CHAPTER 4

ANALYSIS AND INTERPRETATIN OF DATA

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4.1 INTRODUCTION

India is the largest country in South Asia with a huge financial system characterized by many and varied financial institutions and instruments. The Indian financial sector was well-developed even prior to the political independence of the country in 1947.

In the last few decades, developed and developing countries have experienced significant episodes of systemic banking growth. This has been more rapid in developing areas. Banking is topic, practice, business or profession almost as old as the very existence of man, but literarily it can be rooted deep back the days of the Renaissance. It has sprouted from the very primitive Stone-age banking, through the Victorian-age to the technology-driven Google-age banking, encompassing automatic teller machines (ATMs), credit and debit cards, correspondent and internet banking

Adequately managing the performance in banking field is critical for the survival and growth of the banks. Banks are in the business of safeguarding money and other valuables for their clients. They also provide loans, credit and payment services such as checking accounts, money orders and cashier's checks. Banks also may offer investment and insurance products and a wide whole range of other financial services.

The role played by banking institution is so important than that we cannot think about life without banks. The innovation and modernization of the banking sectors nowadays have made the banking system more secure and more comfortable for their customers, so that they can even do transactions through the internet and even their mobile phones. Commercial Banks as financial intermediaries accept deposits from savers and give loans to borrowers for investment and the spread between the interest rate paid to depositors and that charged to borrower is the profit or the interest income to the banks. They also provide some trading facilities like letter of credit, shipping guarantee, Banker's acceptance, and so on.

Banks are important agencies for the generation of savings of the community. They are also the main agents of credit. They divert and employ the funds to make possible fuller utilization of the resources of a nation. They transfer funds from regions where it is available in plenty to where it can be efficiently utilized. The distributions of funds between regions pave the way for the balanced development of the different regions. They are thus catalytic agents that create opportunities for the development of the resources to speed up the tempo of economic development.[1]

Banking industry has been changed after reforms process. The government has taken this sector in a basic priority and this service sector has been changed according to the need of present days. Banking sector reforms in India struggle to increase efficiency and profitability of the banking institutions as well as brought the existing banking institutions face to face with global competition in globalization process. Now, there has been a rapid expansion in the number of banks including in private sector and foreign banks. At present, public sector banks, private banks and foreign banks are playing on equal field with the important role.

Profitability is mainly based on the concept of profit; it is the profit making ability of an enterprise. The profitability earned by an organization over the years is a barometer reflecting organizational performance. Performance evaluation is an important pre- requisite for sustained growth and development of any institution. As in the case of any institution, the evaluation of the performance of banks has to be undertaken in relation to their goals and objectives.

In recent years the evaluation of performance of commercial banks, has attracted considerable attention. Banks are expected to work towards several objectives which can sometimes appear to be inconsistent. They have to abide by monetary and credit policy regulations, achieve social and economic goals, and operate on commercial considerations. Their affairs are not conducted merely on economic or financial considerations. Hence it is not easy to evolve a definite set of parameters to evaluate their overall performance. About bank performance, Shri. R. N. Malhotra, the former Governor of the Reserve

1 Performance Effectiveness of Nationalised Banks: A Case Study of Syndicate Bank by Zacharias Thomas

Bank of India **(R. N. Malhotra was the seventeenth governor of the Reserve Bank of India, serving from 4 February 1985 to 22 December 1990)** observed that banks with satisfactory growth in deposits that fulfill the lending criterion to the various sectors and meet the requisite reserve requirements and provide for bad and doubtful debts with a proper track record in making profits would be acclaimed as 'good'. Such a performance if associated with a good image in customer service would be regarded as 'highly creditable.[2]

Over the years, a considerable number of studies have debated about the performance of banks around the globe. The performance and soundness of the banking sector is very important for almost all sectors. For the better performance of banks, managers require weigh complex trade-offs between growths, return, and risk.

According to **Michael Mascon** "Performance is dependent on efforts, abilities, traits and the individual's perception of his role." While measuring the performance of a firm or an enterprise we need a measuring unit. Human aims and beliefs are mostly realized through the establishment of diverse kinds of associations. All associations were established for fulfillment of some goals and objectives. Thus association needs performance measurement to find out as to how much is organization has achieved by its course of action for its targets.[3]

Erich A. Helfert rightly remarks, "The measurement of business performance is more complex and difficult. Since it must deal with the effectiveness with which capital is employed, the efficiency and profitability of operations, and the value and safety of various claims against the business."[4]

2 Performance Effectiveness of Nationalised Banks: A Case Study of Syndicate Bank by Zacharias Thomas

3 A Thesis on the Study of Financial Performance of Banking Sector of India by Prof.: Nirmal Nathwani

4 A Thesis on the Study of Financial Performance of Banking Sector of India by Prof.: Nirmal Nathwani

The main object of preparing financial statement is to show the result achieved by an enterprise through its operations, the revenue and the expenditure accrued to fulfill that revenues and the actual financial position for the particular period on a particular date. In order to analyze financial statement properly, users must have a basic understanding of the concept and principles underlying their preparation. Without such an understanding users will not recognize the limits of financial statements.

In any business enterprise, accounting provides financial data through income statements, balance sheet and sources and uses of funds statements. According to **Stanley B**., "The financial manager must know how to interpret and use these statements in the allocation of the firm's financial resources to generate the best return possible in the long run. Finance is the link that integrates the economic theory with the numbers of Accounting."[5]

Measurement of performance through the financial statement analysis provides a good knowledge about the behaviour of financial variables for measuring the performance of different units in the industry and to indicate the trend of improvement or deterioration in the organizations.

To keep performance of the banking sector high, knowing dynamics of it is very important. This paper aims to analyze the performance of the banking sector in different perspectives and determine factors affecting the performance. There are areas where the performance can be improved by effective assessment of various activities performed by a business enterprise in different areas of operations. The areas of operations may be termed as the areas of performance.

A competitive banking environment can improve banks' ability to compete with new upcoming banks. In these economies, new entry is expected to be related with more efficiency gains of local banks due to increased competition and positive spillovers. This study further hypothesizes that the competitiveness of these banking sectors will have a moderation impact on the safety and soundness of all the banks.

5 A Thesis on the Study of Financial Performance of Banking Sector of India by Prof.: Nirmal Nathwani

In the Indian financial system, commercial banks are the major mobilisers and disbursers of financial resources. They have an all pervasive role in the growth of a developing country like India.

Banks in India may be commercial banks incorporated as joint stock companies, public sector banks or cooperative banks or regional rural banks or foreign banks. Indian banks operate nationally through a colossal network of branches. Since, they have a large and varied clientele with a diverse spectrum of needs, the Indian banks specialize in different geographical regions—urban and rural, different sectors—industry both large and small, agriculture, trade, housing, exports, etc. However, all of them in the organized sector come under the purview of the RBI Act and the Banking Regulation Act.

The main strength of the Indian banks is their vast number of employees who are well conversant with the social and cultural fabric of their customers. The Indian banks by and large focus on core banking operations. They also strictly comply with the RBI guidelines as to liquidity requirements, interest rates and priority sector lending amongst other provisions.

Research is a systematic way of investigation to solve problems and research methodology is a process of getting solved. The main purpose of this research study is to compute the performance of domestic and foreign banks operating in India, and to find out that either domestic bank are better in performance or foreign banks. This examination leads in the direction of analysis of data of different domestic and foreign banks operating in India**.**

All the domestic and foreign banks operating in India are the anticipated populations for this research study. To gauge the difference of the performance level of domestic and foreign banks stratified systematic sampling technique has been used. In stratified systematic sampling population can be alienated into identified groups, and each group sampled using a systematic approach.

4.2 RATIOS

Ratio is a result of one number or quantity divided by another. Ratios are the simplest mathematical (statistical) tools that reveal significant relationships hidden in mass of data, and allow meaningful comparisons. Some ratios are expressed as fractions or decimals, and some as percentages.[6]

Quantitative analysis of information contained in a company's financial statements. Ratio analysis is based on line items in financial statements like the balance sheet, income statement and cash flow statement; the ratios of one item – or a combination of items - to another item or combination are then calculated. Ratio analysis is used to evaluate various aspects of a company's operating and financial performance such as its efficiency, liquidity, profitability and solvency. The trend of these ratios over time is studied to check whether they are improving or deteriorating. Ratios are also compared across different companies in the same sector to see how they stack up, and to get an idea of comparative valuations. Ratio analysis is a cornerstone of fundamental analysis.

The most traditional method to benchmark efficiency in the banking sector is ratio analysis of different financial parameters. These ratios analyze performance from one specific angle and may provide comprehensive picture based on composite effect of several factors.

Parameters of the Study

There are different approaches in research to deal different types of research problems.

Banking industry is different in the sense that it is more risk taking. Banking regulators are extremely concerned about the safety and soundness of the banking network. As a result, focusing only on efficiency measures is not sufficient in evaluating banks' overall performance. Therefore, this study adopts certain parameters in form of ratios to assess the impact of foreign entry on domestic banks' performance on a full-scale basis.

6 businessdictionary.com

This chapter deals with the efficiency of banks, which is one of the key parameters for evaluating the financial performance. There are hundred banks at present in Indian Banking Sector. All these banks are divided into three groups (private sector bank, Public sector bank and Foreign sector bank) as discussed earlier. To evaluate efficiency of each group, fourteen (14) ratios have been observed for the period of twelve (12) years. Each group is having the bunch of banks, so, an overall performance of each banking sector can be discussed here.

The purpose of this analysis is to know the performance of each group and to observe as to which one is the best group.

Following are the parameters in form of ratios that are selected for the purpose of this study

1. Credit Deposit Ratio
2. Interest Income as Percentage to Total Income
3. Non – Interest Income as Percentage to Total Income
4. Interest Expenses as Percentage to Total Expenses
5. Operating Expenses as Percentage to Total Expenditure
6. Spread as Percentage to Total Assets
7. Interest Income as Percentage to Average Working Fund
8. Non – Interest Income as Percentage to Average Working Fund
9. Operating Profit as Percentage to Average Working Funds
10. Return to Assets
11. Gross NPA as Percentage to Net Advances
12. Net NPA as Percentage to Net Advances
13. Net Profit (PAT) on Owned Fund
14. Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)

An optimum mix of these parameters would provide a comprehensive picture. Development of a proper Model incorporating the parameters and giving due weightage to them would provide a good measure of all round performance. Such a Model would avoid the limitations of evaluating performance on separate parameters too.

Explanation of The Ratios

1. Credit Deposit Ratio

Credit Deposit Ratio is of vital importance to gauge performance of banks. It expresses the relationship between Advances granted by banks and Deposits of the banks. If the ratio is too high, it means that banks might not have enough liquidity to cover any unforeseen fund requirements; if the ratio is too low, banks may not be earning as much as they could be. Thus ratio express to what extent bank has grated Advances out of Deposits accepted. Whether advances are made from owned funds or borrowed funds. A higher ratio in comparison to the industry average implies that the bank is able to deploy its deposits. This ratio has impact on the performance of the bank.

If the ratio is lower than 1, the bank relied on its own deposits to make loans to its customers, without any outside borrowing. If, on the other hand, the ratio is greater than 1, the bank borrowed money which it re-loaned at higher rates, rather than relying entirely on its own deposits. Banks may not be earning an optimal return if the ratio is too low. If the ratio is too high, the banks might not have enough liquidity to cover any unforeseen funding requirements or economic crises.

It is the ratio of how much a bank lends out of the deposits it has mobilized. It indicates how much of a bank's core funds are being used for lending, the main banking activity. The regulator does not stipulate a minimum or maximum level for the ratio. But, a very low ratio indicates banks are not making full use of their resources. And if the ratio is above a certain level, it indicates a pressure on resources.

At present, the credit-deposit ratio for the banking sector as a whole is 75 per cent. In the case of Indian banks, a credit-deposit ratio of over 70 per cent indicates pressure on resources as they have to set aside funds to maintain a cash reserve ratio of 4.5 per cent and a statutory liquidity ratio of 23 per cent. Banks can lend out of their capital, but it is not considered prudent to do so.

The ratio gives the first indication of the health of a bank. A very high ratio is considered alarming because, in addition to indicating pressure on resources, it may also hint at capital adequacy issues, forcing banks to raise more capital. Moreover, the balance sheet would also be unhealthy with asset-liability mismatches. But such a situation is considered extreme as there are not many known instances of banks overstretching themselves. But, the Reserve Bank has voiced concerns over the current ratio of banks as it could have financial stability implication at the systemic level.

The Credit Deposit Ratio is calculated as follows:

Credit Deposit Ratio = Advances / Deposits x 100

2. Interest Income as Percentage to Total Income

Interest income is revenue generated from advancing activities.

For banks, the assets typically include commercial and personal loans, mortgages, construction loans and investment securities.

Depending on a bank's specific assets (e.g., fixed or floating rate), interest income may be more or less sensitive to changes in interest rates.[7]

Higher the Interest Income as Percentage to Total Income it is good. Banks are into core banking system. The Interest Income as Percentage to Total Income is calculated as follows:

$$\text{Interest Income as Percentage to Total Income} = \frac{\text{Total interest Earned}}{\text{Total Income}} \times 100$$

7 www wikipedia.org

3. Non – Interest Income as Percentage to Total Income

Non-interest income is revenue generated by banks from sources other than yield-generating assets. The main types are fee income (such as from credit cards, granting loans or account maintenance), foreign exchange, trading in securities or leasing. Many banks try to follow the "bancassurance concept", which combines banking and insurance under a single roof, though synergies of revenue and costs are difficult to prove compared to traditional banking.

Examples of non-interest income include deposit and transaction fees, insufficient funds fees, annual fees, monthly account service charges; inactivity fees, check and deposit slip fees, etc. Institutions charge fees that provide non-interest income as a way of generating revenue and ensuring liquidity in the event of increased default rates.

Non-interest income makes up a significant portion of most banks' and credit card companies' revenue. In 2008 alone, credit card issuers took in over $19 billion in penalty-fee income alone – this includes late fees and over-the-limit fees, among others. The passage of the Credit Card Accountability, Responsibility and Disclosure (CARD) Act of 2009 included sweeping restrictions on credit card companies' ability to generate non-interest income.[8]

The total income of a bank consists of interest income and non-interest income. Non-interest income includes income earned in the form of commission, exchange and brokerages and income from profit on sale of investments and non-banking assets.

Higher the Non – Interest Income as Percentage to Total Income it is better. The Non – Interest Income as Percentage to Total Income is calculated as follows:

$$\textbf{Non – Interest Income as Percentage to Total Income} = \frac{\textbf{Total Other Income}}{\textbf{Total Income}} \times 100$$

8 www investopedia.com

4. Interest Expenses as Percentage to Total Expenses

The cost incurred by an entity for borrowed funds. Interest expense on the income statement represents interest accrued during the period covered by the financial statements, and not the amount of interest actually paid over that period.

The amount of interest expense has a direct bearing on profitability, especially for banking companies with a huge debt load.

Interest-Expense ratio is measured as a percentage, the lower the percentage the stronger the ratio. The Interest-Expense ratio intimates the amount of gross income that is being spent to pay the interest on borrowed money. The lower the percentages the better it is. An Interest-Expense ratio is higher than it indicates that the banking business is spending too much of its gross income paying interest on borrowed money.

The Interest Expenses as Percentage to Total Expenses is calculated as follows:

$$\textbf{Interest Expenses as Percentage to Total Expense} = \frac{\textbf{Total interest Expended}}{\textbf{Total Expense}} \textbf{X100}$$

5. Operating Expenses as Percentage to Total Expenditure

The operating expense ratio is calculated by dividing operating expense by its total expenditure. Investors using the ratio can further compare each type of expense, such as utilities, insurance, taxes and maintenance, to the gross operating expenses.

