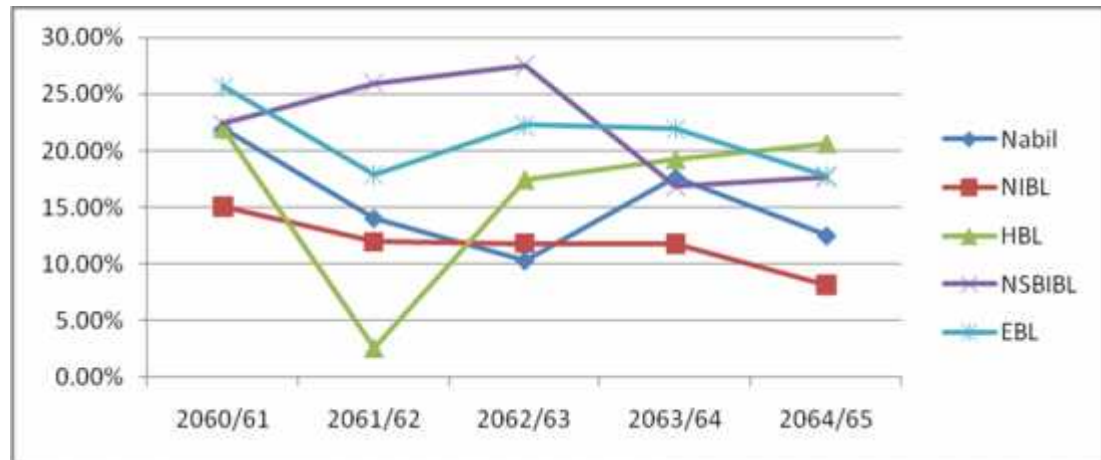
The greater the proposition of government securities, the more liquid the bank's position. So, and the liquid securities indicator indicates the banks liquidity position.

**Table No.4.7.
Liquid Securities Indicator**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	21.93%	15.10%	21.99%	22.39%	25.67%
2061/62	14.05%	11.97%	2.55%	25.98%	17.90%
2062/63	10.31%	11.83%	17.46%	27.55%	22.24%
2063/64	17.64%	11.80%	19.26%	16.87%	21.95%
2064/65	12.51%	8.12%	20.65%	17.66%	17.76%
Average	15.29%	11.76%	16.38%	22.09%	21.10%

Source: Annex-I

**Figure No.4.5.
Liquid Securities Indicator**



This indicator shows the liquidity capacity of the CBs. Higher the level of liquid securities indicator; lower the level of profitability of the CBs. Thus, the indicator is seen declining, this means increase in profitability of the CBs. The highest average level of liquid securities indicator is seen of NSBIBL with 22.09%.

4.2. Analysis of Leverage Ratio

It is called capital structure/leverage/debt management/long-term solvency ratio. To judge the long-term financial position of the firm's financial leverage or capital structure ratio are calculated.

4.2.1. Debt Ratio

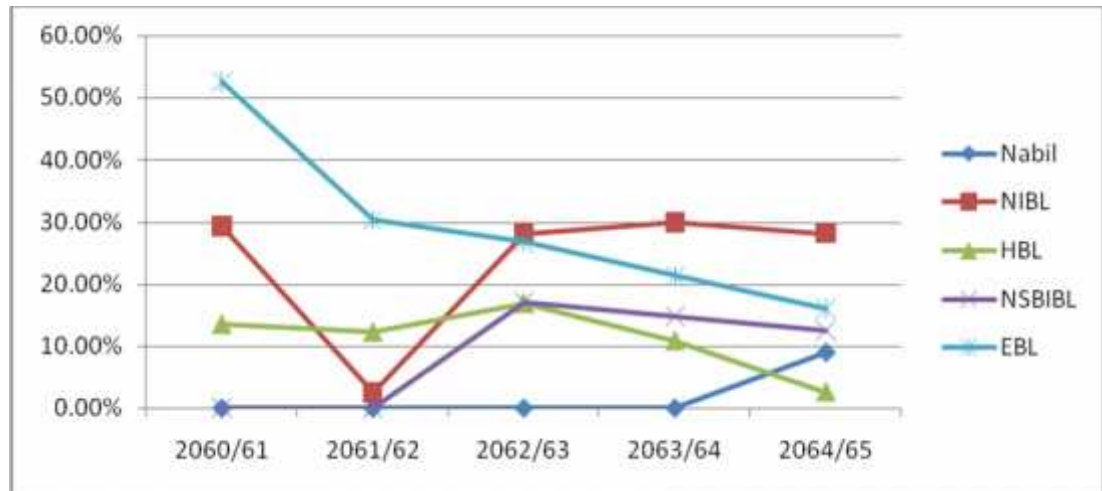
Debt ratio is computed by dividing total debt (TD) by capital employed (CE) or net assets (NA).

**Table No.4.8.
Debt Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	0.00%	29.15%	13.58%	0.00%	52.60%
2061/62	0.00%	2.48%	12.29%	0.00%	30.22%
2062/63	0.00%	27.98%	16.93%	17.07%	26.72%
2063/64	0.00%	29.87%	10.90%	14.78%	21.33%
2064/65	8.96%	28.10%	2.62%	12.47%	15.95%
Average	1.79%	23.52%	11.26%	8.86%	29.36%

Source: Annex-II

**Figure No.4.6.
Debt Ratio**



The debt ratio shows the level of debt financing used by the CBs in their capital structure. Nabil Bank has the least level of debt ratio with the average of 1.79% as it has used debt in its capital structure from the F/Y 2064/65 only. The highest level among the sample CBs was seen of EBL with the average of 29.63%.

4.2.2. Debt-Equity Ratio

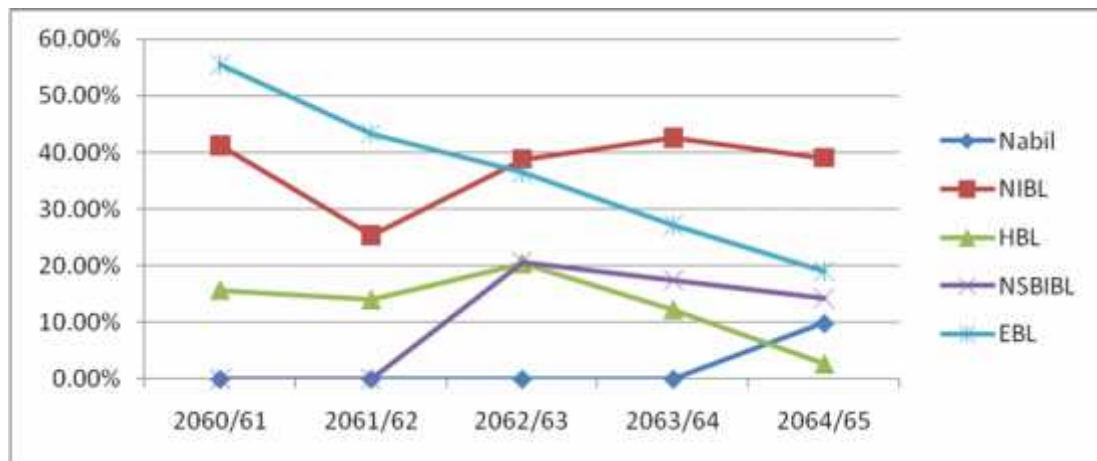
The relationship describing the lenders' contribution for each rupee of the owners' contribution is called debt-equity ratio.

