## CHAPTER I

## INTRODUCTION

### 1.1 Back Ground Of The Study

Nepalese government has now initiated various economic policies like industrial policy, foreign investment policy and privatization policy to accelerate the economic growth and development of the country. Nepal has adopted mixed and liberal economic policy. As a result of the liberal economic policy thrust adopted in the eighties, various multinational companies, finance companies and joint venture banks came into existence. This had given complete autonomy to banks and non banks in determining the interest rates and other commissions \&fees (interest rate deregulation). During that period banking was seen as a major industry to uplift/upgrade the economic conditions of other industries, general public. Therefore that campaign forced government to bring the policies which reduces almost all regulations upon financial institutions from its side.

Landlords and goldsmiths were the ancient bankers of Nepal. Financial institution plays vital role as it provide funds and additional assistance to other most important sources of economy.

Banking in true sense of term started with the establishment of Nepal bank ltd (commercial bank). On $30^{\text {th }}$ Kartik, 1994 B.S. It was established 128 years after the establishment of first commercial bank in India.

Nepal Rastra Bank (NRB) central bank of Nepal was established on 2013B.S. In order to operate all commercial banks incorporated in Nepal, uniformity of laws of banking acts are essential. So a commercial bank act 2031 B.S was enacted and has been many times In accordance with the needs. Now NRB act 2058 and an umbrella act called bank and financial institution act, 2063 are most effective for regulating present financial institutions. NRB has categorized financial institutions into following category:

1. Commercial Bank
2. Development Bank
3. Finance Company
4. Cooperatives
5. Micro Finance

Table No 1.1
Number of Commercial Banks Established So Far In Nepal are As Follows:

| S.N | COMMERCIAL BANKS | HEAD OFFICE |
| :--- | :--- | :--- |
| 1. | Nepal Bank ltd. | Katmandu |
| 2. | Rastriya Banijya Bank | Kathmandu |
| 3. | Nepal Arab Bank ltd | Kathmandu |
| 4. | Nepal Investment Bank ltd. | Kathmandu |
| 5. | Standard Chartered Bank Nepal Ltd. | Kathmandu |
| 6. | Himalayan Bank Ltd. | Kathmandu |
| 7. | Nepal SBI Bank Ltd. | Kathmandu |
| 8. | Nepal Bangladesh Bank Ltd. | Kathmandu |
| 9. | Everest Bank Ltd. | Kathmandu |
| 10. | Bank Of Kathmandu Ltd. | Kathmandu |
| 11. | Nepal Credit \& Commercial Bank Ltd. | Kathmandu |
| 12. | Lumbini Bank Ltd. | Narayangadh |
| 13. | Nepal Industrial \& Commercial Bank Ltd | Biratnagar |
| 14. | Machhapuchhre Bank Ltd | Pokhara |
| 15. | Kumari Bank Ltd | Kathmandu |
| 16. | Laxmi Bank Ltd | Birgunj |


| 17. | Siddhartha Bank Ltd | Kathmandu |
| :---: | :--- | :--- |
| 18. | Agriculture Development Bank Ltd | Kathmandu |
| 19. | Global Bank Ltd | Kathmandu |
| 20. | Citizen Bank International Ltd | Kathmandu |
| 21. | Prime Bank Ltd | Kathmandu |
| 22. | Sunrise Bank Ltd | Kathmandu |
| 23. | Bank Of Asia Nepal Ltd | Kathmandu |
| 24. | Development Credit Bank Ltd | Kathmandu |
| 25. | NMB Bank Ltd | Kathmandu |
| 26. | Kist Bank | Kathmandu |
| 27. | Janata Bank | Kathmandu |
| 28. | Mega Bank | Kathmandu |

Source: www.nrb.com

In the monetary system of all countries, the central bank is an apex institutions of the monetary system, which seeks to regulate the functioning of the financial institutions of the country. Nepal Rastra bank as the central bank under the Nepal Rastra bank act 1955 was established in $26^{\text {th }}$ April, 1956. Its function was to supervise commercial banks and to guide the basic monetary policy of the nation. Its major aims were to regulate the issue of paper money, secure countrywide circulation of Nepalese currency and achieve stability in its exchange rates, mobilize capital for economic development and for trade and industry growth; develop the banking system in the country, thereby ensuring the existence of banking facilities; and maintain the economic interests of the general public. NRB is authorized to determine the interest rate charged and offered by the commercial banks and financial institutions. There was full discretion to NRB in determining interest rate structure of banks and financial institution in the period of 1960 to 1975. The financial system reforms started after the liberalization of interest rates in 1984 when commercial banks were given autonomy to fix interest rates over and above the central banks rates by 1.5 percentage points on saving and 1 percentage point on term deposits. The financial institutions got freedom in fixing their interest rates in their deposit and loans in 1986. However, there was limitation imposed on certain sectors of
lending such as the rates of maximization of 15 percent on the priority sectors loan and for the other kinds of loans financial institutions were given freedom to maintain the interest rate structure. On December 1993, banks and finance companies were not allowed to have more than 6 percentage interest rate spread between deposit and lending rates. Commercial banks were obliged to publish their interest rates and variations were permitted only to the extent of 1 percent on deposit and 2 percent in the lending rates between borrowers for the same purpose.