It is important to note that different business models can generate different bank operating ratios for banks with similar expenses. For instance, a heavy emphasis on customer service might increase a bank's operating ratio.

Comparison of operating expenses ratios are generally most meaningful among banks within the same model, and the definition of a "high" or "low" ratio should be made within this context.

The Operating Expenses as Percentage to Total Expenditure is calculated as follows:

$$\text{Operating Expenses as Percentage to Total Expenditure} = \frac{\text{Operating Expenses}}{\text{Total Expenditure}} \times 100$$

Operating Expenses Includes

Establishment Expenses
Rent, taxes and Lightening
Printing and stationery
Advertisement and publicity
Depreciation
Director's fees
Auditor's fees
Law Charges
Postage and Telegram, Telephone etc.
Repair and Maintenance
Insurance
Other Expenditure

6. Spread as Percentage to Total Assets

The excess revenue that is generated from the spread between interest paid out on deposits and interest earned on assets is the net interest income.

The difference between the average yields a financial institution receives from loans and other interest-accruing activities and the average rate it pays on deposits and borrowings. The net interest rate spread is a key determinant of a financial institution's profitability (or lack thereof).[9]

In simple terms, the net interest spread is like a profit margin. The greater the spread, the more profitable the financial institution is likely to be; the lower the spread, the less profitable the institution is likely to be. While the federal funds rate plays a large role in determining the

9 www investopedia.com

rate at which an institution lends immediate funds, open market activities ultimately shape the rate spread.

The Spread as Percentage to Total Assets is calculated as follows:

$$\textbf{Spread as Percentage To Total Assets} = \frac{\textbf{Interest Income – Interest Expenses}}{\textbf{Total Assets}} \times 100$$

7. Interest Income as Percentage to Average Working Fund

This ratio deals with the major income of interest in banks. But only the interest income is not important, the average working fund is also important. The efficiency will be measured according to this ratio. If this ratio is high, the operational efficiency will be also good.

The sum total of discount, interest income from loans and advances, interest income from investments income, Interest income from balances with RBI and other interest inflows is total interest. There is a strong rationale behind include income from aggregate investments in total interest income. And the rationale is that all interest income streams are Policy-driven as far as a bank is concerned. A bank investigating in securities is quite unlike a corporate entity investigating its surplus cash in other corporate securities.

Expressed as a percentage, this ratio shows a bank's ability to leverage its average total resources in enhancing its mainstream operational interest income.

Working funds: These are total resources (total liabilities or total assets) of a bank as on a particular date. Total resources include capital, reserves and surplus, deposits, borrowings, other liabilities and provision. A high AWF shows a bank's total resources strength. There is a school of theory which maintains that working funds are equal to aggregate deposits plus borrowing. However, more pragmatic view in consonance with capital adequacy calculations is, to include all resources and not just deposits and borrowings.

Average working funds (AWF): The AWF at the beginning and at the close of an accounting year or at times worked out as fortnight or monthly average.

The Interest Income as Percentage to Average Working Fund is calculated as follows:

$$\text{Interest Income as Percentage to Average Working Fund} = \frac{\text{Total Interest Income}}{\text{Average Working Fund}} \times 100$$

[Average Working Fund = Fortnightly Average of Total Assets as per IBA]

8. Non – Interest Income as Percentage to Average Working Fund

The other operational income of a bank is Non-Interest Income, which includes commission, brokerage, gains on revaluation of assets etc. This ratio also represents the operational efficiency of a bank. The operational efficiency of a bank will be high if this ratio is high.

This is the other income of a bank. It includes items such as exchange commission, brokerage, gains on sale and revaluation of investments and fixed assets, and profits from exchange transactions. Since Non-Interest Income includes, among other things, items such as profit on sale of assets, it is certainly preferable to replace both the ratios Interest Income to AWF (Average Working Fund) and Non-Interest Income to AWF with fund based income to AWF and non-fund based income to AWF.[10]

This ratio denotes a bank's ability to earn from nonconventional sources. In a liberalized environment, this ratio assumes greater significance for; it mirrors a bank's ability to take full advantage of its operational freedom. Some foreign banks term non-interest income as other income.

10 A Thesis on the Study of Financial Performance of Banking Sector of India by Prof.: Nirmal Nathwani

The Non – Interest Income as Percentage to Average Working Fund is calculated as follows:

$$\textbf{Non-Interest Income as Percentage to Average Working Fund} = \frac{\textbf{Total Non- Interest Income}}{\textbf{Average Working Fund}} \times 100$$

[Average Working Fund = Fortnightly Average of Total Assets as per IBA]

9. Operating Profit as Percentage to Average Working Funds

This ratio relates bank's operating profit with its average working funds. The profit from operations is very much important as well as its percentage to average working funds. Higher the ratio shows higher profitability of a bank

Operating Profit means net profit before provisions and contingencies. This is an indicator of a bank's Profitability at the operating level. In other words it shows a bank's operating efficiency.[11]

This ratio is a profitability parameter for the performance of a bank. This Ratio relates to operating profit with average working funds. If this ratio improves, operating efficiency is believed increased.

The Operating Profit as Percentage to Average Working Funds is calculated as follows:

$$\textbf{Operating Profit as Percentage to Average Working Fund} = \frac{\textbf{Total Operating Profit}}{\textbf{Average Working Fund}} \times 100$$

[Average Working Fund = Fortnightly Average of Total Assets as per IBA]

11 A Thesis on the Study of Financial Performance of Banking Sector of India by Prof.: Nirmal Nathwani

10.Return to Assets

An indicator of how profitable a bank is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing net profit of a bank by its total assets, ROA is displayed as a percentage.

ROA tells you what earnings were generated from assets. It measures the amount of profit the Bank generates as a percentage of the value of its total assets. The profit percentage of assets varies by Banking industry, but in general, the higher the ROA the better. For this reason it is often more effective to compare a Bank's ROA to that of other banks or against its own ROA figures from previous periods. Falling ROA is almost always a problem.

It is a key indicator of profit and asset management efficiency. Therefore, it indicates how well the bank's assets are managed to bring profit of asset that has been invested to the bank**.**

The Return to Assets is calculated as follows:

$$\textbf{Return to Assets} = \frac{\textbf{Net Profit}}{\textbf{Average Assets}} \times 100$$

11.Gross NPA as Percentage to Net Advances

Definition of 'Non-Performing Asset - NPA'

A classification used by financial institutions that refer to loans that are in jeopardy of default. Once the borrower has failed to make interest or principal payments for 90 days the loan is considered to be a non-performing asset.

Gross NPA is the amount outstanding in the borrowal account, in books of the bank other than the interest which has been recorded and not debited to the borrowal account.

The Gross NPA as Percentage to Net Advances is calculated as follows:

$$\textbf{Gross NPA as Percentage To Net Advances} = \frac{\textbf{Gross NPA}}{\textbf{Net Advances}} \times 100$$

12.Net NPA as Percentage to Net Advances

Net NPAs is the amount of gross NPAs less (1) interest debited to borrowal and not recovered and not recognized as income and kept in interest suspense (2) amount of provisions held in respect of NPAs and (3) amount of claim received and not appropriated.

The Net NPA as Percentage to Net Advances is calculated as follows:

$$\textbf{Net NPA as Percentage To Net Advances} = \frac{\textbf{Net NPA}}{\textbf{Net Advances}} \times 100$$

13.Net Profit (PAT) on Owned Fund

The Net Profit of a Bank represents the difference between bank's operating revenues (interest, commissions, capital gains from market operations and other operating revenues) and bank operating costs (interest paid by the bank on financing sources, capital losses from market operations and other operating costs).

Net Profit is calculated by taking revenues and adjusting for the cost of doing business, depreciation, interest, taxes and other expenses. This number is found on a Bank's income statement and is an important measure of how profitable a Bank is over a period of time.

The net amount earned by the bank after all taxation related expenses have been deducted. The profit after tax is often a better assessment of what a Bank is really earning and hence can use in its operations than its total revenues**.**

Owned Funds = Paid Up Capital + Free Reserves and Surplus - Losses.

The benchmark is more than 18% **(as per Indian Bank's Association)**

The Net Profit (PAT) on Owned Fund is calculated as follows:

$$\text{Net Profit (PAT) On Owned Fund} = \frac{\text{Net Profit}}{\text{Average Owned Funds}} \times 100$$

14.Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)

The Basel Committee report on the Convergence of Capital and Standards, 1988, passed a directive that a Capital Adequacy Ratio (CAR) of 8% was necessary for banks operating International. Subsequently, The Narasimham Committee recommendation that all Indian Banks should achieve a capital adequacy of 8% by March 1996 was implemented with successful results by the reserve Bank of India (RBI). The capital Accord of Basel Committee was reviewed and amended in 1996. The Narasimham Committee on Banking Sector Reforms proposed an increase in the CAR of Banks. Consequently, a CAR target of 9% by March 2000 was fixed. The RBI had proposed to increase CAR to 10% by March 2002. The New Capital Adequacy Framework issue by Basel Committee in June, 1999 is yet another step towards the strengthening of capital adequacy in Banks.[12]

Capital adequacy is indicated by a minimum numerical ratio which the Banks are expected to maintain to ensure stability and strength.

Capital Adequacy is seen as the measure of a bank's strength to absorb credit risks i. e. its strength to provide for losses that may arise upon its advance going bad. It is expressed as a proportion of capital to assets weighted according to the risk of default attached to them.[13]

The Basel Accords:

The Basel Accord(s) refers to the banking supervision accords (recommendations on banking laws and regulations), Basel I (first published in 1988 and enforced by law in 1992 by the G-10 countries) and Basel II (published in June 2004) issued by the Basel Committee on

12 A Thesis on The Study of Financial Performance of Banking Sector of India by Prof.: Nirmal Nathwani

13 Performance Effectiveness of Nationalised Banks: A Case Study of Syndicate Bank by Zacharias Thomas

Banking Supervision (BCBS). They are called the Basel Accords as the BCBS maintains its secretariat at the Bank for International Settlements in Basel, Switzerland and the committee normally meets there. The Basel Committee consists of representatives from central banks and regulatory authorities of the G10 countries, plus others (specifically Luxembourg and Spain). The committee does not have the authority to enforce recommendations, although most member countries (and others) tend to implement the Committee's policies. This means that recommendations are enforced through national (or EU-wide) laws and regulations, rather than as a result of the committee's recommendations - thus some time may pass between recommendations and implementation as law at the national level. [14]

Tier 1 capital

Tier 1 capital is the core measure of a bank's financial strength from a regulator's point of view. It consists of the types of financial capital considered the most reliable and liquid, primarily Shareholders' equity. Examples of Tier 1 capital are common stock, preferred stock that is irredeemable and non-cumulative, and retained earnings. Capital in this sense is related to, but different from, the accounting concept of shareholder's equity. Tier 1 capital is considered the core capital and more reliable form of capital.[15]

Tier 2 capital

Tier 2 capital is a measure of a bank's financial strength with regard to the second most reliable form of financial capital, from a regulator's point of view. The forms of banking capital were largely standardized in the Basel I accord, issued by the Basel Committee on Banking Supervision and left untouched by the Basel II accord.[16]

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15 Bank Performance and Credit Risk Management by Takang Felix Achou Ntui Claudine Tenguh

16 Bank Performance and Credit Risk Management by Takang Felix Achou Ntui Claudine Tenguh

Both Tier 1 and Tier 2 capital were first defined in the Basel I capital accord. The new accord, Basel II, has not changed the definitions in any substantial way. Each country's banking regulator, however, has some discretion over how differing financial instruments may count in a capital calculation. This is appropriate, as the legal framework varies in different legal systems.

G10 Nations

The Group of Ten is made up of eleven industrial countries (Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States) which consult and co-operate on economic, monetary and financial matters. The Ministers of Finance and central bank Governors of the Group of Ten meet as needed in connection with the meetings of the International Monetary Fund (IMF) and the World Bank. The reports and press releases of the Ministers and Governors of the Group of Ten or published under the aegis of the Group of Ten are available at the BIS (Bank for International Settlements). They may also be obtained at the IMF and the OECD (Organization for Economic Co-operation and Development).[17]

The Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I) is calculated as follows:

$$\textbf{Capital Adequacy Ratio} = \frac{\textbf{(Tier I + Tier II) Capital}}{\textbf{Risk Weighted Average}} \textbf{X100}$$

17 Www. Bis.Org

4.3 THE COMPARISON OF PERFORMANCE OF ALL THE THREE CATEGORIES OF BANKS

In this study all three categories of banks that is 3 Private Bank, 5 Public Bank and 5 foreign banks are compared regarding each parameter of performance as under.

The Minimum and Maximum column in the following table in each category are given in the Ratio Table Excel Sheet in Appendix. It is year wise average that is calculated of each year.

Table 4.1 Category wise sample average performance summary of selected ratios during the period of year 2001-02 to 2012-13 data.

Table 4.1 CATEGORY WISE SAMPLE AVERAGE PERFORMANCE SUMMARY OF SELECTED RATIOS DURING THE PERIOD 2001-02 TO 2012-13 DATA

Selected Ratios	CATEGORY																			
	PRIVATE					PUBLIC					FORIEGN					Avg.Total of All 3 Sector Bank				
	N	**Min**	**Max**	**Mean**	**SD**	**N**	**Min**	**Max**	**Mean**	**SD**	**N**	**Min**	**Max**	**Mean**	**SD**	**N**	**Min**	**Max**	**Mean**	**SD**
Credit Deposit Ratio	12	71.14	87.34	78.60	5.87	12	43.98	75.62	61.61	12.16	12	45.68	100.92	67.09	18.26	36	43.98	100.92	69.10	14.62
Interest Income As % to Total Income	12	76.69	83.36	80.87	2.09	12	80.93	91.68	87.30	3.30	12	50.29	86.70	64.85	12.13	36	50.29	91.68	77.67	11.94
Non - Interest Income As % To Total Income	12	16.64	23.31	19.13	2.09	12	8.32	19.07	12.70	3.30	12	13.30	49.71	35.15	12.13	36	8.32	49.71	22.33	11.94
Interest Expenses As % To Total Expenses	12	54.88	63.25	59.60	3.20	12	52.59	69.74	62.69	6.14	12	28.71	45.30	34.29	5.20	36	28.71	69.74	52.19	13.79
Operating Expenses As % To Total Expenditure	12	19.60	30.25	25.81	3.25	12	17.86	30.22	24.30	4.66	12	30.10	40.91	35.91	3.48	36	17.86	40.91	28.67	6.43
Spread As % To Total Assets	12	1.60	3.19	2.52	0.46	12	2.02	3.04	2.57	0.37	12	2.45	4.09	3.42	0.51	36	1.60	4.09	2.84	0.61
Interest Income As % To Average Working Fund	12	7.21	9.60	8.35	0.76	12	7.65	9.48	8.37	0.62	12	5.31	9.13	7.37	1.03	36	5.31	9.60	8.03	0.93
Non-Interest Income As % To Total Average Working Fund	12	1.69	2.32	1.95	0.22	12	.80	2.03	1.24	0.43	12	1.53	7.44	4.93	2.21	36	0.80	7.44	2.70	2.06
Operating Profit As % To Average Working Funds	12	1.96	3.02	2.54	0.38	12	1.59	3.48	2.20	0.59	12	3.21	7.77	5.51	1.64	36	1.59	7.77	3.41	1.81
Return on Assets (PAT/Total ASSETS)	12	0.88	1.74	1.24	0.31	12	0.51	1.18	0.81	0.17	12	0.54	3.75	2.36	0.85	36	0.51	3.75	1.47	0.84
Gross NPA as % to Net Advances	12	1.77	7.14	3.08	1.63	12	2.23	15.20	5.59	4.22	12	0.95	39.04	9.84	13.51	36	0.95	39.04	6.17	8.47
Net NPA as % to Net Advances	12	0.39	2.36	1.22	0.58	12	1.09	7.06	2.58	1.90	12	0.30	7.45	1.49	2.00	36	0.30	7.45	1.76	1.69
Net Profit(PAT) on Owned Fund	12	9.41	23.75	13.83	4.21	12	7.64	17.72	12.98	2.58	12	4.81	19.55	12.66	3.87	36	4.81	23.75	13.16	3.55
Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I)	12	10.66	16.33	12.78	1.86	12	9.14	13.57	11.81	1.11	12	12.39	36.86	18.52	7.82	36	9.14	36.86	14.37	5.45

1. CREDIT DEPOSIT RATIO

Findings

Credit deposit ratio for the 12 years, of all the three sector banks for the period from 2001-02 to 2012-13 moves from minimum of 43.98 to maximum of 100.92 however on an average it is 69.10 with standard deviation of 14.62. Generally Credit Deposit Ratio should have mean 75%as discussed in this chapter earlier. It is good across all sectors of bank but even in that, among three sectors it is more favorable in case of Private sector bank with mean of 78.60 where minimum is 71.14 and maximum is 87.34 as compared to Public Sector mean of 61.61 where minimum is 43.98 and maximum is 75.62 and Foreign sector bank mean of 67.09 where minimum is 45.68 and maximum is 100.92. (Minimum and maximum is given in Appendix under the head Credit deposit ratio)

Interpretation

Among the three sectors, private sector bank has been able to deploy **(use)** higher credit during the period. In case of Foreign Banks fluctuation in Credit deposit ratio is more as compared to Public Sector Banks and Private Public Sector Banks.