**Table No.4.9.
Debt-Equity Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	0.00%	41.15%	15.71%	0.00%	55.52%
2061/62	0.00%	25.42%	14.02%	0.00%	43.32%
2062/63	0.00%	38.86%	20.38%	20.58%	36.46%
2063/64	0.00%	42.60%	12.24%	17.34%	27.11%
2064/65	9.85%	39.08%	2.69%	14.24%	18.97%
Average	1.97%	37.42%	13.01%	10.43%	36.28%

Source: Annex-II

**Figure No.4.7.
Debt-Equity Ratio**



The D/E ratio shows the relationship between the debt and equity utilized in the capital structure of the CBs. The highest average ratio was seen of the EBL.

4.2.3. Capital Employed to Net worth Ratio

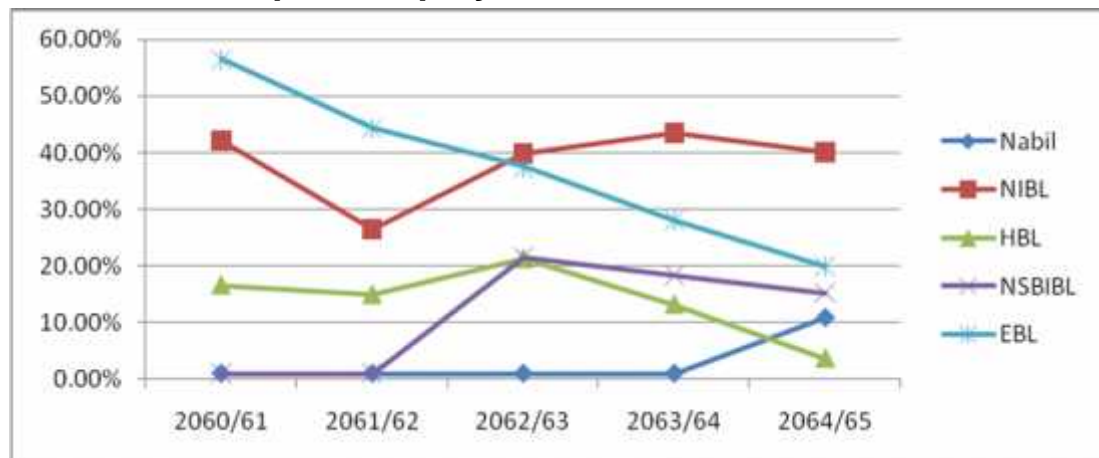
There is yet another alternative way of expressing the basic relationship between debt and equity that is capital employed to net worth ratio.

Table No.4.10.
Capital Employed to Net worth Ratio

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	1.00%	42.15%	16.71%	1.00%	56.52%
2061/62	1.00%	26.42%	15.02%	1.00%	44.32%
2062/63	1.00%	39.86%	21.38%	21.58%	37.46%
2063/64	1.00%	43.60%	13.24%	18.34%	28.11%
2064/65	10.85%	40.08%	3.69%	15.24%	19.97%
Average	2.97%	38.42%	14.01%	11.43%	37.28%

Source: 1+Debt-Equity Ratio

Figure No.4.8.
Capital Employed to Net worth Ratio



The Capital Employed to Net worth Ratio of most of the sample CBs is seen declining. But the ratio of Nabil is seen slightly increasing.

4.3. Analysis of Activity Ratio

Activity ratio is employed to evaluate with which the firm manage & utilize its assets. These ratios are called turnover ratio because they indicate the speed with which assets are being converted or turnover into sales.

4.3.1. Credit-Deposit Ratio

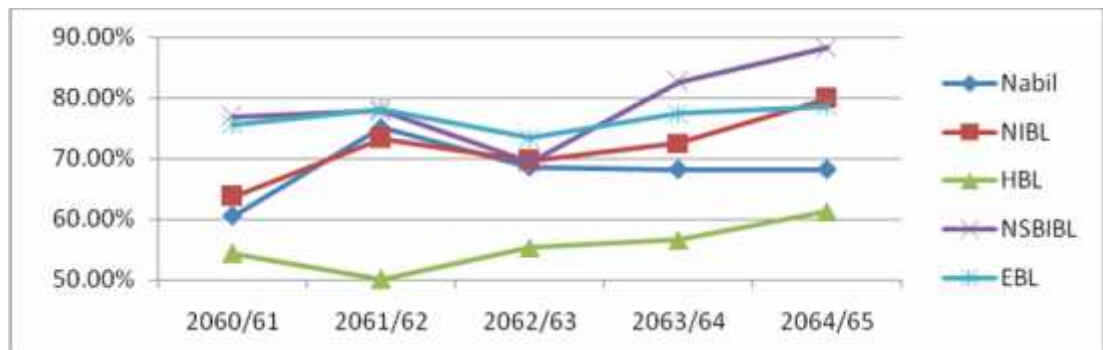
The CD ratio is one of the most important and popular measure of the liquidity position of the CBs.

**Table No.4.11.
Credit-Deposit Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	60.55%	63.68%	54.30%	76.85%	75.60%
2061/62	75.05%	73.33%	50.07%	77.87%	78.20%
2062/63	68.63%	69.63%	55.27%	69.32%	73.40%
2063/64	68.13%	72.56%	56.57%	82.66%	77.40%
2064/65	68.18%	79.91%	61.23%	88.32%	78.60%
Average	68.11%	71.82%	55.49%	79.00%	76.64%

Source: Annual Reports

**Figure No.4.9.
Credit-Deposit Ratio**



The best level of CD ratio is said to be between the ranges of 70% to 80%. The average CD ratio of HBL is seen slightly lower than the standard level with the average of 55.49%. The CD ratio of Nabil Bank is also seen lower with the average of 68.11%. NSBIBL has maintained the average highest CD ratio among the sample CBs with 79%.