Since money can earn a return over a period of time; interest rates are often considered as an expression of the time value of money and are expressed in percentage. All business organizations or individuals are responsive to interest rate of the banks and financial institutions in one way or another. A variety of interest rate risk exits in the financial markets. However, in the context of Nepal, interest rate is regulated by the central bank during the early stage of financial market, development taking the period from 1955 to 1965. But gradually dramatic change had been made in the regulation on the interest rate by the central bank i.e. NRB according to the compatibility of the banks and financial institutions through liberalization. In the early mid 1980's Nepal has adopted liberal economic policy as a result of which many banks and financial institutions came into existence. Regulation of the financial system aimed at control of the economy rather than foster safety and soundness of financial system. But the interest rate deregulation, curtailment or elimination of directed credits, lifting entry and exit barriers for financial intermediaries, restructuring of banking system and institution of regulatory and supervisory mechanism are some of the components which open the door of such liberalization. There were full discretions to NRB in determining interest rate structure of banks and financial institutions from the period 1960 to 1975 as it was the sole and whole institution authorized to determine the interest rate as per NRB act. The era of interest rate liberalization started in November 16, 1984 when NRB granted autonomy to commercial banks to fix rates of interest over and above the NRB rates by 1.5 and 1.0 percentage points respectively on saving and term deposit. NRB directed commercial banks to reduce the interest rates by 2 percent points than the normal credit for agricultural and cottage industries in 18 remote districts. The interest rates were further liberalized in May 29, 1986 when commercial banks were allowed to fix rates higher than minimum deposit rates fixed by NRB. Commercial banks were also set free to fix
lending rates except certain item in the priority sector. The minimum interest rates were 8.5 percent on saving deposit and 12.5 percent for one year fixed deposit. The interest rates on fixed deposit with maturity lending rates, the interest rate was at 15 percent maximum. On august 22, 1992, NRB issued some directives to commercial banks and other financial institutions to clearly spell out the interest rate on deposits. NRB also suggested to commercial banks and other financial institutions to limit the spread of interest rate at 6 percent within mid- December 1993. a further instruction to banks and financial institution was in 2002 and now the interest rate spread required to be maintained by commercial banks and financial institutions has also been removed.

Table No 1.2
Phase-Wise Development in Interest Rates

| 1960 | Sole monopoly of NRB to fix interest rate on deposit and loans |
| :---: | :---: |
| 1976 | NRB empowered to determine interest rate |
| 1980 | Process continued for NRB to fix interest rate and banks and financial <br> institution to follow it. |
| 1986 | Freedom to commercial banks to offer higher interest rates from the <br> minimum level of interest rate fixed by NRB. |
| 1989 | Interest rate fully deregulated |
| 1992 | Issue directive to commercial banks to spell out interest rate policy <br> encouraging competition in interest rate. |
| 1993 | Spread not to exceed 6 percent |
| 1999 | Secrease spread to 5 percent |
| 2002 | Semoval of spread restriction Shrestha \& Bhandari, 2007:129 |

Source: Shrestha \& Bhandari, 2007:129
Bank is a financial institution which deals with money. Banks collect the money from the surplus unit and lend to deficit unit. It allows interest on the deposits made and charges interest on the loans granted. It creates credit and supports for the formation of capital and hence it is regarded as manufacturer of money.

A bank is an organization whose principal operations are concerned with the accumulation of the temporarily idle money of the general public for the purpose of advancing to others for expenditures. Ordinarily banking business consists of changing cash for bank deposits and bank deposits for cash, transferring bank deposits from one person or corporation to another. The major revenue for the bank is spread rate- interest rate on deposit minus interest rate charges on loan and advances. Other sources, except interest related, of income and expenditures also plays vital role at determining profit of bank.

Commercial banks represent the largest group of depository institutions measured by asset size. They are also known as the financial department store because it satisfies the broadest range of financial services needs in the economy. They perform functions similar to those of savings institutions and credit unions, but distinguishable from them, however, in the size and composition of their loans and deposits. Specifically, while deposits are the major sources of funds, commercial bank liabilities usually include several types of non depository funds. Performance of commercial banks depends upon their profitability, where profitability depends upon the sources of income- interest income and non-interest income.

There are two, generally, sources of income for commercial bank- interest income and non-interest income. Interest income is the income from the interest charged by bank to their loans and advances, where non-interest income is the income from several types of commissions and fees generating activities-different kinds of additional services and facilities provided by banks to their customers.

Interest income is the most important source of income for financial institutions, also known as traditional sources of income. It is because the major function of bank is to provide loans and advances from the deposits that they accept from their customers. Where interest spread becomes the income for the bank. Interest spread is the amount difference between the interest amount that bank charges to its loans \& advances and interest amount that bank pays to its deposits.

Non-interest income is the secondary sources of income to a bank. It is earned from those additional services that bank provides for its customers except interest related activities.

Management of commercial bank's profitability is the crucial factor in making the stay of the banks long run sustainability and survival.

The financial liberalization has changed the behavior of the commercial banks in almost all countries including also Nepal. Banks have been increasingly diversifying into non-interest income activities as against traditional banking to have more stable source of income.

In the context of Nepal there are twenty seven commercial banks. The oldest one has approximately about seven decades of history (Nepal bank limited). And other remaining has not more than three decades history. Now in the present Nepalese banking environment all are trying to attract customers through various modern banking services. Banking industry, in Nepal, has become one of the most successful industries in terms of investment, geographical coverage, gross domestic production, sophisticated modern technology and employment.