2. INTEREST INCOME AS % TO TOTAL INCOME

Findings

Interest Income as % to total Income for the 12 years, of all three sector banks period from 2001-02 to 2012-13 which have minimum of 50.29 and maximum of 91.68 and mean is 77.67 with standard deviation of 11.94. In case of private sector bank mean is 80.87 with minimum of 76.69 and maximum of 83.36 and in case of public sector bank mean is 87.30 with minimum of 80.93 and maximum of 91.68. In case of foreign sector bank it is minimum of 50.29 and maximum of 86.70 with a mean of 64.85. (Minimum and maximum is given in Appendix under the head Interest Income as % to total Income)

Interpretation

If we see the mean of private sector bank (80.81) and public sector bank (87.30) we observe that they are higher than the mean of all 3 sector banks that is 77.67. This indicates that income of these two sectors is higher or good than foreign sector bank (64.85). This shows that in case of Private and Public sector banks, it is indicating higher contribution from interest income than the fee based income.

3. NON - INTEREST INCOME AS % TO TOTAL INCOME

Findings

Non -Interest Income as % to total Income for the 12 years, of all three sector banks period from 2001-02 to 2012-13 where minimum is 8.32 and maximum of 49.71 and an average (mean) is 22.33 with standard deviation of 11.94. Mean of foreign sector bank is 35.15 with minimum of 13.30 and maximum of 49.71. Similarly in private sector banks minimum of 16.64 and maximum of 23.31 with a mean of 19.13 and in case of public sector bank, minimum of 8.32 and maximum 19.07 with a mean of 12.70. (Minimum and maximum is given in Appendix under the head Non -Interest Income as % to total Income)

Interpretation

It can be concluded that that mean of foreign sector bank (35.15) is higher than the average total of all 3 sector bank (22.33). Mean of foreign sector bank is also higher than mean of private sector banks and public sector banks. This indicates that in case of foreign sector banks Non-interest income is higher, this could be due to higher treasury and fee based earnings. Foreign sector banks are earning more from other income rather than interest income (as we observed in previous ratio).

4. INTEREST EXPENSES AS % TO TOTAL EXPENSES

Findings

Interest Expenses as % to total Expenses for the 12 years, of all three sector banks period from 2001-02 to 2012-13 moves from minimum of 28.71 to maximum of 69.74 however on an average it is 52.19 with standard deviation of 13.79. In case of Private sector bank mean is 59.60, minimum is 54.88 and maximum is 63.25. In case of Public sector bank mean 62.69 minimum is 52.59 and maximum is 69.74. In case of foreign sector bank mean is 34.29 minimum is 28.71 and maximum is 45.30. (Minimum and maximum is given in Appendix under the head Interest Expenses as % to total Expenses)

Interpretation

If we observe all the means of 3 sectors of banks and mean of sample bank we find that mean of foreign sector bank (34.29) is less than the mean of total of all 3 sector bank (52.19). Mean of Private sector bank and Public sector bank are also higher than mean of sample bank. The Interest-Expense ratio indicates that the amount of gross income that is being spent to pay the interest on borrowed money. The lower the percentages the better it is. From this we conclude that private sector bank and public sector bank are spending too much of its gross income paying interest on borrowed money as compared to foreign sector bank

5. OPERATING EXPENSES AS % TO TOTAL EXPENDITURE

Findings

Operating expenses as % to Total expenditure for the 12 years, of all three sector banks period from 2001-02 to 2012-13 shifts from minimum of 17.86 to maximum of 40.91 with mean 28.67 and standard deviation of 06.43. Mean of Private sector bank mean is 25.81 yearly wise minimum is 19.60 and maximum is 30.25. Similarly in case of Public sector bank mean 24.30, minimum is 17.86 and maximum is 30.22. Mean of Foreign sector bank it is 35.91 minimum is 30.10 and maximum is 40.91. (Minimum and maximum is given in Appendix under the head Operating expenses as % to Total expenditure)

Interpretation

Mean of foreign sector bank is higher and mean of private sector bank and public sector bank are lower than the mean of all 3 sector bank. This indicates that foreign bank is spending more on operating expense like Rent, taxes, lightening etc. Private Banks and Public banks have really kept their operating expenses in control which is good on their part. Heavy emphasis on customer service might increase a bank's operating ratio.

6. SPREAD AS % TO TOTAL ASSETS

Findings

Interest spread or net Interest Income as percentage of total assets for the 12 years, of all three sector banks period from 2001-02 to 2012-13 moves from the minimum of 1.60 to maximum of 4.09. However on an average it is 2.84 with standard deviation of 0.61. In case of private sector bank mean is 2.52 with minimum of 1.60 and maximum of 3.19 and in case of public sector bank mean is 2.57 with minimum of 2.02 and maximum of 3.04. In case of foreign sector bank it is minimum of 2.45 and maximum of 4.09 with a mean of 3.42. Bench mark ratio is approximate 3 % (higher than this is good). (Minimum and maximum is given in Appendix under the head Spread As % To Total Assets)

Interpretation

The net interest spread is like a profit margin. The greater the spread, the more profitable the financial institution is likely to be. There is almost no difference between the 3 categories of banks and mean of all 3 sector bank. But still if we see mean of foreign bank is higher than the mean of private bank, public bank and sample bank. As said 3% or more is good then also it is said that in case of spread ratio, Foreign bank is in good position.

7. INTEREST INCOME AS % TO AVERAGE WORKING FUND

Findings

Interest Income as percentage of Average working Fund for the 12 years, of all three sector banks period from 2001-02 to 2012-13 moves from minimum of 5.31 to maximum of 9.60 however on an average it is 8.03 with standard deviation of 0.93. Average of private sector banks is 8.35 with minimum of 7.21 and maximum of 9.60. Average of Public sector banks is 8.37 with minimum of 7.65 and maximum of 9.48. Average of Foreign sector banks is 7.35 with minimum of 5.31 and maximum of 9.13. Higher the ratio better it is. (Minimum and maximum is given in Appendix under the head Interest Income as percentage of Average working Fund)

Interpretation

As discussed in this chapter, that the efficiency of bank will be measured according to this ratio. If this ratio is high, the operational efficiency will be also good. This ratio shows a bank's ability to control its average total resources. Mean of private bank and public bank is higher than the mean of all 3 sector bank which is good sign for both sector banks. Even in that also mean of public bank is higher that indicates Interest Income as percentage of Average working Fund of public bank is very good (mean of private bank is also decent). Mean of foreign bank is lower than that of mean of sample bank which is not good for the position of foreign bank.

8. NON – INTEREST INCOME AS % TO TOTAL AVERAGE WORKING FUND

Findings

Non - Interest Income as percentage of Average working Fund for the 12 years, of all three sector banks period from 2001-02 to 2012-13 with minimum of 0.80 and maximum of 7.44 and mean is 2.70 with standard deviation of 2.06. In case of private sector banks the mean is 1.95 with minimum of 1.69 and maximum of 2.32. In case of Public sector banks the mean is 1.24 with minimum of 0.80 and maximum of 2.03. In case of Foreign sector banks mean is 4.93 with minimum of 1.53 and maximum of 7.44. The operational efficiency of a bank will be high if this ratio is high. (Minimum and maximum is given in Appendix under the head Non - Interest Income as percentage of Average working Fund)

Interpretation

Ratio signifies the bank's capability to gain from non-conventional sources. Non-Interest Income means income from commission, brokerage etc. Here mean of foreign bank is higher than that from the mean of private bank (1.95), public bank (1.24) and total sample bank (2.70).Also, from the previous ratio we observe that foreign bank had lower interest income, here it proves that foreign banks are earning from non-interest income. Private Banks and Public Banks are purely earning from interest income as their mean is lower than that of the average of all 3 sector banks.

9. OPERATING PROFIT AS % TO AVERAGE WORKING FUND

Findings

Operating profit as percentage of Average working Fund for the 12 years, of all three sector banks period from 2001-02 to 2012-13 where the average of total sample is 3.41 (minimum 1.59 and maximum 7.77) and its standard deviation is 1.81. Mean of private sector bank is 2.54 (minimum 1.96 and maximum 3.02). Mean of public sector bank is 2.20 (minimum 1.59 and maximum 3.48). Mean of foreign sector bank is 5.51(minimum 3.21 and maximum7.77). If this ratio progresses, operating efficiency is supposed to be improved. (Minimum and maximum is given in Appendix under the head Operating profit as percentage of Average working Fund)

Interpretation

This ratio displays bank's performance at the operating level. Higher the ratio it indicates higher profitability of a bank. Among the three sector banks mean of foreign sector bank of 5.51 is higher than the mean of all three sector bank of 3.41. Whereas in case of Private sector bank mean is 2.54 and in case of public sector bank mean is 2.20 which is lower than the mean of all three sector banks of 3.41. Therefore, we can say that foreign sector bank is showing more profit in this ratio as compared to private and public bank. Foreign bank is in good position as far as this ratio is concerned.

10. RETURN ON ASSETS (PAT/TOTAL ASSETS)

Findings

Return on Assets for the 12 years, of all three sector banks period from 2001-02 to 2012-13 moves from minimum of 0.51 to maximum of 3.75 however on an average it is 1.47 with standard deviation of 0.84. In case of private sector banks the mean is 1.24 with minimum of 0.88 and maximum of 1.74. In case of Public sector banks the mean is 0.81 with minimum of 0.51 and maximum of 1.18. In case of Foreign sector banks mean is 2.36 with minimum of 0.54 and maximum of 3.75. [Minimum and maximum is given in Appendix under the head Return on Assets (PAT/total assets)]

Interpretation

ROA tells you what earnings were generated from assets. It measures the amount of profit the Bank generates as a percentage of the value of its total assets. Benchmark ratio for banking sector is 1 %. Higher the ratio better it is. Mean of (2.36) is higher than mean of all 3 sector banks (1.47) as well as it is higher than Private Bank (1.24) and Public Bank (0.81). This concludes that foreign bank is making more earnings from Return on Assets as compared to other two sector bank. As far as Public Sector Banks are concerned it is 0.81 which is less than benchmark ratio of 1%.

11. GROSS NPA AS % TO NET ADVANCES

Findings

Gross NPA as percentage to Net Advances for the 12 years, of all three sector banks period from 2001-02 to 2012-13 moves from minimum of 0.95 to maximum of 39.04 however on an average it is 6.17 with standard deviation of 8.47. In case of Private Sector Banks the mean is 3.08 with minimum of 1.77 and maximum of 7.14. In case of Public Sector Banks the mean is 5.59 with minimum of 2.23 and maximum of 15.20. In case of Foreign Sector Banks mean is 9.84 with minimum of 0.95 and maximum of 39.04. (Minimum and maximum is given in Appendix under the head Gross NPA as percentage to Net Advances)

Interpretation

When borrower fails to make interest or principal payments loan is considered to be a non-performing asset. Lower the ratio better it is. Mean of Private bank is lowest then mean of all 3 sector bank and other sector banks, this indicates that Private Banks are collecting their debts in time; this makes its position good in banking market. But that of Foreign Bank mean is higher than other means this shows that borrowers are not paying loan money in time (mean is higher due to heavy NPA in case of one of the sample bank (Barclays Bank PLC). Though mean of public bank is lower than mean of all 3 sector bank still it is in average position.

12. NET NPA AS % TO NET ADVANCES

Findings

Net NPA as percentage to Net Advances for the 12 years, of all three sector banks period from 2001-02 to 2012-13 moves from minimum of 0.30 to maximum of 7.45 however on an average it is 1.76 with standard deviation of 1.69. In case of private sector banks the mean is 1.22 with minimum of 0.39 and maximum of 2.36. In case of Public sector banks the mean is 2.58 with minimum of 1.09 and maximum of 7.06. In case of Foreign sector banks mean is 1.49 with minimum of 0.30 and maximum of 7.45. (Minimum and maximum is given in Appendix under the head Net NPA as percentage to Net Advances)

Interpretation

Interest debited to borrowal and not recovered and not recognized as income and kept in interest suspense and made provision of the bad debt. Lower the ratio better it is. Here mean of Public Sector Banks is higher than the mean of all 3 sector bank which indicates that out of three categories of banks selected Public sector banks are not doing good in collecting their debt.

13. NET PROFIT (PAT) ON OWNED FUND

Findings

Net Profit (PAT) on Owned Fund for the 12 years, of all three sector banks period from 2001-02 to 2012-13 moves from minimum of 4.81 to maximum of 23.75 however on an average it is 13.16 with standard deviation of 3.55. In case of private sector banks the mean is 13.83 with minimum of 9.41 and maximum of 23.75. In case of Public sector banks the mean is 12.98 with minimum of 7.64 and maximum of 17.72. In case of Foreign sector banks mean is 12.66 with minimum of 4.81 and maximum of 19.55. (Minimum and maximum is given in Appendix under the head Net Profit (PAT) on Owned Fund)

Interpretation

Profit, the word itself defines that more the ratio better it is. Average of all sector banks is 13.16. As we observe the table in this ratio we find that Private Sector Banks are making more profit on owned fund as mean of private sector bank 13.83 is higher than mean of all sector banks. In case of Public Sector Bank mean is 12.98 and in case of Foreign Banks it is 12.66, which is lower than average.