4.3.2. Non-performing Credit to Total Credit Ratio

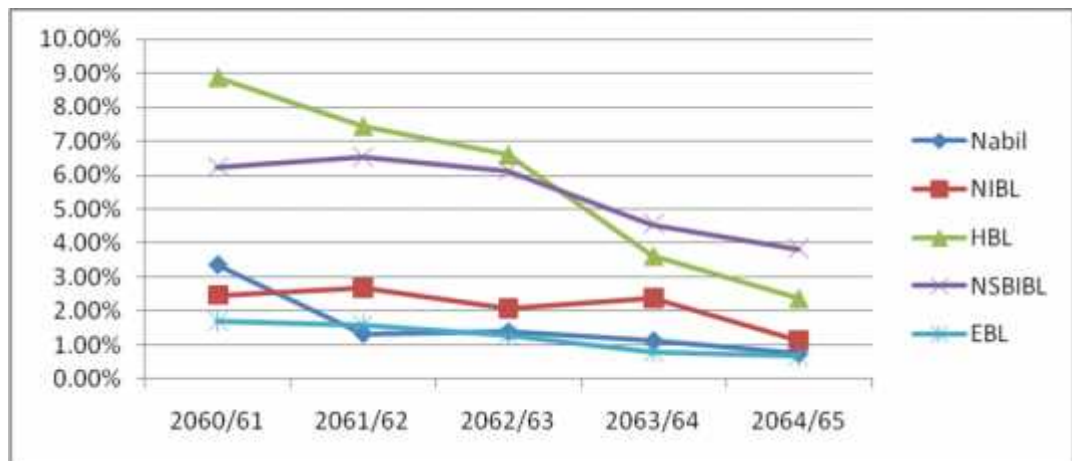
It is used to measure the actual performance of the credit flow of the financial institutions and the credit performance.

Table No.4.12.
Non-performing Credit to Total Credit Ratio

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	3.35%	2.47%	8.88%	6.25%	1.70%
2061/62	1.32%	2.69%	7.44%	6.54%	1.60%
2062/63	1.38%	2.07%	6.60%	6.13%	1.30%
2063/64	1.12%	1.12%	2.36%	3.83%	0.68%
Average	1.58%	2.14%	5.78%	5.46%	1.22%

Source: Annual Reports

Figure No.4.10.
Non-performing Credit to Total Credit Ratio



It is good to see the NPC of the sample CBs are seen declining in the past few F/Y. This also states that the number of loan defaulters of the CBs is seen declining day-by-day. The NPC to total credit ratio is one of the best indicator of the activity ratio for the CBs as the majority of the activity of the CBs are related with the handling of the credit.

The average ratio of HBL and NSBIBL are still in high level with 5.78% and 5.46% respectively. The position of EBL is seen in the best position among the sample CBs with average ratio of 1.22%.

4.4. Analysis of Profitability Ratio

Profit is the difference between total revenues & total expenses over a period of time. Profit is the ultimate output of a company, & it will have no future, if it fails to make sufficient profits. The profitability ratios are calculated to measure the operating efficiency of the c

4.4.1. Net Profit Margin

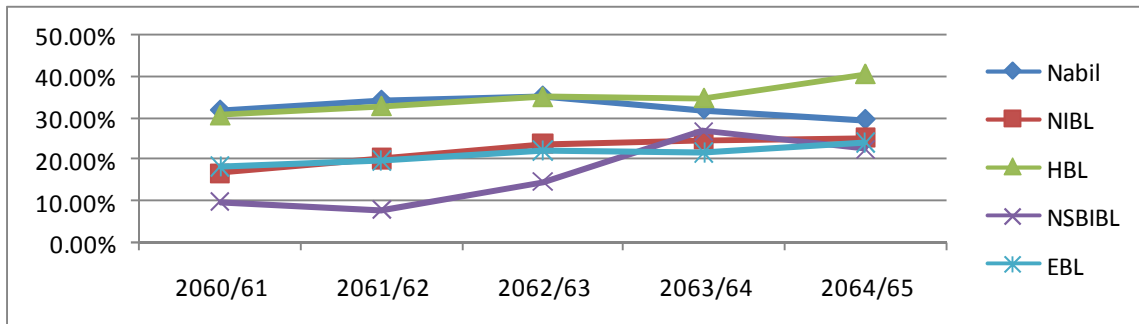
This ratio is very important to evaluate the efficiency of the management in present competitive banking market.

**Table No.4.13.
Net Profit Margin**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	31.92%	16.71%	30.75%	9.95%	18.30%
2061/62	34.33%	20.26%	32.98%	7.98%	19.90%
2062/63	35.32%	23.99%	35.16%	14.63%	22.20%
2063/64	32.16%	25.07%	34.90%	26.95%	21.60%
2064/65	29.68%	25.33%	40.73%	22.67%	24.17%
Average	32.68%	22.27%	34.90%	16.44%	21.23%

Source: Annual Reports

**Figure No.4.11.
Net Profit Margin**



The net profit margin is one of the basic indicators of the profitability position of the CBs. The NPM of the entire sample CBs are seen increasing in every F/Y. The average NPM of HBL was seen the highest among the CBs with 34.90% & similarly lowest of NSBIBL with the average NPM of 16.44%.

4.4.2. Return on Assets

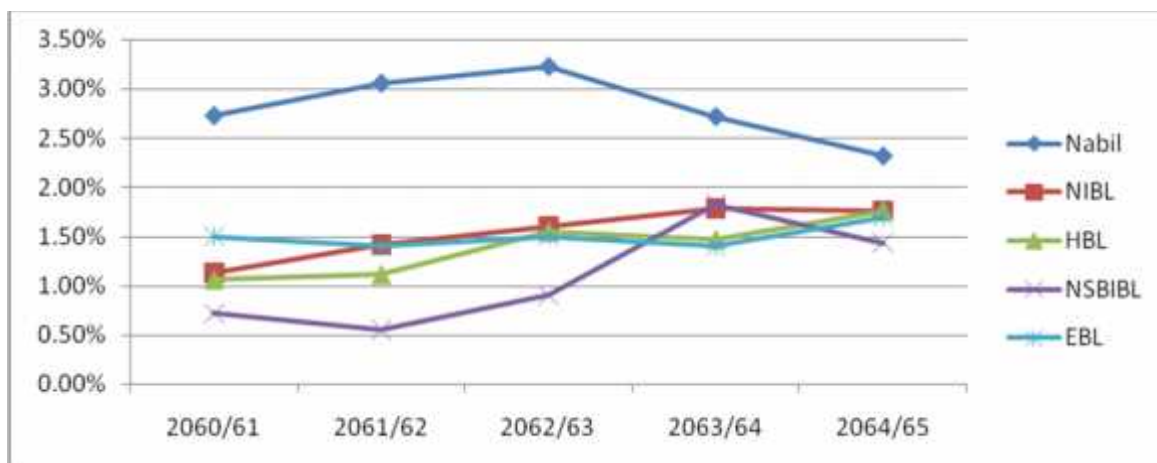
It is the ratio of a bank's net after-tax income divided by its total assets.