Like others country's commercial banks, Success of banks here in Nepal have also depended on two basic sources of income- interest income and, non-interest income. By the help of modern banking software's and high speed internet facilities banks have been providing reliable and faster services to their customers and success to earn more non-interest income. They are providing any branch banking facilities (ABBS) for which there are tough competition between banks to extend their branches within entire nation to increase number of customer \& income too.

It has been found that customer use to select their bank not only on the basis of interest rate but to those additional effective services which are highly countable for them and their business as they and their businesses are not limited only the place where their bank lies.

World banking industry is steadily shifting away from traditional sources of revenue like loan making and toward nontraditional activities that generates fee income, service charges, trading revenue, and other types of non interest income. While non interest income has always played an important role in banking revenue. This shift toward non interest income has contribution to higher levels of bank revenue in recent years, but there is also a sense that it can lower the volatility of bank profit and revenue, and reduce risk. One potential
channel is that non interest income may be less dependent on overall business conditions than traditional interest income so that an increased reliance on non interest income reduces the cyclical variation in bank profits and revenue. Alternatively, expanded product lines and cross-selling opportunities associated with growing non-interest income may offer traditional diversification benefits for a bank's revenue portfolio. If non interest income and net interest income are negatively or only weakly correlated, for example, non interest income may diversify bank revenue and improve the risk/return trade-off. Non-interest income growth is much more volatile than net interest income growth, largely due to very volatile trading revenue, and the covariance between the two has risen as the line between interest and non interest activities becomes increasingly blurred. More cross-selling and greater reliance on loan substitutes like commitments are two examples as both strategies expose multiple business segments to the same economic or financial shocks and naturally reduce the potential for diversification benefits. Moreover, neither aggregate bank profits (net income) nor the primary components of bank revenue (net interest income and non interest income) are very highly correlated with GDP growth; in fact, non interest income appears somewhat more cyclical than net interest income. This suggests that the banking industry should not necessarily be counting on non interest income to smooth revenue flows or reduce aggregate cyclicality. Same kind of effect can be also seen in the case of Nepal as Nepal has been also affected by globalization culture. Nepalese banking industry is using modern banking software and providing modern banking facilities, which is very similar to the banking facilities that developed countries banking industry use to provide their costumer. Banking industry of developed counties and developing countries are almost all same. In Nepal modern banking practices have been started few years ago with few banks. But now most of the banks, finance companies, even few cooperatives are running their business with Hi fi banking technologies. Those technologies have provided reasonable basis to this industry for generating non interest income as modern HI FI banking technology provides modern banking services to the costumers and costumer do not hesitate to pay extra commission/charge/fees for that. Beside this, now a day Nepalese banking industry has brought new banking cultures in the market. They are totally focused on costumer based banking activities. They are searching new ways to serve their customers.

This may be one more evidence that in modern banking customer seek not only effective interest rate but also the unique modern facilities- ABBS, internet banking, faster remittance (inland and foreign), ATM, debit card, credit card, OD, travelers cheque, low minimum balance $\mathrm{a} / \mathrm{c}$, insurance, LC, guarantee, pay bill, SMS and other prompt and reliable services that makes customer well satisfied in this very HIGH-FI society. Above sentences proves that in this era, banking industry should count their additional services to customers very sensitively. Interest income counts but non-interest income gives stability and weapon to use in this highly competitive market to attract more customers. For this banking industry should always keep bringing new services in the market which can attract the customer.

### 1.2 Problem Statement

In general understanding one and only source of banks income/profit is interest from its investment- loan \& advances. But this is not true as other income- except interest income- plays vital role in the banks. Traditionally banks had only source of income i.e. interest income. Banks at that time were recognized as an organization that takes interest on their loans and advances and gives interest on the deposit that they collect from their customers, there was nothing more elements to introduce this organization. Banks existence were limited to the word interest -given interest \& taken interest- traditionally. But now days banks are not only limited on the word interest. Its new \& effective source of income has taken place in its profit making process. This type of income is known- generally- as non interest income in banking industry. Unlike traditionally income generating process through only interest items, banks- now- are also generating huge amount of income from non interest income sources. This practice has provided two major sources of income for banks- interest income \& non interest income. These non interest income are collected through various modern banking services \& facilities-except loan \& advances or, non financial- that the bank provides to its customers. Banks now a day are not only responsible for providing loan \& advances to its customers; they are also responsible for providing various modern banking services \& facilities desired by their
customers. Major Sources of this non income items are - commissions \& fees, exchange gain, other operating income \& non-operating income. Some researches on this topic have found that non-interest income is the major basis for banks profit stability.

Keeping these facts in mind, through this thesis, it is going to discover: Is there any significant contribution of non-interest income on total profitability of commercial banks in Nepal?
Specially, this study seeks to solve the answer for following questions
i. What is the contribution- in terms of volume (quantity) \& stability (quality)- of major two income generating sources - interest income \& non interest income- on banks total profitability in Nepalese context.
ii. Are Nepalese customers sensitive to the interest income \& non interest income that their bank collects from them?
iii. What is the relationship between interest income \& non interest income? Or, what is the magnitude of correlation between interest income \& non interest income in Nepalese perspective?