14 CAPITAL ADEQUACY RATIO (TIER I PLUS TIER II) (UNDER BASEL I)

Findings

Capital Adequacy ratio for the 12 years, of all three sector banks period from 2001-02 to 2012-13 moves from minimum of 9.14 to maximum of 36.86 however on an average it is 14.37 with standard deviation of 5.45. In case of private sector banks the mean is 12.78 with minimum of 10.66 and maximum of 16.33. In case of Public sector banks the mean is 11.81 with minimum of 9.14 and maximum of 13.57. In case of Foreign sector banks mean is 18.52 with minimum of 12.39 and maximum of 36.86. [Minimum and maximum is given in Appendix under the head Capital Adequacy ratio (Tier I plus Tier II) (Under Basel I)]

Interpretation

Capital Adequacy is seen as the measure of a bank's strength. It is strength to provide for losses that may arise upon its advance going bad. Benchmark ratio for banking sector is 9 %. Higher the ratio better it is. Average of all sector banks is 14.37. Average of Foreign Sector Bank is higher than all sector banks and also from Private Sector Bank and Public Sector Bank. We can say that Foreign Bank is stronger as it has enough capital adequacy to fight against losses that may arise upon its advance going bad. As for Private Bank and Public Bank their mean are lower than average of all sector bank. They are not in so good position as foreign bank to fight their bad debts.

From the above exercise we conclude that after comparing mean of each sector bank with Average Total of All 3 Sector Bank we come to the following conclusion:-

Table 4.2 Giving Grades to all Sector Banks Ratio Wise

SR. NO	RATIO	GOOD SECTOR	%	AVERAGE SECTOR	%	POOR SECTOR	%
1	CREDIT DEPOSIT RATIO	Private	78.60	Foreign	67.09	Public	61.61
2	INTEREST INCOME AS % TO TOTAL INCOME	Public	87.30	Private	80.87	Foreign	64.85
3	NON - INTEREST INCOME AS % TO TOTAL INCOME	Foreign	35.15	Private	19.13	Public	12.70
4	INTEREST EXPENSES AS % TO TOTAL EXPENSES	Foreign	34.29	Private	59.60	Public	62.69
5	OPERATING EXPENSES AS % TO TOTAL EXPENDITURE	Public	24.30	Private	25.81	Foreign	35.91
6	SPREAD AS % TO TOTAL ASSETS	Foreign	3.42	Public	2.57	Private	2.52
7	INTEREST INCOME AS % TO AVERAGE WORKING FUND	Public	8.37	Private	8.35	Foreign	7.37
8	NON – INTEREST INCOME AS % TO TOTAL AVERAGE WORKING FUND	Foreign	4.93	Private	1.95	Public	1.24
9	OPERATING PROFIT AS % TO AVERAGE WORKING FUND	Foreign	5.51	Private	2.54	Public	2.20
10	RETURN ON ASSETS	Foreign	2.36	Private	1.24	Public	0.81
11	GROSS NPA AS % TO NET ADVANCES	Private	3.08	Public	5.59	Foreign	9.84
12	NET NPA AS % TO NET ADVANCES	Private	1.22	Foreign	1.49	Public	2.58
13	NET PROFIT (PAT) ON OWNED FUND	Private	13.83	Public	12.98	Foreign	12.66
14	CAPITAL ADEQUACY RATIO (TIER I PLUS TIER II) (UNDER BASEL I)	Foreign	18.52	Private	12.78	Public	11.81

From the above working and table 4.1 and 4.2 we conclude that performance of Foreign Bank is good. On average position is Private Bank and Public Bank has poor performance.

4.4 COMPARISON OF MEAN OF ALL RATIOS

Construction of the hypothesis is a process of identifying the problem statement, identifying the possible causes. The hypothesis is basically a technique to show the cause and effect relationship.

The Hypothesis Testing is done to find out that if there is any significant difference regarding the performance related to all the Ratio taken among all the three categories i.e. Private Banks, Public Banks and Foreign Banks during 2001-02 to 2012-13 or not.

The following table shows the working of Mean and Standard deviation significant values and real difference between banks. Also it will prove that hypothesis of all the three bank categories are alike or not.

To understand the performance across the three define bank categories with respect to all the ratios taken as parameters, category wise, average of all the ratios that are taken as parameter have been calculated for the period of 12 years for each sample of bank category. The performance of average of all ratios between the specific bank categories has been compared using one way analysis of variance statistics for the period of 12 years of data.

In analysis of variance, an F-test is used to test group variance against a null hypothesis, and is often used to determine whether any group of trials differs significantly from an expected value. F-value is found to make comparison between our three sample sectors. (If probability value i.e. p-value is less than 0.05 than that makes our f-value significant and there exist difference between mean of all the three sector of banks that we have selected as sample and if p-value is more than 0.05 than f-value is not significant and there does not exist difference between mean of all the three sector of banks that we have selected as sample)

We assume that Hypothesis (Ho) of average of all the Ratios of Private Public and Foreign banks is alike i.e.

Ho= Private Bank = Public Bank = Foreign Bank

Value of F is calculated in the ANOVA Table in appendix

The real difference between the different categories of banks is given under the head Multiple Comparisons Table in appendix. Level of significance is 0.05.

1. Credit Deposit Ratio

Table 4.3: Mean comparison of average ***Credit Deposit Ratio*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	78.6037	5.86874	5.250	0.010
Public	61.6148	12.16178		
Foreign	67.0934	18.25532		
Pairs having significant difference: 1: (Private and Public)				

Ho_1: Average Credit Deposit Ratio across all three Bank Categories is alike.

Table 4.3 indicates the comparison of average Credit Deposit Ratio of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Credit Deposit Ratio of Private Bank is 78.6037, Public Bank 61.6148 and Foreign Bank 67.0934. Looking to the analysis of variance result F value (5.250) found to be significant as P value is 0.010 (≤ 0.05) and there exist a real difference between average Credit Deposit Ratio of Private Bank category and Public Bank category as mean of Private Bank is higher and that of Public Bank has lower Mean in this ratio. So there is difference between the mean of these two Bank categories. It means that our assumption of Ho does not prevail. Ho is rejected.

2. Interest Income as Percentage to Total Income

Table 4.4: Mean comparison of average ***Interest Income As %To Total Income*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	80.8664	2.08903	29.631	0.000
Public	87.3035	3.29735		
Foreign	64.8544	12.12924		
Pairs having significant difference: Public Bank and Foreign Bank and Private Bank and Foreign Bank				

Ho_2: Average Interest Income as %to total income across all three Bank Categories is alike.

Table 4.4 indicates the comparison of average Interest Income As %To Total Income of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result calculated in above table the average Interest Income As %To Total Income of Private Bank is 80.8664, Public Bank 87.3035 and Foreign Bank 64.8544. Looking to the analysis of variance result F value (29.631) found to be significant as P value is 0.000 (≤ 0.05) and there exist a real difference between average Interest Income As %To Total Income of Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.

Here also our assumption of Ho is not fulfilled. So Ho is rejected. As p value is less than 5% that means there is real difference. Here the difference is between two pairs i.e. between Public Bank and Foreign Bank and between Private Bank and Foreign Bank.

3. Non – Interest Income as Percentage to Total Income

Table 4.5: Mean comparison of average ***Non-Interest Income As % To Total Income*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	19.1336	2.08905	29.630	0.000
Public	12.6965	3.29735		
Foreign	35.1458	12.12942		
Pairs having significant difference: Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.				

Ho_3: Average Non-Interest Income as % to total income across all three Bank Categories is alike.

Table 4.5 indicates the comparison of average Non-Interest Income As % To Total Income of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Non-Interest Income As % To Total Income of Private Bank is 19.1336, Public Bank 12.6965 and Foreign Bank 35.1458. Looking to the analysis of variance result F value (29.630) found to be significant as P value is 0.000 (≤ 0.05) and there exist a real difference between average Non-Interest Income As % To Total Income of Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.

Here also just like previous table as F value is significant there is difference between banks. Even in this table the difference between the mean of Public Bank and Foreign Bank and that of Private Bank and Foreign Bank is more but there is not much difference between Private Bank and Public Bank. Our assumption Ho is rejected.

4. Interest Expenses as Percentage to Total Expenses

Table 4.6: Mean comparison of average ***Interest Expense As % To Total Expenses*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	59.5967	3.20404	116.644	0.000
Public	62.6917	6.13908		
Foreign	34.2870	5.19534		
Pairs having significant difference: Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.				

Ho_4: Average Interest Expense as % to total expenses across all three Bank Categories is alike.

Table 4.6 indicates the comparison of average Interest Expense As % To Total Expenses of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the outcome calculated, the average Interest Expense As % To Total Expenses of Private Bank is 59.5967, Public Bank 62.6917 and Foreign Bank 34.2870. Looking to the study of variance result F value (116.644) found to be significant as P value is 0.000 (≤ 0.05) and there exist a real difference between average Interest Expense As % To Total Expenses of Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.

The mean of Public Bank is higher and mean of Foreign Bank is lower, so we can say that there is real difference between these two categories of banks but if see the mean of Private Bank there is also difference between Private Bank and Foreign Bank so there is real difference between these two categories of banks also. Ho is rejected.

5. Operating Expenses as Percentage to Total Expenditure

Table 4.7: Mean comparison of average ***Operating Expenses As % To Total Expenditure*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	25.8060	3.25181	32.327	0.000
Public	24.2952	4.65723		
Foreign	35.9081	3.48295		
Pairs having significant difference: Private Bank and Foreign Bank and also between Public Bank and Foreign Bank.				

Ho_5: Average Operating Expenses as % to total expenditure across all three Bank Categories is alike.

Table 4.7 indicates the comparison of average Operating Expenses As % To Total Expenditure of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Operating Expenses As % To Total Expenditure of Private Bank is 25.8060, Public Bank 24.2952 and Foreign Bank 35.9081. Observing the examination of variance result F value (32.327) is significant because P value is 0.000 (≤ 0.05) and therefore there exist a real difference between the average Operating Expenses As % To Total Expenditure of Private Bank and Foreign Bank and also between Public Bank and Foreign Bank. Ho is rejected.

P value is less than 0.05 i.e. 5% this makes F value major and that makes possible for existence of real difference between the banks.

6. Spread as Percentage to Total Assets

Table 4.8: Mean comparison of average ***Spread As % To Total Assets*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	2.5240	0.45595	15.225	0.000
Public	2.5694	0.37455		
Foreign	3.4233	0.50866		
Pairs having significant difference: Private Bank and Foreign Bank and also between Public Bank and Foreign Bank				

Ho_6: Average Spread as % to total assets across all three Bank Categories is alike.

Table 4.8 indicates the comparison of average Spread As % To Total Assets of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

Average Spread As % To Total Assets of Private Bank is 2.5240, Public Bank 2.5694 and Foreign Bank 3.4233. From the analysis, variance result F value (15.225) found to be significant because P value is 0.000 (≤ 0.05) and there occur a real difference between average Spread As % To Total Assets of Private Bank and Foreign Bank and also between Public Bank and Foreign Bank. Ho is not alike therefore Ho is rejected.

7. Interest Income as Percentage to Average Working Fund

Table 4.9: Mean comparison of average ***Interest Income As % To Average Working Fund*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	8.3478	0.76196	5.785	0.007
Public	8.3675	0.62080		
Foreign	7.3703	1.02802		
Pairs having significant difference: Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.				

Ho_7: Average Interest Income as % to average working fund across all three Bank Categories is alike.

Table 4.9 indicates the comparison of average Interest Income As % To Average Working Fund of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Interest Income As % To Average Working Fund of Private Bank is 8.3478, Public Bank 8.3675 and Foreign Bank 7.3703. Observing the study of variance result F value (5.785) is found to be significant as P value is 0.007 (≤ 0.05) and there exist a actual difference between average Interest Income As % To Average Working Fund of Public Bank and Foreign Bank and also between Private Bank and Foreign Bank. Ho is rejected.

8. Non – Interest Income as Percentage to Average Working Fund

Table 4.10: Mean comparison of average ***Non-Interest Income As % To Total Average Working Fund*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	1.9469	0.21841	26.865	0.000
Public	1.2390	0.42875		
Foreign	4.9263	2.21346		
Pairs having significant difference: Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.				

Ho_8: Average Non-Interest Income as % to total average working fund across all three Bank Categories is alike.

Table 4.10 indicates the comparison of average Non-Interest Income As % To Total Average Working Fund of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Non-Interest Income As % To Total Average Working Fund of Private Bank is 1.9469, Public Bank 1.2390 and Foreign Bank 4.9263. Looking to the analysis of variance result F value (26.865) found to be significant as P value is 0.000 (≤ 0.05) and there exist a real difference between average Non-Interest Income As % To Total Average Working Fund of Public Bank and Foreign Bank and also between Private Bank and Foreign Bank. Ho is rejected.

9. Operating Profit as Percentage to Average Working Funds

Table 4.11: Mean comparison of average ***Operating Profit As % To Average Working Funds*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	2.5378	0.38148	37.555	0.000
Public	2.2005	0.59236		
Foreign	5.5060	1.63554		
Pairs having significant difference: Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.				

Ho_9: Average Operating Profit as % to average working funds across all three Bank Categories are alike.

Table 4.11 indicates the comparison of average Operating Profit As % To Average Working Funds of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

According to the result, average Operating Profit As % To Average Working Funds of Private Bank is 2.5378, Public Bank 2.2005 and Foreign Bank 5.5060. Looking to the analysis of variance result F value (37.555) found to be significant as P value is 0.000 (≤ 0.05) and there exist a real difference between average Operating Profit As % To Average Working Funds of Public Bank and Foreign Bank and also between Private Bank and Foreign Bank. Ho is rejected.

10. Return to Assets

Table 4.12: Mean comparison of average ***Return On Assets (PAT /Total ASSETS)*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.				
Category	Mean	SD	F-value	p-value
Private	1.2406	0.30972	27.373	0.000
Public	0.8113	0.17062		
Foreign	2.3597	0.84578		
Pairs having significant difference: Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.				

Ho_{10}: Average Return On Assets (PAT /Total ASSETS) across all three Bank Categories are alike.

Table 4.12 indicates the comparison of average Return on Assets (PAT /Total ASSETS) of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Return on Assets (PAT /Total ASSETS) of Private Bank is 1.2406, Public Bank 0.8113and Foreign Bank 2.3597. Looking to the analysis of variance result F value (27.373) found to be significant as P value is 0.000 (≤ 0.05) and there exist a real difference between average Return On Assets (PAT /Total ASSETS) of Public Bank and Foreign Bank and also between Private Bank and Foreign Bank. Ho is rejected.

11. Gross NPA as Percentage to Net Advances

Table 4.13: Mean comparison of average ***Gross NPA As % To Net Advances*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.				
Category	Mean	SD	F-value	p-value
Private	3.0767	1.62934	2.070	0.142
Public	5.5944	4.22223		
Foreign	9.8374	13.51132		
Pairs having significant difference: "No Real Difference"				

Ho_{11}: Average Gross NPA as % to net advances across all three Bank Categories are alike.

Table 4.13 indicates the comparison of average Gross NPA As % To Net Advances of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Gross NPA As % To Net Advances of Private Bank is 3.0767, Public Bank 5.5944 and Foreign Bank 9.8374. Looking to the analysis of variance result F value (2.070) not found to be significant as P value is 0.142 (which is not ≤ 0.05) and there is no real difference in average Gross NPA As % To Net Advances of all the Banks therefore the hypothesis that all the banks are alike prevails.

Here P value is not less than 5% i.e. 0.05 that means F value is not significant this indicates no real difference between any categories of Banks. Also the assumption of Ho that all bank categories are alike proves right. If we see the Mean of all banks then we observe that there is almost no difference between Private Bank, Public Bank and Foreign. Here our assumption of hypothesis is fulfilled therefore Ho is accepted.

12. Net NPA as Percentage to Net Advances

Table 4.14: Mean comparison of average ***Net NPA As % To Net Advances*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	1.2179	0.58159	2.360	0.110
Public	2.5804	1.89914		
Foreign	1.4881	1.99856		
Pairs having significant difference: "No Real Difference"				

Ho_{12}: Average Net NPA as % to net advances across all three Bank Categories are alike.