**Table No.4.14.
Return on Assets**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	2.73%	1.13%	1.06%	0.72%	1.50%
2061/62	3.06%	1.42%	1.11%	0.55%	1.40%
2062/63	3.23%	1.61%	1.55%	0.90%	1.50%
2063/64	2.72%	1.79%	1.47%	1.83%	1.40%
2064/65	2.32%	1.77%	1.76%	1.44%	1.70%
Average	2.81%	1.54%	1.39%	1.09%	1.50%

Source: Annual Reports

**Figure No.4.12.
Return on Assets**



The average ROA of Nabil Bank is seen the highest among the sample CBs. Its average ROA during the study period was seen 2.81%. The average ROA of the other sample CBs were seen around 1.50%. The lowest average ROA among the sample CBs was seen for NSBIBL with 1.09% during the study period.

4.4.3. Return on Equity

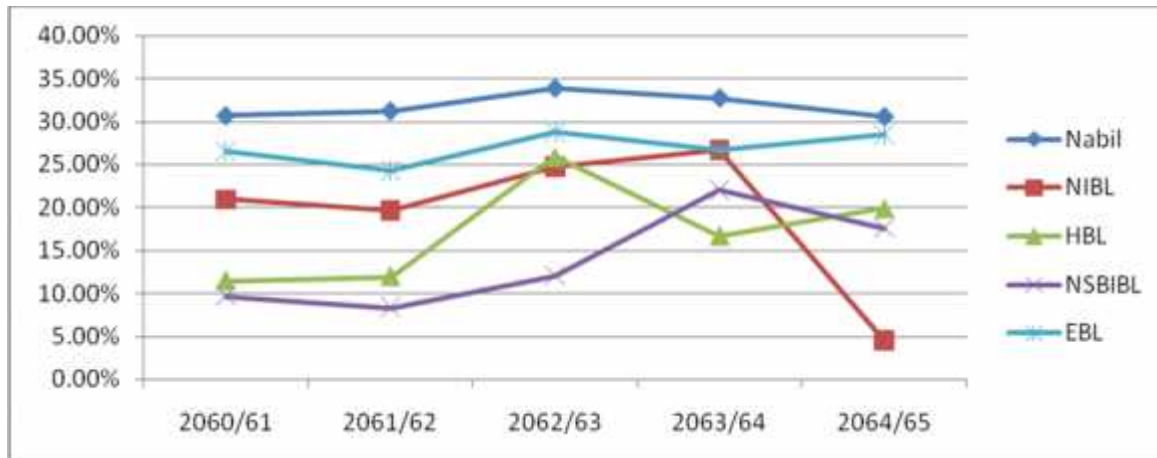
A return on shareholders' equity is calculated to see the profitability of owners' investment. ROE indicates how well the firm has used the resources of owners.

**Table No.4.15.
Return on Equity**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	30.73%	20.94%	11.48%	9.71%	26.57%
2061/62	31.28%	19.67%	12.00%	8.33%	24.29%
2062/63	33.88%	24.77%	25.90%	12.04%	28.84%
2063/64	32.76%	26.70%	16.72%	22.10%	26.79%
2064/65	30.63%	4.52%	19.90%	17.64%	28.54%
Average	31.86%	19.32%	17.20%	13.96%	27.01%

Source: Annex-III

**Figure No.4.13.
Return on Equity**



The average ROE of NSBIBL is seen the lowest among the sample CBs. Although the average ROE for NIBL is seen higher than that of HBL & NSBIBL, the ROE was declined very low to 4.52% in the F/Y 2064/65. The highest average ROE was seen of Nabil Bank with

31.86%. The average ROE of EBL was also seen in good position with 27.01%.

4.4.4. Return on Investment

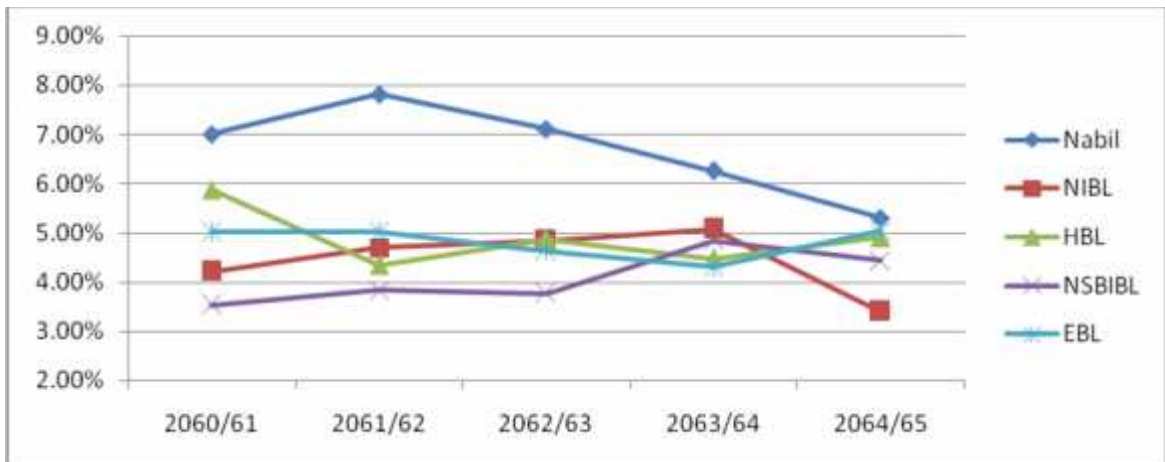
ROI shows the actual return from the investment by the financial institution. It is also the part of the overall profit of the financial institutions.

Table No.4.16.
Return on Investment

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	7.01%	4.21%	5.88%	3.54%	5.01%
2061/62	7.82%	4.70%	4.35%	3.84%	5.01%
2062/63	7.11%	4.84%	4.87%	3.77%	4.63%
2063/64	6.26%	5.08%	4.48%	4.85%	4.31%
2064/65	5.30%	3.40%	4.91%	4.44%	5.04%
Average	6.70%	4.45%	4.90%	4.09%	4.80%

Source: Annex-III

Figure No.4.14.
Return on Investment



The highest ROI among the sample CBs is seen of Nabil Bank with 6.70% and the lowest of NSBIBL with the average ROI of 4.09%. The ROI of the all the sample CBs are seen declining. Due to the highly

competitive banking environment, the return from the investment is seen declining for the CBs.