### 1.3 Objective Of The Study

The objective of the study is to examine \& analyze the role played by interest income and non-interest income for increasing Nepalese commercial banks profitability \& stability, and to analyze about their past, present \& future perspective. The specific objectives are-
i. To examine Contribution of interest income on total profit
ii. To examine Contribution of non- interest income on total profit
iii. To analyze the Contribution of interest income \& non- interest income on total profit (in terms of volume \& stability)

### 1.4 Significance

This study will try to help analyze the significant contribution of interest income and non interest income on total profitability of Nepalese commercial banks \& try to develop some useful ideas whether these factors are significantly correlated or not. In this topic very few researches have been done and almost all of them are foreign countries based. In Nepalese perspective this study will be a good initiation. Banking professionals, general public, teachers, students, banking institutions, government institutions (ministry of finance, NRB etc), and further researchers can take this study as useful resource/information for understanding the relationship among interest income, non interest income and total profit along with each variables degree of impact on income generating process.

In short, this study will be fruitful resources for-

* Banker: It can be useful information about the effectiveness of generating non-interest income strategy in the banking industry.
* All types of banks: They can take this information as a basic tool for their product mix strategy in coming days banking environment.
* Teachers, students, and professionals, business houses: They can have a good knowledge about income generating process in banking.
* New researchers: They will be provided a significant basis for their research in similar field.

It further finds some glaring issues related to banks' income and suggests some appropriate strategies to increase to increase interest \& non-interest income which may be helpful to stabilize the total income of the banks in the emerging competition.

### 1.5 Limitation Of The Study

This master degree thesis study has certain limitations, which are presented as follows:

1. The samples have been drawn on the basis of business and operation period of banks, so there may exit some sampling error. And sample size may not be sufficient to generalize the findings. Only top performing banks having at least ten years of
operational experience have been selected for the study, and the findings and conclusions generated from this may not be applicable for other remaining banks having lower performance \& operational history.
2. Only commercial banks have been selected as the sample for this study. Other financial institutions participation zero.
3. Reliability of this study depends upon the accuracy of published data and the genuineness of respondent. Accuracy and reliability of data from sample banks are not sure as total study depends upon almost all secondary data.
4. Only interest income, not interest expenses, and non-interest income, not non-interest expenses, have been taken for the study, which do not reflect exact contribution of interest income and non-interest income on total profitability- income-expenses.
5. This study is based upon only ten fiscal years.
6. Time and cost is another main limitation for this study.

Cost: Financial support is not so strong
Time: Short period of time is invested.

### 1.6 Organization of The Study

This study is divided in 5 chapters: 1. Introduction, 2. Review of literature, 3. Research methodology, 4. Presentation and analysis of data, \& 5. Summary, conclusion and recommendation.

The first chapter consists of introduction of the study, back ground of the study, statement of the problems, objective of the study, significance of the study, limitation of the study, conceptual framework etc.

This second chapter includes review of the literature, which was obtained during the review of books, articles, journals, reports and other relevant materials.

This chapter deals on research design, population and sample size, source of data, data collection and processing techniques and analysis of tools.

The forth chapter attempts to analyze and evaluate data with the help of analytical tools and interpret all the result into the unit of empirical findings and results.

The fifth and final chapter consists of summary of findings, conclusion and recommendation.

## CHAPTER II

## LITERATURE REVIEW

### 2.1 Introduction

The purpose of reviewing the literature is to develop some expertise in one's area, to see what new contribution can be made, and to receive some ideas for developing research design. The review of literature helps to the study to fulfill issues. The review of literature includes the reviews of previous writing and studies relevant to the problem being explored and with the framework of theory structure. The review of literature is the process locating, reading and evaluating the research literature in area of the student's interest (wolf \& pant, 2001: 39).
2.2 Concept of Interest Income

Interest is the amount paid to the creditor in return to a debt borrowed by a debtor for a fixed period of time. As the reward of their factors of production this market is also a reward of other factor of production \& reward paid to the capitalist for the use of capital (Joshi, 2058: 384).

Interest is cost of borrowing, while interest rate is the rate expressed as a percentage of the total sum borrowed for a stated period of time. Various types of interest rate exit in the financial market according to the nature of risk involved and expected yield determined from the market forces. Time period and various risk factors are the basic determinants of interest rate.

Both interest income and non-interest income has significant effect in profit generating process of commercial bank. Interest income is the major source of profit, but non-interest income has also supported the bank in generating additional sources of income for increasing profit.

Interest income is generated from what is known as "the spread." The spread is the difference between the interest a bank earns on loans extended to customers, corporate etc and the interest paid to depositors for the use of their money. It is also earned from any securities that the banks own, such as treasury bills or bonds.