Table 4.14 indicates the comparison of average Net NPA As % To Net Advances of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Net NPA As % To Net Advances of Private Bank is 1.2179, Public Bank 2.5804 and Foreign Bank 1.4881. Looking to the analysis of variance result F value (2.360) not found to be significant as P value is 0.110 (which is not ≤ 0.05) and there is no real difference in average Net NPA As % To Net Advances of all the Banks therefore the hypothesis that all the banks are alike prevails.

From the Mean column we study that there is not much difference between all the three bank categories. This is because P value is greater than 0.05 and if P value is greater than F value cannot be significant this indicates no difference between Private Bank, Public Bank and Foreign. Ho is accepted.

13. Net Profit (PAT) on Owned Funds

Table 4.15: Mean comparison of average ***Net Profit (PAT) On Owned Funds*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.				
Category	Mean	SD	F-value	p-value
Private	13.8297	4.20958	0.333	0.719
Public	12.9822	2.58452		
Foreign	12.6611	3.86962		
Pairs having significant difference: "No Real Difference"				

Ho_{13}: Average Net Profit (PAT) on owned funds across all three Bank Categories are alike.

Table 4.15 indicates the comparison of average Net Profit (PAT) On Owned Funds of all three bank categories that is Private Banks, Public Banks and Foreign Banks.

As per the result average Net Profit (PAT) On Owned Funds of Private Bank is 13.8297, Public Bank 12.9822 and Foreign Bank 12.6611. Looking to the analysis of variance result F value (0.333) not found to be significant as P value is 0.719 (which is not ≤ 0.05) and there is no real difference in average Net Profit (PAT) On Owned Funds of all the Banks therefore the hypothesis that all the banks are alike prevails.

Again same as previous two tables P value is more than 5% that means hypothesis assumption is correct i.e. Mean of Private Banks, Public Banks and Foreign Banks are almost same. Ho is accepted.

14. Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)

Table 4.16: Mean comparison of average ***Capital Adequacy Ratio (Tier I Plus Tier II)(Under Basel I)*** for the period 2001-02 to 2012-13 across the Bank category using One Way Analysis of Variance Statistics.

Category	Mean	SD	F-value	p-value
Private	12.7800	1.85735	7.192	0.003
Public	11.8092	1.11203		
Foreign	18.5182	7.81790		
Pairs having significant difference: Public Bank and Foreign Bank and also between Private Bank and Foreign Bank.				

Ho_{14}: Average Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I) across all three Bank Categories are alike.

Table 4.16 indicates the comparison of average Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I) of all three bank categories that are Private Banks, Public Banks and Foreign Banks.

As per the result average Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I) of Private Bank is 12.7800, Public Bank 11.8092and Foreign Bank 18.5182. Looking to the analysis of variance result F value (7.192) found to be significant as P value is 0.003 (≤ 0.05) and there exist a real difference between average Capital Adequacy Ratio (Tier I Plus Tier II)(Under Basel I) of Public Bank and Foreign Bank and also between Private Bank and Foreign Bank. Ho is rejected.

4.5 REGRESSION ANALYSIS

Regression analysis is a statistical measure that attempts to determine the strength of the relationship between one dependent variable (usually denoted by Y) and a series of other changing variables (known as independent variables).[18]

The two basic types of regression are linear regression and multiple regressions. Linear regression uses one independent variable to explain and/or predict the outcome of Y, while multiple regressions use two or more independent variables to predict the outcome. Correlation analysis is employed to identify the relationship between a dependent variable and one or more independent variables.

To understand the trend of all the ratios that are taken as parameters over a period of time using past 12 years data following regression analysis has been performed.

Values in following tables are calculated in Regression Analysis Table in appendix.

In the following tables of regression, in some ratios, F will be significant but negative this means that as the year increase ratio value is decreasing, this shows the decreasing trend.

In some ratios, F value will not be significant that means trend cannot be explained. Trend cannot be explained whether it is upward or downward trend for the years taken.

18 www.investopedia.com

Table 4.17: Bank category wise trend of average *Credit Deposit Ratio* for the period 2001-2002 to 2012-2013 using Regression Analysis.							
Bank Category	**R^2**	**F-value**	**p-value**	**Year**		**Constant**	
				Coefficient	**p-value**	**Coefficient**	**p-value**
Private Banks	0.340	5.162	0.046	0.950	0.046	72.430	0.000
Public Banks	0.920	114.25	0.000	3.234	0.000	40.591	0.000
Foreign Banks	0.827	47.798	0.000	4.604	0.000	37.165	0.000

Table 4.17 indicates the regression analysis result of Credit Deposit Ratio as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Credit Deposit Ratio has been significantly explained by years with R^2 value is 0.340, significant F value 5.162 as P value is 0.046 (P value should be ≤ 0.05) and significant coefficient of year value is 0.950 (even here P value is 0.046 which is ≤ 0.05).

As a result of analysis within **Public Bank** category Credit Deposit Ratio has been significantly explained by years with R^2 value is 0.920, significant F value 114.251 as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is 3.234 (even here P value is 0.000 which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Credit Deposit Ratio has been significantly explained by years with R^2 value is 0.827, significant F value 47.798as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is 4.604 (even here P value is 0.000 which is ≤ 0.05).

Table 4.18: Bank category wise trend of average *Interest Income As %To Total Income* for the period 2001-2002 to 2012-2013 using Regression Analysis.							
Bank Category	**R^2**	**F-value**	**p-value**	**Year**		**Constant**	
				Coefficient	**p-value**	**Coefficient**	**p-value**
Private Banks	0.542	11.847	0.006	0.427	0.006	78.093	0.000
Public Banks	0.735	27.688	0.000	0.784	0.000	82.208	0.000
Foreign Banks	0.673	20.557	0.001	2.759	0.001	46.919	0.000

Table 4.18 indicates the regression analysis result of Interest Income As % To Total Income as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Interest Income As % To Total Income has been significantly explained by years with R2 value is 0.542, significant F value 11.847as P value is 0.006 (P value should be ≤ 0.05) and significant coefficient of year value is 0.427 (even here P value is 0.006which is ≤ 0.05).

As a result of analysis within **Public Bank** category Interest Income As % To Total Income has been significantly explained by years with R2 value is 0.735, significant F value 27.688 as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is 0.784 (even here P value is 0.000 which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Interest Income As % To Total Income has been significantly explained by years with R2 value is 0.673, significant F value 20.557 as P value is 0.001 (P value should be ≤ 0.05) and significant coefficient of year value is 2.759 (even here P value is 0.001 which is ≤ 0.05)

Table 4.19: Bank category wise trend of average *Non-Interest Income As % To Total Income* for the period 2001-2002 to 2012-2013 using Regression Analysis.

Bank Category	R^2	F-value	p-value	Year		Constant	
				Coefficient	p-value	Coefficient	p-value
Private Banks	0.542	11.846	0.006	-0.427	0.006	21.907	0.000
Public Banks	0.735	27.688	0.000	-0.784	0.000	17.792	0.000
Foreign Banks	0.673	20.560	0.001	-2.759	0.001	53.081	0.000

Table 4.19 indicates the regression analysis result of Non-Interest Income As % To Total Income as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Non-Interest Income As % To Total Income has been significantly explained by years with R^2 value is 0.542, significant F value 11.846 as P value is 0.006 (P value should be ≤ 0.05) and significant coefficient of year value is -0.427 (even here P value is 0.006 which is ≤ 0.05).

As a result of analysis within **Public Bank** category Non-Interest Income As % To Total Income has been significantly explained by years with R^2 value is 0.735, significant F value 27.688 as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is -0.784 (even here P value is 0.000 which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Non-Interest Income As % To Total Income has been significantly explained by years with R^2 value is 0.673, significant F value 20.560 as P value is 0.001 (P value should be ≤ 0.05) and significant coefficient of year value is -2.759 (even here P value is 0.001 which is ≤ 0.05).

Table 4.20: Bank category wise trend of average *Interest Expense As % To Total Expenses* for the period 2001-2002 to 2012-2013 using Regression Analysis.

Bank Category	R^2	F-value	p-value	Year		Constant	
				Coefficient	p-value	Coefficient	p-value
Private Banks	0.009	0.090	0.771	-0.084	0.771	60.142	0.000
Public Banks	0.438	7.802	0.019	1.127	0.019	55.365	0.000
Foreign Banks	0.070	0.756	0.405	0.382	0.405	31.804	0.000

Table 4.20 indicates the regression analysis result of Interest Expense As % To Total Expenses as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Interest Expense As % To Total Expenses has been significantly explained by years with R^2 value is 0.009, F value 0.090 not found to be significant as P value is 0.771 (P value should be ≤ 0.05) and coefficient of year value is -0.084 which is also not found to be significant (even here P value is 0.771 which is not ≤ 0.05).

As a result of analysis within **Public Bank** category Interest Expense As % To Total Expenses has been significantly explained by years with R^2 value is 0.438, significant F value 7.802 as P value is 0.019 (P value should be ≤ 0.05) and significant coefficient of year value is 1.127 (even here P value is 0.019which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Interest Expense As % To Total Expenses has been significantly explained by years with R^2 value is 0.070, F value 0.756 not found to be significant as P value is 0.405 (P value should be ≤ 0.05) and coefficient of year value is 0.382 which is also not found to be significant (even here P value is 0.405 which is not ≤ 0.05).

Table 4.21: Bank category wise trend of *Operating Expenses As % To Total Expenditure* for the period 2001-2002 to 2012-2013 using Regression Analysis.

Bank Category	R^2	F-value	p-value	Year		Constant	
				Coefficient	p-value	Coefficient	p-value
Private Banks	0.204	2.568	0.140	0.408	0.140	23.156	0.000
Public Banks	0.744	29.059	0.000	-1.114	0.000	31.537	0.000
Foreign Banks	0.001	0.011	0.919	0.032	0.919	35.702	0.000

Table 4.21 indicates the regression analysis result of Operating Expenses As % To Total Expenditure as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Operating Expenses As % To Total Expenditure has been significantly explained by years with R^2 value is 0.204, F value 2.568 not found to be significant as P value is 0.140 (P value should be ≤ 0.05) and coefficient of year value is 0.408 which is also not found to be significant (even here P value is 0.140 which is not ≤ 0.05).

As a result of analysis within **Public Bank** category Operating Expenses As % To Total Expenditure has been significantly explained by years with R^2 value is 0.744, significant F value 29.059 as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is -1.114 (even here P value is 0.000 which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Operating Expenses As % To Total Expenditure has been significantly explained by years with R^2 value is 0.001, F value 0.011 not found to be significant as P value is 0.919 (P value should be ≤ 0.05) and coefficient of year value is 0.032 which is also not found to be significant (even here P value is 0.919 which is not ≤ 0.05).

Table 4.22: Bank category wise trend of average *Spread As % To Total Assets* for the period 2001-2002 to 2012-2013 using Regression Analysis.							
Bank Category	**R^2**	**F-value**	**p-value**	**Year**		**Constant**	
				Coefficient	**p-value**	**Coefficient**	**p-value**
Private Banks	0.862	62.519	0.000	0.117	0.000	1.761	0.000
Public Banks	0.182	2.224	0.167	-0.044	0.167	2.857	0.000
Foreign Banks	0.565	12.977	0.005	0.106	0.005	2.734	0.000

Table 4.22 indicates the regression analysis result of Spread As % To Total Asset as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Spread As % To Total Asset has been significantly explained by years with R^2 value is 0.862, significant F value 62.519 as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is 0.117 (even here P value is 0.000 which is ≤ 0.05).

As a result of analysis within **Public Bank** category Spread As % To Total Asset has been significantly explained by years with R^2 value is 0.182, F value 2.224 not found to be significant as P value is 0.167 (P value should be ≤ 0.05) and coefficient of year value is -0.044 which is also not found to be significant (even here P value is 0.167 which is not ≤ 0.05).

As a result of analysis within **Foreign Bank** category Spread As % To Total Asset has been significantly explained by years with R^2 value is 0.565, significant F value 12.977 as P value is 0.005 (P value should be ≤ 0.05) and significant coefficient of year value is 0.106 (even here P value is 0.005 which is ≤ 0.05).

Table 4.23: Bank category wise trend of average *Interest Income As % To Average Working Fund* for the period 2001-2002 to 2012-2013 using Regression Analysis.

Bank Category	R^2	F-value	p-value	Year		Constant	
				Coefficient	p-value	Coefficient	p-value
Private Banks	0.134	1.553	0.241	0.077	0.241	7.844	0.000
Public Banks	0.013	0.129	0.727	-0.019	0.727	8.494	0.000
Foreign Banks	0.018	0.181	0.679	-0.038	0.679	7.618	0.000

This Table indicates the regression analysis result of Interest Income As % To Average Working Fund as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Interest Income As % To Average Working Fund has been significantly explained by years with R^2 value is 0.134, F value 1.553 not found to be significant as P value is 0.241 (P value should be ≤ 0.05) and coefficient of year value is 0.077 which is also not found to be significant (even here P value is 0.241 which is not ≤ 0.05).

As a result of analysis within **Public Bank** category Interest Income As % To Average Working Fund has been significantly explained by years with R^2 value is 0.013, F value 0.129 not found to be significant as P value is 0.727 (P value should be ≤ 0.05) and coefficient of year value is -0.019 which is also not found to be significant (even here P value is 0.727 which is not ≤ 0.05).

As a result of analysis within **Foreign Bank** category Interest Income As % To Average Working Fund has been significantly explained by years with R^2 value is 0.018, F value 0.181 not found to be significant as P value is 0.679 (P value should be ≤ 0.05) and coefficient of year value is -0.038which is also not found to be significant (even here P value is 0.679 which is not ≤ 0.05).

Table 4.24: Bank category wise trend of average *Non-Interest Income As % To Total Average Working Fund* for the period 2001-2002 to 2012-2013 using Regression Analysis.

Bank Category	R^2	F-value	p-value	Year		Constant	
				Coefficient	p-value	Coefficient	p-value
Private Banks	0.300	4.287	0.065	-0.033	0.065	2.163	0.000
Public Banks	0.773	34.040	0.000	-0.105	0.000	1.919	0.000
Foreign Banks	0.865	63.985	0.000	-0.571	0.000	8.637	0.000

Table 4.24 indicates the regression analysis result of Non-Interest Income As % To Total Average Working Fund as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Non-Interest Income As % To Total Average Working Fund has been significantly explained by years with R^2 value is 0.300, F value 4.287 not found to be significant as P value is 0.065 (P value should be ≤ 0.05) and coefficient of year value is -0.033 which is also not found to be significant (even here P value is 0.065 which is not ≤ 0.05).

As a result of analysis within **Public Bank** category Non-Interest Income As % To Total Average Working Fund has been significantly explained by years with R^2 value is 0.773, significant F value 34.040 as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is -0.105 (even here P value is 0.000 which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Non-Interest Income As % To Total Average Working Fund has been significantly explained by years with R^2 value is 0.865, significant F value 63.985 as value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is -0.571 (even here P value is 0.000 which is ≤ 0.05).

Table 4.25: Bank category wise trend of average *Operating Profit As % To Average Working Funds* for the period 2001-2002 to 2012-2013 using Regression Analysis.

Bank Category	R^2	F-value	p-value	Year		Constant	
				Coefficient	p-value	Coefficient	p-value
Private Banks	0.000	0.001	0.979	0.000	0.979	2.544	0.000
Public Banks	0.580	13.820	0.004	-0.125	0.004	3.014	0.000
Foreign Banks	0.739	28.357	0.000	-0.390	0.000	8.041	0.000

Table 4.25 indicates the regression analysis result of Operating Profit As % To Average Working Funds as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Operating Profit As % To Average Working Funds has been significantly explained by years with R^2 value is 0.000, F value 0.001 not found to be significant as P value is 0.979 (P value should be ≤ 0.05) and coefficient of year value is 0.000 which is also not found to be significant (even here P value is 0.979 which is not ≤ 0.05).