4.4.5. Net Interest Margin

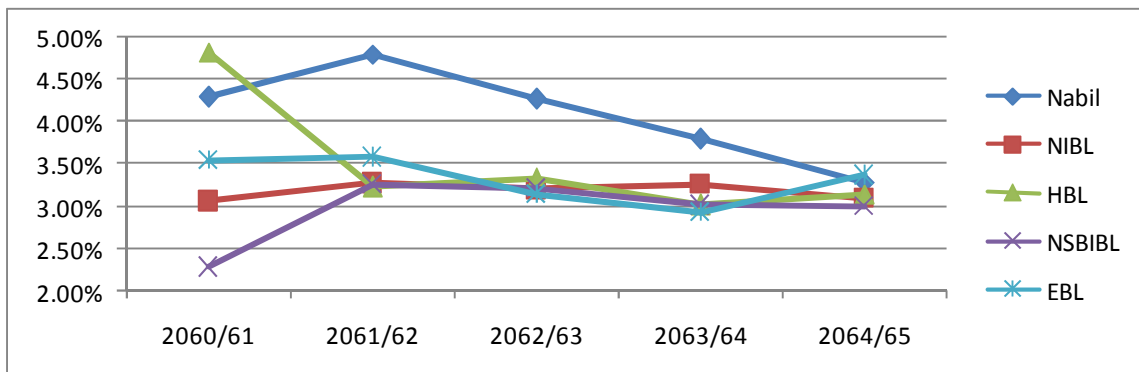
Net interest margin shows the interest revenue less interest expenses divided by a bank's total asset.

**Table No.4.17.
Net Interest Margin**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	4.29%	3.06%	4.82%	2.28%	3.55%
2061/62	4.80%	3.27%	3.23%	3.26%	3.58%
2062/63	4.27%	3.20%	3.32%	3.21%	3.15%
2063/64	3.79%	3.26%	3.01%	3.01%	2.93%
2064/65	3.29%	3.09%	3.15%	3.00%	3.37%
Average	4.09%	3.18%	3.51%	2.95%	3.32%

Source: Annex-III

**Figure No.4.15.
Net Interest Margin**



Due to the bottle-neck competition among the CBs operating within the country, the net interest margin of the CBs are seen declining in the past few years. The net interest margin is also one of the major sources of earning of the commercial banks. The interest rate spread is one of the major sources of the earning of the CBs. But, the ratio is seen declining. The least average net interest margin was seen for

NSBIBL with 2.95% during the period. The highest average ratio was seen for the Nabil Bank with 4.09%.

4.5. Analysis of Coverage Ratio

Coverage ratio is another type of leverage ratio which is calculated from the information of profit & loss account & income statement.

4.5.1. Interest Coverage

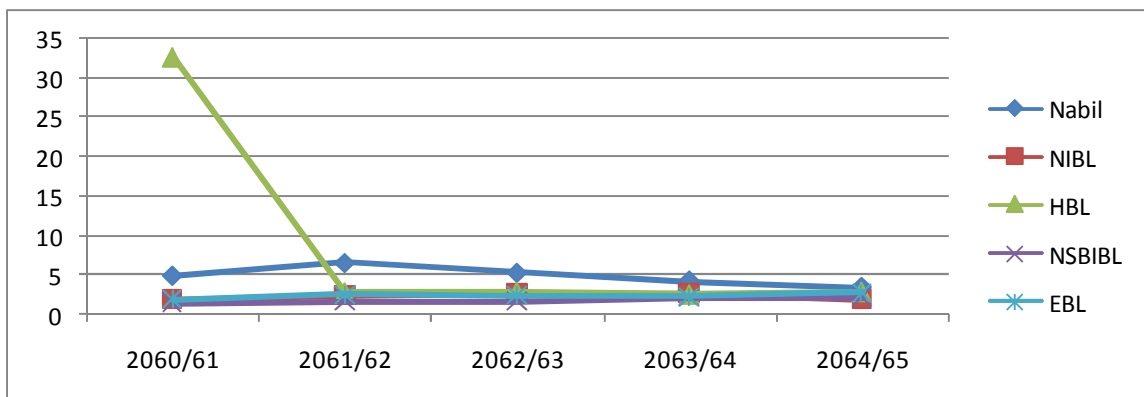
The interest coverage ratio or the times-interest-earned is used to test the firm's debt-servicing capacity.

**Table No.4.18.
Interest Coverage**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	4.91	1.96	32.72	1.38	1.92
2061/62	6.56	2.47	2.83	1.77	2.57
2062/63	5.29	2.69	2.91	1.71	2.41
2063/64	4.29	2.66	2.59	2.08	2.32
2064/65	3.47	1.89	2.92	2.18	2.76
Average	Rs.4.904	Rs.2.334	Rs.8.794	Rs.1.824	Rs.2.396

Source: Annex-IV

**Figure No.4.16.
Interest Coverage**



The interest coverage for HBL was seen very high in the F/Y 2060/61 of Rs.32.72 which ultimately also made the highest average coverage ratio among the sample CBs. Ignoring the position of HBL, highest interest coverage is seen of Nabil Bank with the average of Rs.4.904. The least average coverage was seen of NSBIBL with Rs.1.824.

4.6. Analysis of Valuation/Market Value Ratio

The ratios which examine the stock price relative to earning and the market value of the firm relative to the book value are the valuation ratios which reflect results of overall performance of the company.

4.6.1.EPS

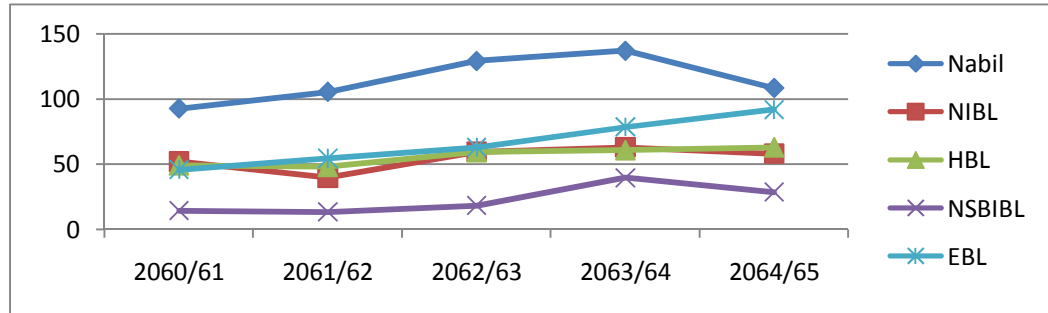
EPS is one of the most valuable indicators of any CBs for the shareholders or any stake holders who are interested in the movement of the share prices at the stock market of a particular company. Higher the value of EPS better for the respective companies' shareholders or for the potential investors.

Table No.4.19.
EPS

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	92.61	51.70	49.05	14.26	45.60
2061/62	105.49	39.50	47.91	13.29	54.20
2062/63	129.21	59.35	59.24	18.27	62.80
2063/64	137.08	62.57	60.66	39.35	78.40
2064/65	108.31	57.87	62.74	28.33	91.82
Average	Rs.114.54	Rs.54.198	Rs.55.92	Rs.22.70	Rs.66.564

Source: Annual Reports

**Figure No.4.17.
EPS**



The average EPS of Nabil was seen highest among the sample CBs with Rs.114.54 during the study period. Then the average EPS of EBL was seen well than of Nabil. Other sample CBs average EPS was seen around Rs.55. The least average EPS was seen for NSBIBL with Rs.22.70 during the period.