### 2.2.1 Factors Affecting the Difference in Interest Rates

Although it is assumed that deposit increase as interest increase but interest rate is affected by numerous factors. In real world, different financial institutions quote different interest rate. It means that the sample type of instrument carries different interest rate at the same time, so there is presence of interest spread (Kohn, 1993: 169). For this, there are various factors affecting the difference in interest rate-
i. Credit or default risk
ii. Liquidity risk
iii. Marketability risk
iv. Call or prepayment risk
v. Serving costs
vi. Exchange rate risks
vii. Taxability

### 2.2.2 Components of Interest Income

The major components of interest income in Nepalese commercial banking sector are as follows:
a. Interest on loan \& advances: it includes loan \& advances and overdrafts
b. Interest on investments: it includes-
i. Government securities
ii. Foreign securities
iii. NRB securities
iv. Debentures \& bonds
v. Interest on inter-bank lending
c. Agency balance:

- Local Banks \&
- Foreign Banks/Fis
d. Money at call \& short notice:
- Local banks/FIS
- Foreign banks.
e. Others:
- Certificate of deposits
- Inter bank/FIS
- Others

Commercial banks earn interest income through their investment- loan and advances. In other words, the commercial bank earns profit by lending the amount in terms of loan or credit and in return it gets interests. Banks loan are classified as I. loan advances, II. Overdraft, III. Cash credit, IV. Discounting of bills and so on. There are some factors that affect the volume of credit, which are-credit rate, rate of return, investment opportunity, pace of financial development, basic infrastructure, political condition, trade condition, currency condition and so on.

To make such investments bank needs fund. The major sources of fund for banks are primary capital and deposits. Primary capital consists of the shareholders investment on bank. Deposit is the liability of bank toward their customer as it is collected from their customer with an agreement to pay interest on it.

Deposit is the major source of fund for commercial banks. Commercial bank act 2031 defines "deposit" as the amount deposited in current, saving, call and fixed accounts of a bank or financial institution. The income of individual is divided into consumption and saving. Deposit arises from saving. Deposit includes the idle money of the public, bank being the mediator to accept this sort of money and help to channelize this in productive sector. Deposit also arises when customers are granted accommodation in the form of loans. Of course, there is nothing that prevents the borrower from withdrawing the entire amount of borrowing in cash but quite often $\mathrm{s} / \mathrm{he}$ retains the amount with the bank as deposit (Bhandari, 2003: 73)

In present context Nepalese commercial banks lending rate is in an average 13\% their borrowing rate is in an average 9\%. So on this basis the interest spread for banks now is 4\%.

### 2.3 Concept of Non Interest Income

Non-interest income is earned by providing a variety of services, such as trading of securities, assisting companies to issue new equity financing, securities commissions and wealth management, sale of land, building, profit and loss on revaluation of assets etc.
as compared to developed world, the Indian banking sector, apart from the relying on traditional sources of revenue like loan making are also focusing on the activities that generates fee income, service charges, trading revenue, and other types of non interest income. While non interest income plays an important role in banking revenues in the developed world, its contribution to the total income of the Indian banking was $25 \%$ as on $31^{\text {st }}$ march 2008.

### 2.3.1 Components of Non Interest Income

The major components of non interest income in Nepalese commercial banking sector are as follows:
A. Commission \& discount: it includes following commissions \& discounts
a. Commissions:
i. Letter of credit
ii. Letter of guarantee
iii. Collectionfees
iv. Remittance fees
v. Credit card
vi. Share underwriting/issue commission
vii. Government transaction
viii. Exchange commission
ix. Batta
b. Bills purchased \& discounted
c. Others
B. Other operating income: it includes following operating incomes-
i. Safe deposit vault rental income
ii. Credit card issue \& renewals
iii. ATM card
iv. Telex/T.T
v. Service charges
vi. Renewal charges
vii. Write back from loan loss provision
viii. Others
C. Exchange gain/loss:
i. Exchange rate difference
ii. Foreign exchange trading (except Batta)
D. Non-operating income: it includes following non- operating incomes-
i. Gain/loss on sale of investment
ii. Gain/loss on sale of assets/NBA
iii. Dividend
-Commercial banks
-Rural development banks
-Financial institutions
-Body corporate (subsidiary \& others).
iv. Subsidiary received from NRB
-Compensation of branch loss
-Interest compensation
-Exchange counters
V. Others

Non interest can be also classified as follows:

1. commission/exchange and brokerage
2. profit or loss on sale of investments
3. profit or loss sale of land \& buildings
4. profit/loss on revaluation of investments
5. Profit or loss on exchange transaction etc.
6. Miscellaneous income source which includes advisory, trading etc

### 2.4 Review of Related Studies:

There are some research papers and thesis related with this study that contribute some ideas and help in the preparation of this thesis study. As there are not enough literatures in Nepalese perspectives regarding the topic of this report, most of the literatures are taken from foreign banks, but due to globalization same factors affect all banks in the world.

Staikouras, Wood \& Denney, (2000), studied about stable sources of profit/revenue of depository institution. They found that noninterest income-comparatively to interest income- is becoming more stable sources for profitability. They also found a new trend in banking industry regarding sources of income. They found depository institution entering into new product areas over the past two decades, moving from traditional lending to areas that generates non-interest revenue.

There may be further assumptions that non-interest income will not be as sensitive as net interest income to changing economic conditions, and that non-interest income in that way will help make a banks overall income less variable (Tripe, 2000).

Banks can differ markedly in their sources of income. Some focus on business lending, some on household lending, and some on feeearning activities. Increasingly, however, most banks are diversifying into fee-earning activities. Such diversification is justified (by the bank) or welcomed (by commentators), or both, as reducing the bank's exposure to risk. Diversification across various sources of earning is welcomed for, it is claimed, and diversification reduces risk. Whether it does of course depends on how independent of each other the various earnings sources are.