As a result of analysis within **Public Bank** category Operating Profit As % To Average Working Funds has been significantly explained by years with R^2 value is 0.580, significant F value 13.820 as P value is 0.004 (P value should be ≤ 0.05) and significant coefficient of year value is -0.125 (even here P value is 0.004 which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Operating Profit As % To Average Working Funds has been significantly explained by years with R^2 value is 0.739, significant F value 28.357 as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is -0.390 (even here P value is 0.000 which is ≤ 0.05)

Table 4.26: Bank category wise trend of average *Return On Assets (PAT /Total ASSETS)* for the period 2001-2002 to 2012-2013 using Regression Analysis.

Bank Category	R^2	F-value	p-value	Year		Constant	
				Coefficient	p-value	Coefficient	p-value
Private Banks	0.238	3.115	0.108	0.042	0.108	0.968	0.000
Public Banks	0.007	0.071	0.796	-0.004	0.796	0.837	0.000
Foreign Banks	0.441	7.889	0.019	-0.156	0.019	3.372	0.000

Table 4.26 indicates the regression analysis result Return on Assets (PAT /Total ASSETS) Income as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Return on Assets (PAT /Total ASSETS) Income has been significantly explained by years with R^2 value is 0.238, F value 3.115 not found to be significant as P value is 0.108 (P value should be ≤ 0.05) and coefficient of year value is 0.042 which is also not found to be significant (even here P value is 0.108 which is not ≤ 0.05).

As a result of analysis within **Public Bank** category Return on Assets (PAT /Total ASSETS) has been significantly explained by years with R^2 value is 0.007, F value 0.071 not found to be significant as P value is 0.796 (P value should be ≤ 0.05) and coefficient of year value is -0.004 which is also not found to be significant (even here P value is 0.796 which is not ≤ 0.05).

As a result of analysis within **Foreign Bank** category Return on Assets (PAT /Total ASSETS) has been significantly explained by years with R^2 value is 0.441, significant F value 7.889 as P value is 0.019 (P value should be ≤ 0.05) and significant coefficient of year value is -0.156 (even here P value is 0.019 which is ≤ 0.05).

Table 4.27: Bank category wise trend of average *Gross NPA As % To Net Advances* for the period 2001-2002 to 2012-2013 using Regression Analysis.							
Bank Category	**R^2**	**F-value**	**p-value**	**Year**		**Constant**	
				Coefficient	**p-value**	**Coefficient**	**p-value**
Private Banks	0.578	13.671	0.004	-0.343	0.004	5.309	0.000
Public Banks	0.617	16.105	0.002	-0.920	0.002	11.573	0.000
Foreign Banks	0.313	4.566	0.058	-2.098	0.058	23.475	0.009

Table 4.27 indicates the regression analysis result of Gross NPA As % To Net Advances as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Gross NPA As % To Net Advances has been significantly explained by years with R^2 value is 0.578, significant F value 13.671 as P value is 0.004 (P value should be ≤ 0.05) and significant coefficient of year value is -0.343 (even here P value is 0.004 which is ≤ 0.05).

As a result of analysis within **Public Bank** Gross NPA As % To Net Advances has been significantly explained by years with R^2 value is 0.617, significant F value 16.105 as P value is 0.002 (P value should be ≤ 0.05) and significant coefficient of year value is -0.920 (even here P value is 0.002 which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Gross NPA As % To Net Advances has been significantly explained by years with R^2 value is 0.313, F value 4.566 not found to be significant as P value is 0.058 (P value should be ≤ 0.05) and coefficient of year value is -2.098 which is also not found to be significant (even here P value is 0.058 which is not ≤ 0.05).

Table 4.28: Bank category wise trend of average *Net NPA As % To Net Advances* for the period 2001-2002 to 2012-2013 using Regression Analysis.							
Bank Category	**R^2**	**F-value**	**p-value**	**Year**		**Constant**	
				Coefficient	**p-value**	**Coefficient**	**p-value**
Private Banks	0.840	52.399	0.000	-0.148	0.000	2.179	0.000
Public Banks	0.490	9.626	0.011	-0.369	0.011	4.978	0.000
Foreign Banks	0.104	1.156	0.308	-0.178	0.308	2.648	0.055

Table 4.28 indicates the regression analysis result of Net NPA As % To Net Advances as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Net NPA As % To Net Advances has been significantly explained by years with R^2 value is 0.840, significant F value 52.399 as P value is 0.000 (P value should be ≤ 0.05) and significant coefficient of year value is -0.148 (even here P value is 0.000 which is ≤ 0.05).

As a result of analysis within **Public Bank** Net NPA As % To Net Advances has been significantly explained by years with R^2 value is 0.490, significant F value 9.626 as P value is 0.011 (P value should be ≤ 0.05) and significant coefficient of year value is -0.369 (even here P value is 0.011 which is ≤ 0.05).

As a result of analysis within **Foreign Bank** category Net NPA As % To Net Advances has been significantly explained by years with R^2 value is 0.104, F value 1.156 not found to be significant as P value is 0.308 (P value should be ≤ 0.05) and coefficient of year value is -0.178 which is also not found to be significant (even here P value is 0.308 which is not ≤ 0.05).

Table 4.29: Bank category wise trend of average *Net Profit (PAT) On Owned Funds* for the period 2001-2002 to 2012-2013 using Regression Analysis.							
Bank Category	**R^2**	**F-value**	**p-value**	**Year**		**Constant**	
				Coefficient	**p-value**	**Coefficient**	**p-value**
Private Banks	0.033	0.342	0.572	-0.212	0.572	15.209	0.000
Public Banks	0.008	0.077	0.788	-0.063	0.788	13.388	0.000
Foreign Banks	0.589	14.349	0.004	-0.824	0.004	18.016	0.000

Table 4.29 indicates the regression analysis result of Net Profit (PAT) On Owned Funds as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Net Profit (PAT) On Owned Funds has been significantly explained by years with R^2 value is 0.033, F value 0.342 not found to be significant as P value is 0.572 (P value should be ≤ 0.05) and coefficient of year value is -0.212 which is also not found to be significant (even here P value is 0.572 which is not ≤ 0.05).

As a result of analysis within **Public Bank** category Net Profit (PAT) On Owned Funds has been significantly explained by years with R^2 value is 0.008, F value 0.077 not found to be significant as P value is 0.788 (P value should be ≤ 0.05) and coefficient of year value is -0.063 which is also not found to be significant (even here P value is 0.788 which is not ≤ 0.05).

As a result of analysis within **Foreign Bank** category Net Profit (PAT) On Owned Funds has been significantly explained by years with R^2 value is 0.589, significant F value 14.349 as P value is 0.004 (P value should be ≤ 0.05) and significant coefficient of year value is -0.824 (even here P value is 0.004 which is ≤ 0.05).

Table 4.30: Bank category wise trend of average *Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)* for the period 2001-2002 to 2012-2013 using Regression Analysis.

Bank Category	R^2	F-value	p-value	Year		Constant	
				Coefficient	p-value	Coefficient	p-value
Private Banks	0.057	0.604	0.455	0.123	0.455	11.981	0.000
Public Banks	0.000	0.002	0.964	-0.004	0.964	11.838	0.000
Foreign Banks	0.447	8.083	0.017	-1.450	0.017	27.941	0.000

Table 4.30 indicates the regression analysis result of Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I) as dependent variable and year as independent variable.

As a result of analysis within **Private Bank** category Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I) has been significantly explained by years with R^2 value is 0.057, F value 0.604 not found to be significant as P value is 0.455 (P value should be ≤ 0.05) and coefficient of year value is 0.123 which is also not found to be significant (even here P value is 0.455 which is not ≤ 0.05).

As a result of analysis within **Public Bank** category Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I) has been significantly explained by years with R^2 value is 0.000, F value 0.002 not found to be significant as P value is 0.964 (P value should be ≤ 0.05) and coefficient of year value is -0.004which is also not found to be significant (even here P value is 0.964 which is not ≤ 0.05).

As a result of analysis within **Foreign Bank** Capital Adequacy Ratio (Tier I plus Tier II) (Under Basel I) has been significantly explained by years with R^2 value is 0.447, significant F value 8.083as P value is 0.017 (P value should be ≤ 0.05) and significant coefficient of year value is -1.450 (even here P value is 0.017 which is ≤ 0.05).

4.6 TABLES FOR T-TEST

The *t*-test for comparing the means of the performance of all the three sector banks (private, public and foreign) is done. The results support past findings. As the hypothesis of equality for the performance on all the 14 parameters for all three sectors does not hold true it can be said that all the banks, irrespective of their sector, i.e., private, public and foreign, showed statistically different performances.

T-value is found to compare our sample with the whole population. This test is conducted to know whether our sample really represent our population or not. This is done by comparing mean of our sample and population. (If probability value i.e. p-value is less than 0.05 than that makes our t-value significant and there exist difference between sample mean and population mean and if p-value is more than 0.05 than t-value is not significant and there does not exist difference between sample mean and population mean)

Here t-test is done separately each sector wise. Comparison is done between sample banks, all banks in particular sector and with all the banks for example sample banks taken in private sector banks will be compared with all the banks in private sector banks and all the banks, this same is done with public and foreign sector bank as well.

Table 4.31: T-Value of Private Banks

Name of Ratios	Mean Of All Sample Private Banks		Mean Of All Private Banks	Mean Of All The Banks	t Value		p Value	
	Mean	SD	----	----	All Private Banks	All The Banks	All Private Banks	All The Banks
Credit Deposit Ratio	78.6037	5.86874	74.57	74.36	2.381	2.505	0.036	0.029
Interest Income as Percentage to Total Income	80.8664	2.08903	81.06	79.95	-0.321	1.520	0.754	0.157
Non – Interest Income as Percentage to Total Income	19.1336	2.08905	18.94	20.05	0.321	-1.52	0.754	0.157
Interest Expenses as Percentage to Total Expenses	59.5967	3.20404	60.49	54.09	-0.966	5.954	0.355	0.000
Operating Expenses as Percentage to Total Expenditure	25.8060	3.25181	25.55	28.14	0.273	-2.486	0.790	0.030
Spread as Percentage to Total Assets	2.5240	0.45595	2.46	2.89	0.487	-2.78	0.636	0.018
Interest Income as Percentage to Average Working Fund	8.3478	0.76196	8.77	8.5	-1.920	-0.692	0.081	0.503
Non – Interest Income as Percentage to Average Working Fund	1.9469	0.21841	1.63	2.10	5.027	-2.428	0.000	0.034

Name of Ratios	Mean Of All Sample Private Banks		Mean Of All Private Banks	Mean Of All The Banks	t Value		p Value	
	Mean	SD	----	----	All Private Banks	All The Banks	All Private Banks	All The Banks
Operating Profit as Percentage to Average Working Funds	2.5378	0.38148	2.18	2.60	3.249	-0.565	0.008	0.584
Return to Assets	1.2406	0.30972	0.89	1.09	3.921	1.684	0.002	0.120
Gross NPA as Percentage to Net Advances	3.0767	1.62934	3.88	4.00	-1.708	-1.963	0.116	0.075
Net NPA as Percentage to Net Advances	1.2179	0.58159	1.39	1.56	-1.025	-2.038	0.327	0.066
Net Profit (PAT) on Owned Fund	13.8297	4.20958	13.02	13.49	0.666	0.280	0.519	0.785
Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)	12.7800	1.85735	13.17	28.57	-0.727	-29.45	0.482	0.000

1. Credit Deposit Ratio

Here p-value of All Private Banks is 0.036 and All banks is 0.029. Both are lower than 0.05 that means t-value is significant in both All Private (2.381) Banks and All banks (2.505). This indicates that there is a significant difference between the mean of Sample Private Banks 78.60, mean of All Private Banks 74.57 and mean of All banks 74.36. Here if we compare all the three means we observe that Sample Private Banks are in good position than All Private Banks and All banks.

2. Interest Income as Percentage to Total Income

Here p-value of All Private Banks is 0.754 and All banks is 0.157. Both are higher than 0.05 that means t-value is not significant in both All Private Banks (-0.321) and All banks (1.520). As we see the mean of Sample Private Banks 80.87 mean of All Private Banks 81.06 and mean of All banks 79.95 there is no real difference among all the three means. Still we can say that All Private Banks doing good than Sample Private Banks and All banks as income interest is high here.

3. Non – Interest Income as Percentage to Total Income

Here p-value of All Private Banks is 0.754 and All banks is 0.157. Both are higher than 0.05 that means t-value is not significant in both All Private Banks (0.321) and All banks (-1.520). As we see the mean of Sample Private Banks 19.13 mean of All Private Banks 18.94 and mean of All banks 20.05 there is no actual difference among all the three means. Though there is not much difference between all the three means still we observe that All banks are earning more through non-interest income.

4. Interest Expenses as Percentage to Total Expenses

P-value of All Private Banks is 0.355 which is greater than 0.05 that means t-value here is not significant. If we compare mean of Sample Private Banks 59.59 with mean of All Private Banks 60.59 there is not much difference.

P-value of All Banks is 0.00 that is less than 0.05 that makes t-value significant and there exist real difference between mean of Sample Private Banks 59.59 and mean of All Banks 54.09

If we compare all the 3 means we see that expanses of All Private Banks are more. They are paying more interest on borrowed funds. But overall if we see that mean of All Banks is less that is good sign.

5. **Operating Expenses as Percentage to Total Expenditure**

Here p-value of All Private Banks is 0.79 which is greater than 0.05 that means t-value 0.273 here is not significant. If we compare mean of Sample Private Banks 25.81 with mean of All Private Banks 25.55 there is not much difference.

P-value of All Banks is 0.03 that is less than 0.05 that makes t-value -2.486 significant and there exist real difference between mean of Sample Private Banks 25.81 and mean of All Banks 28.14.

Expenses should be less and in controlled. As we compare all three means we observe that almost All Banks are spending more. But further if we see All Private Banks have less expanses.

6. **Spread as Percentage to Total Assets**

As we see p-value of All Private Banks is 0.636 which is greater than 0.05 this makes t-value 0.487 not significant. This indicates that there is no real difference between mean of Sample Private Banks 2.52 with mean of All Private Banks 2.46.

As we observe p-value of All Banks is 0.018 which is lower than 0.05 that indicates t-value of All Banks is -2.780 is significant and there exist real difference between mean of Sample Private Banks 2.52 and mean of All Banks 2.86.

Spread is nothing but income that is more the better. If we compare all the 3 means we understand almost All Banks are in good position as their spread ratio is good.

7. **Interest Income as Percentage to Average Working Fund**

Here p-value of All Private Banks is 0.081 and All banks is 0.503. Both are higher than 0.05 that means t-value of All Private Banks -1.92 and t-value of All banks -0.692 are not significant.

More income better it is. As we see the mean of Sample Private Banks 8.35 mean of All Private Banks 8.77 and mean of All banks 8.50 there is no real difference among all the three means. Even though there is no

difference between all three means, still we can say that with very less margin of difference All Private Banks are doing well.

8. Non – Interest Income as Percentage to Average Working Fund

Here p-value of All Private Banks is 0.000 and All banks is 0.034. Both are lower than 0.05 that means t-value is significant in both All Private Banks (5.027) and All banks (-2.428). This indicates that there is a significant difference between the mean of Sample Private Banks 1.95, mean of All Private Banks 1.63 and mean of All banks 2.10.