4.6.2.DPS

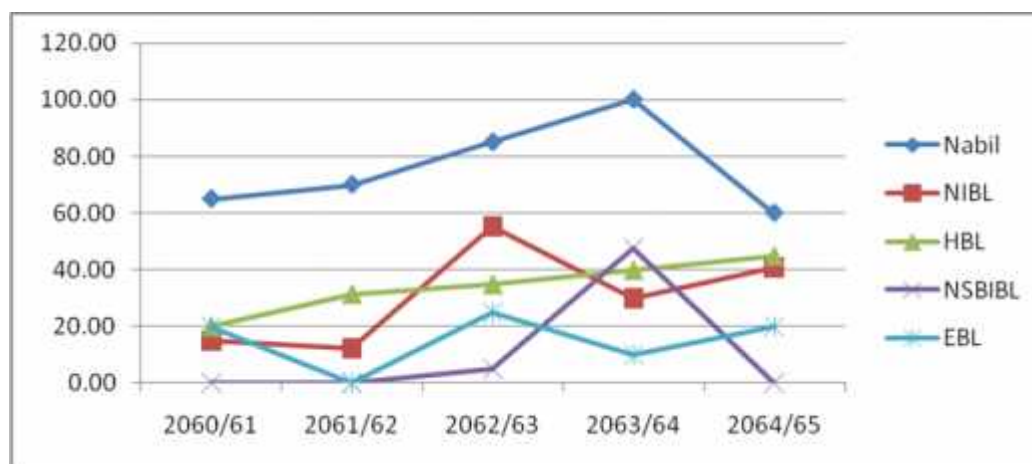
DPS is the earnings distributed to ordinary shareholders divided by the number of ordinary shares outstanding.

**Table No.4.20.
DPS**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	65.00	15.00	20.00	0.00	20.00
2061/62	70.00	12.25	31.58	0.00	0.00
2062/63	85.00	55.46	35.00	5.00	25.00
2063/64	100.00	30.00	40.00	47.59	10.00
2064/65	60.00	40.83	45.00	0.00	20.00
Average	Rs.76.00	Rs.30.708	Rs.34.316	Rs.10.518	Rs.15.00

Source: Annual Reports

**Figure No.4.18.
DPS**



Nabil Bank has been paying the highest average DPS to its shareholders. The average DPS of Nabil Bank for the past five F/Y is seen Rs.76.00 per share. NSBIBL & EBL has not been able to pay dividend to their shareholders in the certain F/Y. And similarly, the average least DPS for the last F/Y was for NSBIBL with Rs.10.518 per share. Similarly, the average DPS was Rs. 15.00 for EBL also.

4.6.3.Payout Ratio

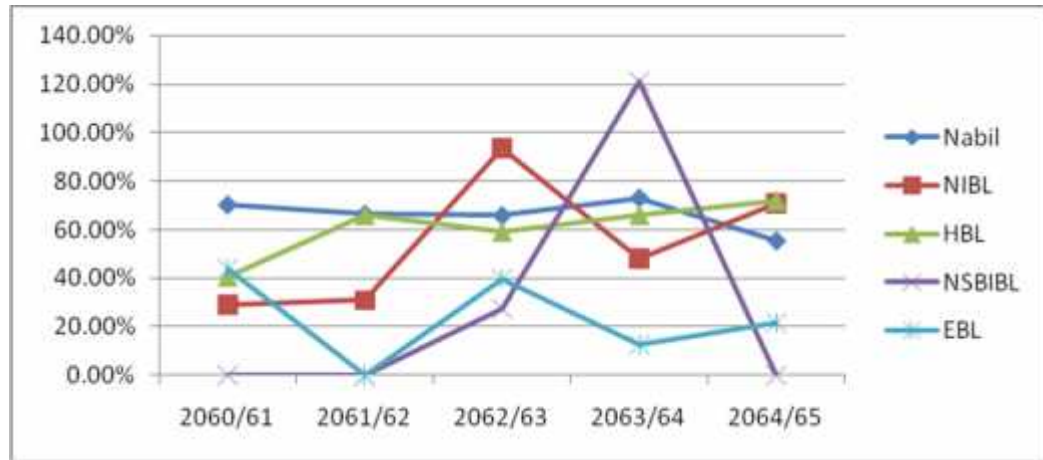
The dividend-payout ratio or simply payout ratio is DPS (or total equity dividends) divided by the EPS (or profit after tax).

**Table No.4.21.
Payout Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	70.19%	29.01%	40.77%	0.00%	43.86%
2061/62	66.36%	31.01%	65.92%	0.00%	0.00%
2062/63	65.78%	93.45%	59.08%	27.37%	39.81%
2063/64	72.95%	47.95%	65.94%	120.94%	12.76%
2064/65	55.40%	70.55%	71.72%	0.00%	21.78%
Average	66.14%	54.39%	60.69%	29.66%	23.64%

Source: Annex-V

**Figure No.4.19.
Payout Ratio**



The highest average payout ratio is seen of Nabil Bank with 66.14%. The least average payout ratio was seen of EBL with 23.64%. NSBIBL has also the lower payout ratio. Both the CBs have also the inconsistent payout in the past 5 F/Y. HBL has also the good average payout ratio.

4.6.4.P/E Ratio

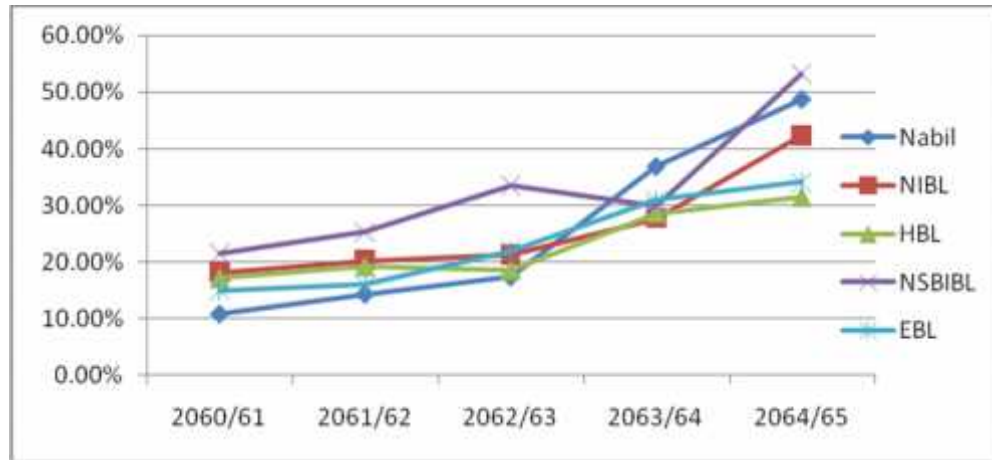
P/E ratio reflects investors' expectations about the growth in the firm's earnings.