Traditionally fee income has been very sable; but, also traditionally, it has been a small part of the earnings stream of most banks. Has non-interest income remained stable, or at least uncorrelated with interest income, as banks have increased its importance their earnings? It is found that the increased importance of non-interest income did, for most but not all categories of bank stabilize profits in banking industry in those years. The financial liberalization has changed the behavior of income of the commercial banks in India. Of late, banks have been increasingly diversifying into non-interest income activities as against traditional banking. In developed countries non interest income is playing vital role due to the modern banking services, as developing countries are also adopting advanced banking software and concepts. They are also getting same kinds of effects from non income like developed countries. So the review of literature for this thesis report depending on Indian \& third developed countries banks are significant for the study of Nepalese commercial banks in the related topics. in the current scenario, hi fi banking services have been providing by almost all banks in Nepal too. This has brought a wide opportunity for Nepalese banking customers. Non interest income has become one of the most incomes generating head for modern banking in Nepal. Whatever-either developed or not- the economic condition of the country similar banking environment affects with similar degree.

Interest income has played major role in creating and increasing banks total income since the beginning of banking history. It is one of the most significant sources of banks revenue. As we know without interest income we just can't imagine about the existence of banks, income interest income has not any alternatives.

In spite of this fact that income interest covers almost all total revenue of bank, there is another significant source of income i.e., non interest income. Comparing to interest income non-interest income has very little contribution in creating bank's income volume-in terms of quantity. But it has got very powerful features- stability. Non-interest income helps to keep banks income or profitability stable. Interest is very sensitive in nature. It is always changing as per market trend, which further makes fluctuation in bank's income.

There is not any doubt that interest income represents almost all total revenue of bank. Bank's life depends upon interest spread (interest rate income - interest rate expenses). Due to the cut throat competition in banking industry, it has become very difficult to survive along with the effective interest management strategy. Customers are demanding modern banking facilities also. They don't see reasonable interest rates only; rather they see the services provided by the bank before choosing it.

Determination of interest rate is not so simple, as it has to face sharp customer bargaining. If high interest rate is set in order to increase interest spread, bank will lose most of its customers \& so it's loan \& advances. This happens because interest rate is very sensitive in nature. Bank cannot have any advantage to increase its total income by increasing its interest rates; if it does then it will lose its customers. But if bank generates income from the sources other than interest income by providing unique modern banking

Services then definitely its total income/profitability will be increased without increasing its interest rates.

It is universally accepted that nobody will bargain for the prices of unique/extraordinary products/services. Here in the case of banking industry if a bank can provide unique services to their customer nobody will make any arguments there \& ready to pay whatever prices/charges/fees set by the bank as they don't have any other alternatives there. Alternatives are there where competition is \& vice versa. Unique products \& services never bring competition \& sensitive nature. This has become very easy means to increase bank's profit. This proves that non-interest income has also vital role in the contribution of bank's total profit.

The trend in banking towards non-interest income was first reported by Boyd and Gertler (1994). Taking off- balance sheet (OBS) activities into account, Boyd and Gertler (1994) show that contrary to previous research, U.S. commercial banking is still very important to the U.S. economy. In the stochastic frontier literature, adding non-interest income as a banks output increase measures of economies of scale and efficiency.

Deyoung and Rice, (2004), stressed that non-interest income is important for both small and large financial institutions. One can think of two competing arguments. First, since large banks have a larger proportion of their operating revenue in non-interest income they should be more sensitive to unexpected changes in the sources of non-interest income. The competing argument is "flight to size" and diversification. Large banks benefit from economies of scale in providing off-balance sheet services and are therefore better suited for these unexpected changes.

Kevin \& Stiroh, (2002), tried to explore new trend of banking industry regarding income generation. He found that the US banking industry is steadily increasing its reliance on nontraditional business activities that generates fee income, trading revenue, and other types of non interest income. This paper assesses potential diversification benefits from this shift. At the aggregate level, declining volatility of net operating revenue reflects reduced volatility of net interest income, rather than diversification benefits from non interest income, which is quite volatile and has become more correlated with net interest income. At bank level, growth rates of net interest income and non interest income have also become, more correlated in recent years. Finally, greater reliance on non-interest income, particularly trading revenue, is associated with higher risk and lower risk- adjusted profits. These results suggest little obvious diversification benefit from the ongoing shift toward non interest income.

## Earlier work on bank diversification benefits has taken several distinct approaches:

Counterfactual exercises of bank combinations with non-banks, examination of actual operations of banks involved in many activities, and analysis of market reactions to bank diversification. These approaches do not give a uniform picture of the diversification possibilities for banks, so this remains an open research question. Sunders and Walters, (1994), reviewed 18 studies that examine whether nonbank activities reduce bank holding company risk, and conclude that 9 answer yes, 6 answer no, and 3 provide mixed results. This section quickly summarizes the existing literature and contrast the approach used in the current study.

Boyd and Graham, (1988), and Boyd, Graham, and Hewitt, (1993), simulated mergers between bank holding companies and nonblank financial firms and conclude that mergers between bank holding companies and life insurance firms would likely reduce the risk of bankruptcy. Rose (1989) compares financial and non financial firms from 1966 to 1985 and finds the observed cash-flow correlation between banking and financial-service lines were small and positive, implying some diversification benefits.