Non-interest income means income other than interest income. After comparing we come to the conclusion that All banks are earning more from other income and are in good position.

9. Operating Profit as Percentage to Average Working Funds

Here in Operating Profit as Percentage to Average Working Funds ratio we observe that p-value in All Private Banks 0.008 is less than 0.05 therefore t-value 3.249 is significant. This makes possibility of existence of real difference between the mean of All Private Banks 2.18 and mean of Sample Private Banks 2.54.

But p-value of All banks 0.584 which is greater than 0.05 which makes t-value -0.565 not significant this indicates that there is not much difference between mean of All banks 2.60 and mean of Sample Private Banks 2.54.

As we compare all the three means we can say that almost All banks are doing good in operating profit.

10. Return to Assets

Here in Return to Asset ratio we observe that p-value in All Private Banks 0.002 which is less than 0.05 therefore t-value 3.921 is significant. This makes possibility of existence of real difference between the mean of All Private Banks 0.89 and mean of Sample Private Banks 1.24.

But p-value of All banks 0.120 is greater than 0.05 making t-value 1.684 not significant this indicates that there is not much difference between mean of All banks 1.09 and mean of Sample Private Banks 1.24.

This ratio indicates how well the bank's assets are managed to bring profit on assets that have been invested to the bank**.** Return on assets tells you what earnings were generated from assets. Here observing all the three means we can say that our Sample Private Banks are good in this ratio.

11. Gross NPA as Percentage to Net Advances

Here p-value of All Private Banks is 0.116 and All banks is 0.075. Both are higher than 0.05 that means t-value of All Private Banks -1.708 and All banks -1.963 are not significant. As we see the mean of Sample Private Banks 3.08, mean of All Private Banks 3.88 and mean of All banks is 4.00 there is no real difference among all the three means.

This ratio refers to loans that are in default. Borrowers have not paid their loan money back. Lesser the bad debt the better it is. As there is not much difference between Sample Private Banks, All Private Banks and All banks still we can say that Sample Private Banks are doing well.

12. Net NPA as Percentage to Net Advances

Here p-value of All Private Banks is 0.327 and All banks is 0.066. Both are higher than 0.05 that means t-value of All Private Banks -1.025 and All banks -2.038 are not significant. As we see the mean of Sample Private Banks 1.22, mean of All Private Banks 1.39 and mean of All banks 1.56 there is no real difference among all the three means.

Interest debited to borrower and not recovered and not recognized as income and kept in interest suspense. Similarly to the previous ratio here also less the better it is. Here our selected Sample Private Banks has less mean than the two, which indicates that Sample Private Banks are in good position.

13. Net Profit (PAT) on Owned Fund

Here p-value of All Private Banks is 0.519 and All banks is 0.785. Both are higher than 0.05 that shows t-value of All Private Banks 0.666 and All banks 0.280 are not significant. As we see the mean of Sample Private Banks 13.83, mean of All Private Banks 13.02 and mean of All banks 13.49 there is no real difference among all the three means.

When profit on owned fund is more, the better it is. Here after comparing three means together, even though there is no significant difference, we come to conclusion that the Sample Private Banks we had selected are making good profit on owned funds.

14. Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)

As we see p-value of All Private Banks is 0.482 which is greater than 0.05 this makes t-value -0.727 not significant. This indicates that there is no real difference between mean of Sample Private Banks 12.78 with mean of All Private Banks 13.17.

Observing p-value of All Banks is 0.000 which is lower than 0.05 that indicates t-value of All Banks is -29.450 is significant and there exist real difference between mean of Sample Private Banks 12.78 and mean of All Banks 28.57.

Capital adequacy is indicated by a least numerical ratio which the Banks are likely to maintain to safeguard their stability and strength. It is taken as a part of capital to assets weighted according to the risk of bad debt attached to them. As we discussed earlier more the better it is. Here mean of All Banks are higher. That indicates that almost entire banking industry is going good as far as Capital Adequacy Ratio is concerned.

According to this working after over-all observing the pattern of mean of Sample Private Banks, All Private Banks and All Banks, it can be concluded that on-the-whole the performance of All Banks is good. Our selected Sample Private Banks comes on average position and All Private Banks has poor performance.

Table 4.32: T-Value of Public Banks

Name of Ratios	Mean Of All Sample Public Banks		Mean Of All Public Banks	Mean Of All The Banks	t Value		p Value	
----	Mean	SD	----	----	All Public Banks	All The Banks	All Public Banks	All The Banks
Credit Deposit Ratio	61.6148	12.16178	66.82	74.36	-1.483	-3.630	0.166	0.004
Interest Income as Percentage to Total Income	87.3035	3.29735	86.40	79.95	0.949	7.725	0.363	0.000
Non – Interest Income as Percentage to Total Income	12.6965	3.29735	13.60	20.05	-0.949	-7.725	0.363	0.000
Interest Expenses as Percentage to Total Expenses	62.6917	6.13908	62.79	54.09	-0.055	4.854	0.957	0.001
Operating Expenses as Percentage to Total Expenditure	24.2952	4.65723	23.33	28.14	0.718	-2.860	0.488	0.016
Spread as Percentage to Total Assets	2.5694	0.37455	2.58	2.89	-0.098	-2.965	0.923	0.013

Name of Ratios	Mean Of All Sample Public Banks		Mean Of All Public Banks	Mean Of All The Banks	t Value		p Value	
----	Mean	SD	----	----	All Public Banks	All The Banks	All Public Banks	All The Banks
Interest Income as Percentage to Average Working Fund	8.3675	0.62080	8.31	8.50	0.321	-0.739	0.754	0.475
Non – Interest Income as Percentage to Average Working Fund	1.2390	0.42875	1.29	2.10	-0.412	-6.956	0.688	0.000
Operating Profit as Percentage to Average Working Funds	2.2005	0.59236	2.10	2.60	0.588	-2.336	0.569	0.039
Return to Assets	0.8113	0.17062	0.89	1.09	-1.597	-5.658	0.139	0.000
Gross NPA as Percentage to Net Advances	5.5944	4.22223	4.77	4.00	0.676	1.308	0.513	0.218
Net NPA as Percentage to Net Advances	2.5804	1.89914	2.13	1.56	0.822	1.861	0.429	0.090
Net Profit (PAT) on Owned Fund	12.9822	2.58452	15.73	13.49	-3.683	-0.681	0.004	0.510
Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)	11.8092	1.11203	11.97	28.57	-0.501	-52.212	0.626	0.000

1. **Credit Deposit Ratio**

P-value of All Public Banks is 0.166 which is greater than 0.05 that makes t-value -1.483 not significant. This indicates that there is no real difference between mean of Sample Public Banks 61.61 and mean of All Public Banks 66.82.

P-value of All Banks is 0.004 which is lower than 0.05 this indicates that t-value of All Banks is -3.630 are significant and there exist real difference between mean of Sample Public Banks 61.61 and mean of All Banks 74.36.

Credit Deposit Ratio should be 75% but here no bank has 75% CDR. But still we observe that almost All Banks are at least near 75% with mean of 74.36.

2. **Interest Income as Percentage to Total Income**

P-value of All Public Banks is 0.363 which is greater than 0.05 that makes t-value 0.949 not significant. This indicates that there is no real difference between mean of Sample Public Banks 87.30 and mean of All Public Banks 86.40.

P-value of All Banks is 0.000 which is lower than 0.05 this indicates that t-value of All Banks is 7.725 are significant and there exist real difference between mean of Sample Public Banks 87.30 and mean of All Banks 79.95.

Income is always better when it is more after comparing all three means; we observe that our Sample Public Banks earning more out of interest income as their mean is higher (87.30) from the mean of All Public Banks (86.40) and All Banks (79.95).

3. Non – Interest Income as Percentage to Total Income

As we observe p-value of All Public Banks is 0.363 which is greater than 0.05 that makes t-value -0.949 not significant. This indicates that there is no real difference between mean of Sample Public Banks 12.69 and mean of All Public Banks13.60.

Here p-value of All Banks is 0.000 which is lower than 0.05 this indicates that t-value of All Banks is -7.725 is significant and there is a real difference between mean of Sample Public Banks 12.69 and mean of All Banks 20.05.

Non-interest income means income from other sources. All Banks are earning more as mean here is 20.05, but mean of our Sample Public Banks is 12.69 which is lowest. This is because our Sample Public Banks are more into advancing and core banking business.

4. Interest Expenses as Percentage to Total Expenses

As we see p-value of All Public Banks is 0.957 which is greater than 0.05 this makes t-value -0.055 not significant. This indicates that there is no real difference between mean of Sample Public Banks 62.69 and mean of All Public Banks 62.79.

By observe p-value of All Banks is 0.001 which is lower than 0.05 that we conclude that t-value of All Banks is 4.854 is significant and there exist real difference between mean of Sample Public Banks 62.69 and mean of All Banks 54.09.

Interest Expenses is that interest which is paid on borrowed funds. Interest expense has a direct bearing on profitability, especially for banking companies with a huge debt load. Therefore, borrowed funds should be less and in control for better performance. Here mean of All Banks are less which is good sign. As All Banks are using their own funds rather than borrowed funds. But if we see our All Public Banks their mean is higher that shows that though interest expenses of All Banks are less but that of All Public Banks are more. This indicates that public banks are using more of borrowed funds.

5. Operating Expenses as Percentage to Total Expenditure

P-value of All Public Banks is 0.488 which is greater than 0.05, therefore, t-value 0.718 not significant. This shows that there is no real difference between mean of Sample Public Banks 24.29 and mean of All Public Banks 23.33.

P-value of All Banks is 0.016 which is lower than 0.05 this specifies that t-value of All Banks is -2.860 is significant and there exist real difference between mean of Sample Public Banks 24.29 and mean of All Banks 28.14.

As earlier said lower expenses better it is. Operating Expenses is nothing but spending on rent, taxes, printing and stationery etc. it affects performance and profitability of a bank. That is why it is important to control these expenses. If compare mean value of our Sample Public Banks, All Public Banks and All Banks we observe that overall All Banks are spending more on operating expenses, which is not good. But in that at least we can say that All Public Banks are spending less on operating expenses.

6. Spread as Percentage to Total Assets

As we observe p-value of All Public Banks is 0.923 which is greater than 0.05 making our t-value -0.098 not significant, and therefore there is no real difference between mean of Sample Public Banks 2.57 and mean of All Public Banks 2.58.

Here p-value of All Banks is 0.013 which is lower than 0.05 this indicates that t-value of All Banks is -2.965 is significant and therefore there is a real difference between mean of Sample Public Banks 2.57 and mean of All Banks 2.89.

The net interest spread is like a profit margin. The greater the spread, the more profitable the financial institution is likely to be. After comparing three means of Sample Public Banks, All Public Banks and All Banks we come to the conclusion that spread ratio of All Banks are good. Almost All Banks have a good profit margin. But still if we look at the mean of our Sample Public Banks, though there is not much difference mean of Sample Public Banks and mean of All Public Banks still Sample Public Banks have lower spread ratio.

7. Interest Income as Percentage to Average Working Fund

Here p-value of All Public Banks is 0.754 and All banks is 0.475. Both are higher than 0.05 that means t-value is not significant in both All Public Banks (0.321) and All Banks (-0.739). As we see the mean of Sample Public Banks 8.37, mean of All Public Banks 8.31 and mean of All Banks 8.50 there is no real difference among all the three means.

This ratio displays a bank's skill to leverage its average total funds in improving its mainstream operational interest income. Even-though there is no difference all three means, still All Banks are earning good amount of interest through mainstream operational interest income. But on the other hand if we notice interest income of All Public Banks is poor.

8. Non – Interest Income as Percentage to Average Working Fund

As we observe p-value of All Public Banks is 0.688 which is greater than 0.05 making our t-value -0.412 not significant, and therefore there is no real difference between mean of Sample Public Banks 1.24 and mean of All Public Banks 1.29.

Here p-value of All Banks is 0.000 which is lower than 0.05 this indicates that t-value of All Banks is -6.956 is significant and therefore there is a real difference between mean of Sample Public Banks 1.24 and mean of All Banks 2.10.

This is the other income of a bank. It includes items such as exchange commission, brokerage, gains on sale and revaluation of investments and fixed assets, and profits from exchange transactions. Operational efficiency of a bank will be high if this ratio is high. Here almost All Banks are earning good from Non – Interest Income as their mean is high. But our selected Sample Public Banks has lowest mean, therefore they are not earning more from Non – Interest Income. This indicates that their income is purely from advances and deposits.

9. Operating Profit as Percentage to Average Working Funds

Observing the p-value of All Public Banks is 0.569 which is greater than 0.05 making our t-value 0.588 not significant, and therefore, there is no real difference between mean of Sample Public Banks 2.20 and mean of All Public Banks 2.10.

Here p-value of All Banks is 0.0.39 which is lower than 0.05 this indicates that t-value of All Banks is -2.336 is significant and therefore there is a real difference between mean of Sample Public Banks 2.20 and mean of All Banks 2.60.

The profit from operations is very much important. Higher the ratio shows higher profitability of a bank. Mean of All Banks is 2.60 which are higher than other two means this show that Operating Profit ratio of All Banks is overall good. But even in that mean of All Public Banks is lowest, therefore, in case of All Public Banks, Operating Profit ratio in not good.

10. Return to Assets

As we observe p-value of All Public Banks is 0.139 which is larger than 0.05 that concludes that t-value -1.597 not significant, and therefore there is no significant difference between mean of Sample Public Banks 0.81 and mean of All Public Banks 0.89.

P-value of All Banks is 0.000 which is lower than 0.05 this indicates that t-value of All Banks which is -5.658 is significant and therefore there is a real difference between mean of Sample Public Banks 0.81 and mean of All Banks 1.09.

This is another indicator to measure profitability. How much return achieved on the assets, is an important factor. Higher the ROA the better it is. As we compare all three means, mean of All Banks is higher. ROA of All Banks is good. Almost All Banks are achieving good return on assets. Mean of our selected Sample Public Banks is lowest.

11. Gross NPA as Percentage to Net Advances

P-value of All Public Banks is 0.513 and All banks is 0.218. Both are higher than 0.05 that means t-value is not significant in both All Public Banks (0.676) and All Banks (1.308). As we see the mean of Sample Public Banks 5.59, mean of All Public Banks 4.77 and mean of All Banks 4.00 there is no real difference among all the three means.

Gross NPA is the amount outstanding in the borrowal account. Lower Gross NPA the better it is. This is the amount that is gone bad (borrower has not paid the money back to the bank). Higher Gross NPA is not good for bank's image. Though there is no difference between the means of Sample Public Banks, All Public Banks and All Banks still mean of our selected Sample Public Banks is high. This indicates our selected banks are not doing well in collecting money from their borrower. But if we overall see that mean of All Banks is low that indicates that almost All Banks are doing well in collecting their debt.

12. Net NPA as Percentage to Net Advances

P-value of All Public Banks is 0.429 and All banks is 0.090. Both are higher than 0.05 that means t-value is not significant in both All Public Banks (0.822) and All Banks (1.861). As we see the mean of Sample Public Banks 2.58, mean of All Public Banks 2.13 and mean of All Banks 1.56 there is no real difference among all the three means.

Net NPAs is the amount of gross NPAs less interest debited to borrowal and not recovered and not recognized as income and kept in interest suspense. Lower the ratio better it is. Though there is no difference between the means of Sample Public Banks, All Public Banks and All Banks still mean of our selected Sample Public Banks is high. This indicates our selected banks are not doing well and they have high bad debt. But if we overall see that mean of All Banks is low that indicates that almost All Banks are doing well in maintaining their debt.