**Table No.4.22.
P/E Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	10.80%	18.18%	17.12%	21.45%	14.90%
2061/62	14.27%	20.25%	19.20%	25.21%	16.00%
2062/63	17.34%	21.23%	18.57%	33.49%	22.00%
2063/64	36.84%	27.63%	28.69%	29.89%	31.00%
2064/65	48.70%	42.33%	31.56%	53.34%	34.10%
Average	25.59%	25.92%	23.03%	32.68%	23.60%

Source: Annual Reports

**Figure No.4.20.
P/E Ratio**



The P/E ratio is widely used by the stock market analyst. It helps to estimate the shareholders expectation from the respective CBs p[erformance in future as well. It shows the relationship between the MPS and the EPS of the companies. The P/E ratio of every sample CBs were seen in increasing trend during the past five F/Y. The highest average P/E ratio was seen for NSBIBL with 32.68% during the study period. The least average P/E ratio was seen of HBL with 23.03%.

4.6.5.MV/BV Ratio

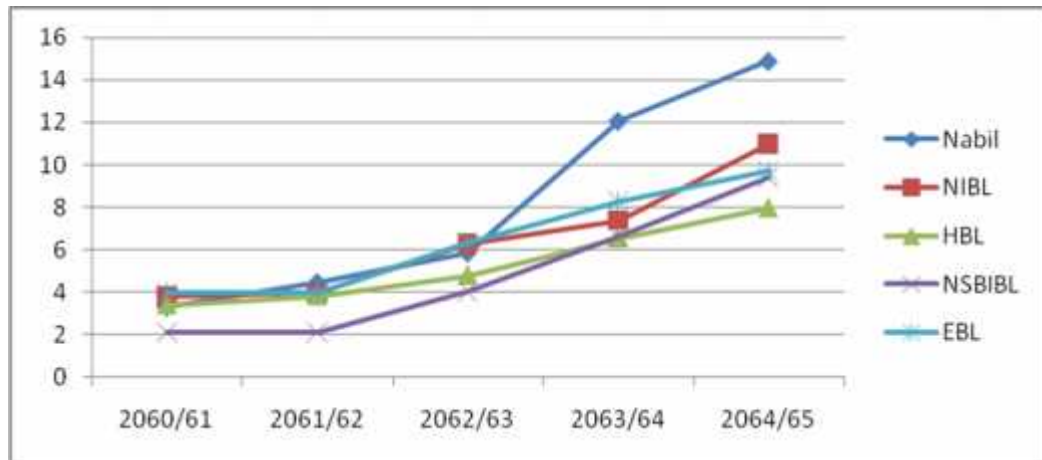
Market value-to-book value (M/B) ratio is the ratio of share price to book value per share.

**Table No.4.23.
MV/BV Ratio**

F/Y	Nabil	NIBL	HBL	NSBIBL	EBL
2060/61	3.32	3.81	3.40	2.09	3.96
2061/62	4.47	3.98	3.84	2.09	3.96
2062/63	5.88	6.27	4.81	4.03	6.34
2063/64	12.08	7.39	6.57	6.61	8.30
2064/65	14.90	10.99	7.99	9.41	9.73
Average	8.13	6.488	5.322	4.846	6.458

Source: Annex-V

**Table No.4.21.
MV/BV Ratio**



The M/B ratio of the entire sample CBs are in excellent position. The sample CBs' worth is not less than the funds, which shareholders have put into it. So, the entire CBs are in favor of shareholders. The best position is seen for Nabil Bank with ratio of 8.13.

4.7. Test of Hypothesis

4.7.1. Test on Homogeneity on D/E Ratio of the Sample CBs

Null Hypothesis (H_0): $\tilde{X}_1 \tilde{X}_2 \tilde{X}_3 \tilde{X}_4 \tilde{X}_5$ i.e. there is no significant difference among D/E Ratio of the sample CBs i.e. D/E Ratio of CBs is homogenous.

Alternative Hypothesis (H_1): $\tilde{X}_1 \mid \tilde{X}_2 \mid \tilde{X}_3 \mid \tilde{X}_4 \mid \tilde{X}_5$ i.e. there is a significant difference among D/E Ratio of the sample CBs.

Table No.:4.24

One-way ANOVA Table for D/E Ratio of CBs

Source of Variation	Sum of Square	d.f.	Mean Square	F ratio= $\frac{MSC}{MSE}$
Between samples	SSC= 5168.9535	k-1= 5-1=4	MSC= $\frac{5168.9535}{4}$ =1292.2384	$F = \frac{MSC}{MSE} = \frac{1292.2384}{81.1634}$
Within samples(Error)	SSE= 1623.2678	n-k= 25-5=20	MSE= $\frac{1623.2678}{20}$ =81.1634	
Total	TSS= 3097.991904	n-1=24		F=15.9214

Source: Annex-VI

Critical Value: The tabulated value of F at 5% level of significance for 4 and 20 d.f. is 2.87.

Decision: Since calculated 'F' is greater than tabulated value, the null hypothesis, H_1 is rejected and hence the null hypothesis, H_0 is rejected. Therefore, we conclude that there is no significant difference among D/E Ratio of the sample CBs i.e. D/E Ratio of CBs is homogenous.

4.7.2. Test on Homogeneity on ROA of the Sample CBs

Null Hypothesis (H₀): $\tilde{X}_1 \tilde{X}_2 \tilde{X}_3 \tilde{X}_4 \tilde{X}_5$ i.e. there is no significant difference among ROA of the sample CBs i.e. ROA of CBs is homogenous.

Alternative Hypothesis (H₁): $\tilde{X}_1 | \tilde{X}_2 | \tilde{X}_3 | \tilde{X}_4 | \tilde{X}_5$ i.e. there is a significant difference among ROA of the sample CBs.

Table No.:4.25
One-way ANOVA Table for ROA of CBs

Source of Variation	Sum of Square	d.f.	Mean Square	F ratio= $\frac{MSC}{MSE}$
Between samples	SSC= 8.8300	k-1= 5-1=4	MSC= $\frac{8.8300}{4}$ =2.2075	$F = \frac{MSC}{MSE} = \frac{2.2075}{0.1174}$
Within samples(Error)	SSE= 2.3471	n-k= 25-5=20	MSE= $\frac{2.3471}{20}$ =0.1174	
Total	TSS=11.1771	n-1=24		F=18.8032

Source: Annex-VII

Critical Value: The tabulated value of F at 5% level of significance for 4 and 20 d.f. is 2.87.

Decision: Since calculated 'F' is greater than tabulated value, the null hypothesis, H₁ is rejected and hence the null hypothesis, H₀ is rejected. Therefore, we conclude that there is no significant difference among ROA of the sample CBs i.e. ROA of CBs is homogenous.