Deyoung and Roland, (2001), examined the link between bank Profitability, volatility, and different revenue shares for 472 large commercial banks from 1988 to 1995. They conclude that increased fee-based activities (revenue from all sources except loans, investment, deposit, and trading activities) increase the volatility of bank revenue and bank earnings. Acharya et al. (2002) use bank-level data for Italian banks from 1993-1999 and conclude that diversification of bank assets (within the loan portfolio) does not typically improve performance or reduce risk. Non-interest income is a heterogeneous category that comprises many different activities, so it is broken down into four primary components-fiduciary income (e.g. administering investment for others), service charges, trading revenue, and fees and other income. Service charge includes revenue directly related to deposit accounts like ATM or check usage fees. Trading revenue is primarily income from trading cash instruments, off-balance contracts, and mark-to-market changes in the carrying value of assets and liabilities. Fees and other income include all other fees, e.g., loan commitment fees, safe deposit boxes, commissions, and land rental fees.

Fiduciary income: it includes gross income from services rendered by the bank's trust department or by any of its consolidated subsidiaries acting in any fiduciary capacity, i.e. administering investments for others.

Service charge on deposit accounts include charges for maintenance of deposit accounts, failure to meet minimum balances, excess check writing, withdrawals from non transaction accounts, early withdraw or closure fees, dormant accounts, extensive activity, ATM usage, bounced check charges, and other fees.

Trading revenue: includes the net gain or loss from trading cash instruments, off-balance sheet derivate contracts, and sales of assets and other financial instruments. Also included are revaluation to carrying value of assets and liabilities due to marking to market, revaluation of interest rate, foreign exchange, equity derivative, commodity and other contracts due to marking to market, and incidental income and expense related to the purchase and sale of assets and liabilities.

Fees and other income: includes all other non interest income items, such as service charges, commissions, and fees not reported elsewhere. This includes fees for safe deposit boxes, insurance sales, bank drafts, money orders, etc. bill collection, savings bond redemption, execution of acceptances and letters of credit, mortgage servicing fees, and notary, consulting or advisory services), periodic credit card fees, merchant credit card charges, rental fees, and loan commitment fees. Also included here are net gains on sales of real state, loans, or premises, data processing services, and sales of other assets, as well as non interest income on other foreign transactions.

Arora \& Kaur, (2009), found some ideas about changing environment of income generating process of banks. Their study concludes that Banks over the world are transcending their normal business operations and diversifying their activities in response to economic and financial sector reforms. The Indian banking industry too has been seen steadily shifting away from traditional sources of revenue like loan-making etc, towards nontraditional activities that generate fee income, service charges, traditional revenue,

And other types of noninterest income. In this paper an attempt has been made to empirically analyze the significance of internal determinants for diversification of banks in India across the time period of 2000 to 2007.

The last two decades, the world over have witnessed a phenomenal transformation in the operations and objectives of financial sector in general and banking sector in particular. The deregulation, disintermediation, emergence of advanced technologies, along with the consolidation wave in the banking sector have been instrumental in making banks to diversify their operations. As a result the banks are transcending their business operation and are venturing into insurance, investment and other non-banking activities. One aspect of overall financial change is a shift in the pattern of business undertaken by banks. This is thought to be manifested in a relative increase in fee and
other non-interest income vis-à-vis the net interest income. The general trend has been towards downstream universal banking where banks have undertaken traditionally non-banking activities such as investment banking, insurance, mortgage financing, securitization, and particularly, insurance (Jalan, 2002). The IMF, (2001), noted the trend toward consolidation of bank with non-banking financial activities and the emergence of universal banking.

During the second half of the 1990s many Indian banks have indeed adopted universal banking structures (in different forms and degrees) as a strategic response to increased competition in both domestic as well as global market. Diversification helps a bank in eliminating the unevenness of geographical reach, product-process innovation, exploit economies of scale and scope, reap benefit of advanced technology, and diversify risk along with mobilization of additional capital. Diversification has opened the door for commercial banks to earn fee income from investment banking, merchant banking, insurance agency, securities brokerage, and other nontraditional financial services. Ali-Yerkko, (2002), classified the banks motive to diversify as synergy (or economic) motive, managerial motive, value maximization motive, increased market power motive, capital strength and risk diversification motives etc. determinants of diversification can be categorized into two categories. External determinants are economies of scale and scope, dynamics of bank competition, global presence of financial conglomerates and disintermediation in banking activities. While the internal determinants include risk reduction motive, decline in interest margin, cost of production, low cost of capital, and technology up gradation etc.

Technological change, measured by the shifting mix of bank income between traditional and nontraditional is significant in equation, when net interest margin is taken as dependent variable which shows that change in technology factor has not brought variations in the trend of net interest margin as dependent variable in the equation, the results are vice-versa showing that changes have been instrumental in increasing non interest income of the banks.

There is contradiction taking volatility of interest income and non-interest between researchers. Some say that interest income is more volatile than non-interest income regarding profitability and some vice-versa. This study doesn't keep too much concern about volatility of these two sources of income rather it focuses on their contribution on banks profit. It is very difficult to say about the seniority of interest income and non-interest income on the basis of single factor as each factor has different effect. Here in this study contribution in terms of income from these two sources are focused.