13. Net Profit (PAT) On Owned Fund

P-value of All Public Banks is 0.004 which is lower than 0.05 making t-value -3.683 significant. As t-value is significant this indicates that there is difference between mean of Sample Public Banks 12.98 and mean of All Public Banks 15.73.

P-value of All Banks is 0.510 which is higher than 0.05 making our t-value -0.681 not significant. As t-value is not significant this indicates that there is no difference between mean of Sample Public Banks 12.98 and mean of All Banks 13.49.

When profit on owned fund is more it shows better position of the bank here mean of All Public Banks is high. This indicates that from all other sector banks All Public Banks are making good profit on owned fund.

14. Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)

As we observe p-value of All Public Banks is 0.626 which is greater than 0.05 that concludes that t-value -0.501 is not significant, and therefore there is no significant difference between mean of Sample Public Banks 11.80 and mean of All Public Banks 11.97.

P-value of All Banks is 0.000 which is lower than 0.05 this indicates that t-value of All Banks is -52.212 is significant and therefore there is a real difference between mean of Sample Public Banks 11.80 and mean of All Banks 28.57.

Capital Adequacy is seen as the measure of a bank's strength to absorb credit risks. Mean of All Banks is higher than mean of Sample Public Banks and mean of All Public Banks. This shows that All Banks are able to maintain a good amount of portion from capital to ensure their stability and strength.

According to the above working of Public Banks, after over-all observing the pattern of mean of Sample Public Banks, All Public Banks and All Banks, it can be concluded that on-the-whole the performance of All Banks is good. All Public Banks is on average position and our selected Sample Public Banks has poor performance.

Table 4.33:T-Value of Foreign Banks

Name of Ratios	Mean Of All Sample Foreign Banks		Mean Of All Foreign Banks	Mean Of All The Banks	t Value		p Value	
----	Mean	SD	----	----	All Foreign Banks	All The Banks	All Foreign Banks	All The Banks
Credit Deposit Ratio	67.0934	18.25532	81.69	74.36	-2.77	-1.379	0.018	0.195
Interest Income as Percentage to Total Income	64.8544	12.12924	72.39	79.95	-2.152	-4.311	0.054	0.001
Non – Interest Income as Percentage to Total Income	35.1458	12.12942	27.61	20.05	2.152	4.311	0.054	0.001
Interest Expenses as Percentage to Total Expenses	34.2870	5.19534	39.08	54.09	-3.196	-13.204	0.009	0.000
Operating Expenses as Percentage to Total Expenditure	35.9081	3.48295	35.55	28.14	0.356	7.726	0.728	0.000
Spread as Percentage to Total Assets	3.4233	0.50866	3.63	2.89	-1.407	3.632	0.187	0.004

Name of Ratios	Mean Of All Sample Foreign Banks		Mean Of All Foreign Banks	Mean Of All The Banks	t Value		p Value	
----	Mean	SD	----	----	All Foreign Banks	All The Banks	All Foreign Banks	All The Banks
Interest Income as Percentage to Average Working Fund	7.3703	1.02802	6.83	8.50	1.821	-3.807	0.096	0.003
Non – Interest Income as Percentage to Average Working Fund	4.9263	2.21346	3.62	2.10	2.044	4.423	0.066	0.001
Operating Profit as Percentage to Average Working Funds	5.5060	1.63554	3.54	2.60	4.164	6.155	0.002	0.000
Return to Assets	2 .3597	0.84578	1.49	1.09	3.562	5.200	0.004	0.000
Gross NPA as Percentage to Net Advances	9.8374	13.51132	3.33	4.00	1.668	1.497	0.123	0.163
Net NPA as Percentage to Net Advances	1.4881	1.99856	1.16	1.56	0.569	-0.125	0.581	0.903
Net Profit (PAT) on Owned Fund	12.6611	3.86962	11.71	13.49	0.851	-0.742	0.413	0.474
Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)	18.5182	7.81790	60.57	28.57	-18.633	-4.454	0.000	0.001

1. **Credit Deposit Ratio**

P-value of All Foreign Banks is 0.018 which is lower than 0.05 that makes t-value -2.770 significant. As t-value is significant this indicates that there is difference between mean of Sample Foreign Banks 67.09 and mean of All Foreign Banks 81.69.

P-value of All Banks is 0.195 which is higher than 0.05 that makes t-value -1.379 not significant. As t-value is not significant this indicates that there is no difference between mean of Sample Foreign Banks 67.09 and mean of All Banks 74.36.

As discussed in this chapter, that Credit Deposit Ratio should be 75%. Here mean of All Foreign Banks is higher that means All Foreign Banks are doing well in maintaining Credit Deposit Ratio. But mean of our selected Sample Foreign Banks is lower than 75% that shows that our selected Sample Foreign Banks are not doing well in maintaining Credit Deposit Ratio.

2. **Interest Income as Percentage to Total Income**

P-value of All Foreign Banks is 0.054 and All banks is 0.001. Both are lower than or equal to 0.05 that means t-value -2.152 of All Foreign Banks and -4.311 of All banks is significant. This indicates that there is a significant difference between the mean of Sample Foreign Banks 64.85, mean of All Foreign Banks 72.39 and mean of All Banks 79.95.

Higher the income the better it is. Here almost All Banks are earning more from Interest Income. But our Sample Foreign Banks are not in the same line like All Foreign Banks and All Banks.

3. **Non – Interest Income as Percentage to Total Income**

P-value of All Foreign Banks is 0.054 and All banks is 0.001. Both are lower than or equal to 0.05 making our t-value 2.152 of All Foreign Banks and 4.311 of All banks is significant. This indicates that there is a significant difference between the mean of Sample Foreign Banks 35.16, mean of All Foreign Banks 27.61 and mean of All Banks 20.05.

Non-interest income is revenue generated by banks from sources other than yield-generating assets. The main types are fee income (such as from credit cards, granting loans or account maintenance). This is income from other sources than income earned from core banking. But, income when it is more it is always good. From the above table of Foreign Bank we come to the conclusion that our selected Sample Foreign Banks are doing well in earning Non – Interest Income. If we over all see that mean of All Banks are low this indicates that over-all All Banks are not doing well in earning income from Non – Interest Income.

4. <u>Interest Expenses as Percentage to Total Expenses</u>

P-value of All Foreign Banks is 0.009 and All banks is 0.000. Both are lower than or equal to 0.05. This makes t-value -3.196 of All Foreign Banks and -13.204 of All banks is significant. This shows that there is a real difference between the mean of Sample Foreign Banks 34.29, mean of All Foreign Banks 39.08 and mean of All Banks 54.09.

The cost incurred by an entity for borrowed funds. The amount of interest expense has a direct bearing on profitability, especially for banking companies with a huge debt load. Interest-Expense ratio is measured as a percentage, the lower the percentage the stronger the ratio. In this case our selected Sample Foreign Banks have a good control over their expenses which is a good sign. But on the whole if we see, All Banks are not doing well in controlling their interest expenses.

5. <u>Operating Expenses as Percentage to Total Expenditure</u>

As we observe p-value of All Foreign Banks is 0.728 which is greater than 0.05 that concludes that t-value 0.356 is not significant, and therefore there is no significant difference between mean of Sample Foreign Banks 35.91 and mean of All Foreign Banks 35.55.

P-value of All Banks is 0.000 which is lower than 0.05 this indicates that t-value of All Banks is 7.726 is significant and therefore there is a real difference between mean of Sample Foreign Banks 35.91 and mean of All Banks 28.14.

The operating expense ratio is calculated by dividing operating expense by its total expenditure. Investors using the ratio can further compare each type of expense, such as utilities, insurance, taxes and maintenance, to the gross operating expenses. As we observe the three means we see that mean of All Banks is lower than the other two, this shows that All Banks are controlling their Operating Expenses. But mean of our selected Sample Foreign Banks is very high this indicates that our selected Sample Foreign Banks are not doing well in keeping their Operating Expenses in control compare to other banks.

6. Spread as Percentage to Total Assets

After observing p-value of All Foreign Banks is 0.187 which is greater than 0.05 this determines that our t-value -1.407 is not significant, and therefore there is no significant difference between mean of Sample Foreign Banks 3.42 and mean of All Foreign Banks 3.63.

As p-value of All Banks is 0.004 which is lower than or equal 0.05 this indicates that t-value of All Banks is 3.632 is significant and therefore there is a real difference between mean of Sample Foreign Banks 3.42 and mean of All Banks 2.89.

The spread is the difference between interest earned and interest spent. The greater the spread, the more profitable the financial institution is likely to be. Even-though there is no difference between the means of Sample Foreign Banks and All Foreign Banks still spread ratio of All Foreign Banks is more. But spread ratio of All Banks is less. This indicates that though All Foreign Banks are good, but overall All Banks are not doing well in maintaining spread ratio.

7. Interest Income as Percentage to Average Working Fund

P-value of All Foreign Banks is 0.096 which is greater than 0.05 this defines that t-value 1.821 is not significant, and therefore there is no significant difference between mean of Sample Foreign Banks 7.37 and mean of All Foreign Banks 6.83.

P-value of All Banks is 0.003 which is lower than 0.05 this shows that our t-value of All Banks is -3.807 is significant and there exist the real difference between mean of Sample Foreign Banks 7.37 and mean of All Banks 8.50.

This ratio deals with the major income of interest in banks. The efficiency will be measured according to this ratio. If this ratio is high, the operational efficiency will be also good. Here mean of All Banks is high. This proves that almost All Banks are efficient enough to earn more Interest Income. But still, mean of our selected Sample Foreign Banks is low, indicating that they are not doing well in earning Interest Income compare to All Banks.

8. Non – Interest Income as Percentage to Average Working Fund

As we observe p-value of All Foreign Banks is 0.066 which is greater than 0.05 that concludes that our t-value 2.044 is not significant, and therefore there is no significant difference between mean of Sample Foreign Banks 4.93 and mean of All Foreign Banks 3.62.

P-value of All Banks is 0.001 which is lower than 0.05 this shows that t-value of All Banks is 4.423 is significant and therefore there is a real difference between mean of Sample Foreign Banks 4.93 and mean of All Banks 2.10.

The other operational income of a bank is Non-Interest Income, which includes commission, brokerage, gains on revaluation of assets etc. The operational efficiency of a bank will be high if this ratio is high. Operational efficiency of our selected Sample Foreign Banks is good as its mean is high than the other two means. Our selected Sample Foreign Banks are earning more from Non – Interest Income. On the other hand if we observe that even-though our Sample Foreign Banks are doing good, but over-all All Banks are not doing well in earning more from Non – Interest Income as its mean is low.

9. Operating Profit as Percentage to Average Working Funds.

P-value of All Foreign Banks is 0.002 and All banks is 0.000. Both are lower than or equal to 0.05 making t-value 4.164 of All Foreign Banks and 6.155 of All banks significant. This indicates that there is a significant difference between the mean of Sample Foreign Banks 5.51, mean of All Foreign Banks 3.54 and mean of All Banks 2.60.

This ratio is an indicator of a bank's Profitability at the operating level. Higher the ratio shows higher profitability of a bank. Operating Profit of our selected Sample Foreign Banks is good as its mean is greater. This indicates that our selected Sample Foreign Banks are earning more from Operating Profit. Even-though our Sample Foreign Banks are decent in earning Operating Profit, All Banks are not doing well in earning more from Operating Profit as its mean is low.

10. Return to Assets

P-value of All Foreign Banks is 0.004 and All banks is 0.000. Both are lower than or equal to 0.05 making t-value 3.562 of All Foreign Banks and 5.200 of All banks significant. This shows that there is a significant difference between the mean of Sample Foreign Banks 2.36, mean of All Foreign Banks 1.49 and mean of All Banks 1.09.

ROA tells about the earnings, over the total Assets. It processes the amount of profit the Bank generates as a percentage of the value of its total assets. It is an important indicator of profit and asset management efficiency. Therefore, it shows how well the bank's assets are managed to bring profit on assets that have been invested by the banks**.** Higher this ratio the better it is. Return to Assets of our selected Sample Foreign Banks is much better as its mean is high. This specifies that our selected Sample Foreign Banks are properly maintaining return over their assets. On other hand if we see that All Banks are not doing equally well in maintaining their Return on Assets that brings profit as its mean is low.

11. Gross NPA as Percentage to Net Advances

P-value of All Foreign Banks is 0.123 and All banks is 0.163. Both are higher than 0.05 making our t-value 1.668 of All Foreign Banks and 1.497 of All banks are not significant. This shows that there is no significant difference between the mean of Sample Foreign Banks 9.84, mean of All Foreign Banks 3.33 and mean of All Banks 4.00.

This ratio shows that how efficient banks are in collecting their money that they have given as loan. If borrower fails to pay the loan amount to the bank this indicates that bank has lots of bad debts in its accounts which is not a good position for a bank. This directs that bank is not able to collect the amount given as loan, and then this loan amount is considered to be NPA. Therefore, lower this ratio the better it is. Here if we observe the three means we find that mean of our selected Sample Foreign Banks is very high, which is not good. But mean of All Foreign Banks is lowest this indicates that Foreign Banks are good in collecting their loan amount.

12. Net NPA as Percentage to Net Advances

P-value of All Foreign Banks is 0.581 and All banks is 0.903. Both are higher than 0.05 which is making our t-value 0.569 of All Foreign Banks and -0.125 of All banks are not significant. This shows that there is no significant difference between the mean of Sample Foreign Banks 1.49, mean of All Foreign Banks 1.16 and mean of All Banks 1.56.

Net NPA is nothing but deduction of interest debited to borrowal and not recovered and not recognized as income and kept in interest suspense, amount of provisions held in respect of NPAs and amount of claim received and not appropriated from Gross NPA. Same as Gross NPA here also lower the ratio better it is as it shows the ability of a bank in collecting their debts (loan given). In-spite of no difference between the three means, mean of All Foreign Banks is lower and mean of All Banks is higher.

13. Net Profit (PAT) on Owned Fund

P-value of All Foreign Banks is 0.413 and All banks is 0.474. Both are higher than 0.05 which is making our t-value 0.851 of All Foreign Banks and -0.742 of All banks are not significant. This shows that there is no real difference between the mean of Sample Foreign Banks 12.66, mean of All Foreign Banks 11.71 and mean of All Banks 13.49.

Though, there is no difference between the means, profit on Owned Fund of All Foreign Banks is less. But overall performance All Banks is good as its mean is high so almost All Banks are earning more profit on Owned Funds.

14. Capital Adequacy Ratio (Tier I Plus Tier II) (Under Basel I)

P-value of All Foreign Banks is 0.000 and All banks is 0.001. Both are lower than or equal to 0.05. This makes our t-value -18.633 of All Foreign Banks and -4.454 of All banks is significant. This shows that there is a real difference between the mean of Sample Foreign Banks 18.52, mean of All Foreign Banks 60.57 and mean of All Banks 28.57.

Capital adequacy is indicated by a minimum numerical ratio which the Banks are expected to maintain to ensure stability and strength. It is expressed as a proportion of capital to assets weighted according to the risk of default attached to them. It is amount kept aside from capital to recover loss when advances given go bad. All Foreign Banks are doing well in maintaining capital adequacy as its mean is highest and our selected Sample Foreign Banks are not doing good in maintaining capital adequacy as its mean is low.

According to the above Table 4.33 and working of Foreign Banks, the pattern of mean of Sample Foreign Banks, All Foreign Banks and All Banks, it can be concluded that on-the-whole the performance of All Foreign Banks is good. Our selected Sample Foreign Banks is on average position and All Banks has poor performance.