4.7.3. Test on multiple correlation among the MPS, EPS and DPS of the Sample CBs

Null Hypothesis (H_0): i.e. $R_{1,23}=0$, i.e. there are no multiple correlations among the MPS, EPS and DPS of the Sample CBs

Alternative Hypothesis (H_1): i.e. $R_{1,23} \neq 0$, i.e. there are multiple correlations among the MPS, EPS and DPS of the Sample CBs

Degree of freedom (d.f) $= n - 2 = 5 - 2 = 3$

Critical Value: The tabulated value of t at 5% level of significance for two tailed test and for 3 d.f. is 2.353.

Decision:

For Nabil: Since the calculated value of 't' is lesser than the tabulated value of 't', the null hypothesis is accepted. Hence, there are no multiple correlations among the MPS, EPS and DPS.

For NIBL: Since the calculated value of 't' is lesser than the tabulated value of 't', the null hypothesis is accepted. Hence, there are no multiple correlations among the MPS, EPS and DPS.

For HBL: Since the calculated value of 't' is greater than the tabulated value of 't', the null hypothesis is rejected. Hence, there are multiple correlations among the MPS, EPS and DPS.

For SBIBL: Since the calculated value of 't' is greater than the tabulated value of 't', the null hypothesis is rejected. Hence, there are multiple correlations among the MPS, EPS and DPS.

For EBL: Since the calculated value of 't' is greater than the tabulated value of 't', the null hypothesis is rejected. Hence, there are multiple correlations among the MPS, EPS and DPS.

4.8. Major Findings of Study

-) The current ratio of HBL during the F/Y 2062/63 is seen the best among the sample CBs with 0.11:1.
-) The stock of CBs were seen minimal there are no changes in the quick ratio as from the current ratio.
-) HBL has a good level of cash ratio with the average of 41.66%. The lowest cash ratio was seen for EBL with the average of 26.64%.
-) The highest level of average cash position ratio is seen for NIBL with 90.90%. The least was seen of NSBIBL.
-) The average NWC of NIBL is seen in the best position with the least ratio of 0.494.
-) The highest average capacity ratio was seen of NSBIBL with 64.07% and the lowest ratio was seen of HBL with 46.13%.
-) The highest average level of liquid securities indicator is seen of NSBIBL with 22.09%.
-) The highest level of debt ratio among the sample CBs was seen of EBL with the average of 29.63%.
-) The highest D/E average ratio was seen of the EBL.
-) The Capital Employed to Net worth Ratio of most of the sample CBs is seen declining. But the ratio of Nabil is seen slightly increasing.

-) NSBIBL has maintained the average highest CD ratio among the sample CBs with 79%.
-) The NPC ratio position of EBL is seen in the best position among the sample CBs with average ratio of 1.22%.
-) The NPM of the entire sample CBs are seen increasing in every F/Y. The average NPM of HBL was seen the highest among the CBs with 34.90%.
-) The average ROA of Nabil Bank is seen the highest among the sample CBs.
-) The average ROE of NSBIBL is seen the lowest among the sample CBs. & ROE of EBL is seen in good position among the sample CBs.
-) The highest ROI among the sample CBs is seen of Nabil Bank with 6.70% and the lowest of NSBIBL with the average ROI of 4.09%.
-) The least average net interest margin was seen for NSBIBL with 2.95% during the period. The highest average ratio was seen for the Nabil Bank with 4.09%.
-) The interest coverage for HBL was seen very high in the F/Y 2060/61 of Rs.32.72 which ultimately also made the highest average coverage ratio among the sample CBs.
-) The average EPS of Nabil was seen highest among the sample CBs with Rs.114.54 during the study period.
-) Nabil Bank has been paying the highest average DPS to its shareholders.
-) The highest average payout ratio is seen of Nabil Bank with 66.14%.

-) The highest average P/E ratio was seen for NSBIBL with 32.68% during the study period. The least average P/E ratio was seen of HBL with 23.03%.
-) The best position is seen for Nabil Bank with M/B ratio of 8.13.
-) There is no significant difference among D/E Ratio of the sample CBs i.e. D/E Ratio of CBs is homogenous.
-) There is no significant difference among ROA of the sample CBs i.e. ROA of CBs is homogenous.
-) From multiple correlations, there is a relation among the MPS, EPS and DPS of the HBL, NSBIBL & EBL & vice-versa for Nabil & NIBL.

Chapter-5

Summary, Conclusion and Recommendations

5.1. Summary

Financial analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account. Financial analysis can be undertaken by management of the firm, or by parties outside the firm, viz. owners, creditors, investors and others. The nature of analysis will differ depending on the purpose of the analyst.

Ratio Analysis is a powerful tool of financial analysis. A ratio is defined as the indicated quotient of two mathematical expressions & as the relationship between two or more things. In another words, the relationship between two accounting figures, expressed mathematically, is known as a financial ratio. It is also a yard-stick for measuring the performance of any financial institution.

Commercial banks are the heart of the financial system. They hold the deposit of many persons, government establishment and business units. They make funds available through their lending and investing activities to borrowers, individual and business firm and government establishment. In doing so, they assist both the flow of goods and securities from the procedures to customers and the financial activities of the government. They provide a large portion of the medium of exchange and they are media through which monetary policy is affected. Those facts show that the commercial banking system of the nation is important to the financing of economy.

So, the performance of the commercial banks of any country will directly affects in the overall economy of the country.

5.2. Conclusion

Every year the number of commercial banks is increasing. The banking market of the country has become highly bottle-necked. Similarly, the existing some development banks and finance companies are thinking of upgrading into an 'A' class commercial banks.

Any how, the commercial banks of Nepal are maintaining their profitability and satisfying their shareholders. Though the economy of the country is not booming but the banking business of Nepal is seen booming. Day-by-day the expansion of branches & services of the commercial banks are increasing. In the race even the oldest commercial bank like Nepal Bank Limited is also chasing in the race to provide new-new banking service to the customers. The increase in the banking industry competition has benefited Nepalese customers.

From the study, mainly, the leading joint venture commercial banks of the country are the sample & their financial performance in the past few years are seen in good position. Especially, the performance of Nabil Bank & HBL is seen in very good position as these two banks majority financial indicators are seen in good position. But the least average P/E ratio was seen of HBL. Similarly, NSBIBL is not performing as well as per the expectation from the shareholders being as its majority indicators are seen least among the sample CBs.

From the test of hypotheses, the D/E ratio & ROA of the sample commercial banks are seen homogenous.

5.3. Recommendations

The following recommendations are given after the study result:

-) Timely audit of the financial reports should be done by the CBs.
-) The CBs should be capable to maintain the financial indicators as far as possible as per the standard.
-) The central bank of the country should also circulate the required standard ratio to the CBs as per the necessity of the country's economy.
-) Publish of the financial statement should be timely & by-law.
-) The central bank as well as the Security Board should co-ordinate to issue the directives regarding the standards of the ratios that the commercial banks should maintain.
-) Proper interpretation and analysis should be made of ratios of the CBs before investing in shares of the respective CBs.