Shrestha, (1979), concluded that the frequent change in interest rate was disliked by customers except changing the interest rates as directed by NRB. He also recommended that the method of calculating interest should be used in such a way that the previous customers and depositors who are already involved in banking transaction should not be affected adversely. High interest rate on loan to luxurious goods as unproductive sector and lower rate on productive and small scale industries should be set, he further recommended. This proves that interest income are not only the concern of banks, it is also the concern of customers. Banks cannot determine interest rate as per only their desire. They need to create different way to generate their income i.e. non interest income, which helps to generate extra income for them. Determination of non interest income and its permission from customer depends upon banks internal management environment.

Sinha, (2008), said that during 1969 and 1980's period the public sector commercial banks had rapid expansion of branches, especially in the rural and semi urban areas and had reasonable success in the matter of deposit mobilization and disbursement of loans. However, the operating efficiency of public sector commercial banks, declined during the period due to various reasons. In the 1990s, the banking environment was radically transformed by certain bold initiatives taken by RBI including the dismantling of entry barriers, rate deregulation, introduction of prudential accounting norm and the implementation of Basel I capital adequacy norms. The changed competition and accounting environment compelled the commercial banks to provide unprecedented attention to cost cutting and supplementing fund-based income by fee-based income.

Robert \& Ronald, (1999), found some very interesting facts about combination among sources of bank's income and their fluctuations. The article says that the commercial banks lending and deposit taking business has declined in recent years. Deregulation and new technology have eroded bank's comparative advantages and made it easier for non bank competitors to enter these markets. In response, banks have shifted their sales mix towards non interest income -by selling non bank fee based financial services such as mutual funds, by charging fees for services that used to be bundled together with deposit or loan products. It says that the conventional wisdom in the banking industry is that earning from fee based products are more stable than loan based earnings and that fee based activities reduce bank risk via diversification.

Sharma, (2009), did the study upon the title of "comparative study of non interest income of the Indian Banking Sector", is also seems to be relevant to review here. The objective of the study was to-
i. Analyze the growth of non interest income as a source of revenue for the Indian banking sector over the period of 11 years (19942004).
ii. To analyze the contribution of major components of the non interest income over a period of 11 years (1994-2004).
iii. To find out statistically that how much of the profits of the banking sector over a period of 11 years is determined by non interest income and interest income.
iv. To find out statistically the contribution of various components of non interest income towards the profits of the bank over a period of 11 years.
v. To find out the contribution of interest and non interest income towards the total income in each of the 11 years (1994-2004).
vi. To find out the correlation between the non interest income and the total income of the banking sector over a period of 11 years.

In few lines his objective here in his study is to show the significance of non interest income among Indian banking sector- i . SBI \& associates, ii. Nationalized banks, iii. Other scheduled banks and foreign banks.

He has selected two broad sources of bank revenues:

1. Interest income, \&

## 2. Non-interest income

He found that the contribution of non interest income of Indian banking sector has increased significantly over a period of 11 years. His study shows that in each type of banks i.e. SBI, public sector banks, private sector banks and foreign banks the contribution of non interest income towards the total income has increased over a period of time and that of the interest income has decreased over period of time. According to him if we look at the total banking sector we will find that in Indian banking system the non interest income is having a significant influence on the profits of the banks. On an average the share of the non interest income towards the total income of the banking sector has increased from $12 \%$ in 1994 to $20 \%$ in 2004. The components of non interest income of Indian banking sector, commission/exchange and brokerage earned by the banks had a major contribution i.e. $44 \%$ to the total non interest income of the bank, after the commission the next big contribution to the non interest income had been of the sale of investments which $28 \%$, followed by exchange transactions having a share of $15 \%$. Miscellaneous income was having the $13 \%$ contribution to the total non interest income to banking sector. The contribution of sale of land, revaluation of investments was having a negative or even a negligible influence on the non interest income of the banking sector. On an average the non interest income of the banking sector has grown at a CAGR of $25 \%$ as compared to interest income which has grown at a CAGR of $18 \%$. The percentage increase in the non interest income of the banking sector has increased by $1264.64 \%$ and interest income has increased by $622 \%$. The private sector banks had seen a significant contribution in the increase of its non interest income over a period of 11 years as compared to other types of banks. Among the various non interest components that had an influence on the profits of the banking sector we find that commission, sale of investment, miscellaneous income had a significant influence on it. He also found that there was a positive correlation between the non interest
income and the total income of the banking sector. He found that in case of public sector banks none of the non interest component was found to be statistically significant enough to influence the profits over a period of 11 years.

His study has found some Reasons for increase in the non interest income, which is as follows:

1. Increased pressure on net interest margins of the banking sector.
2. With economy growing at an unexpected rate of 9.4 percent during 2006-07 and acceleration in the growth rate being attributable to the buoyancy in the industrial and service sector, the demand for fee-based services of banks has gone up and as a result of which the non interest income has also risen up.
3. non interest income is an effective way used by banks to respond to its squeezing margins
4. At the bank level, greater reliance on non interest income, particularly trading revenue, is associated with lower risk-adjusted profits attached to it.

His study further found some significant Challenges involved. They are:

1. Not aggressive direct customer interaction of public sector banks.
2. High cost and less expertise involved in launching of innovative products/services as per the customers' expectations.
3. Technology requirements.

The Conclusion of his study reflects followings facts:
After studying the interest growth pattern of the Indian banking sector over a period of 11 years it is slowly and gradually becoming one of the important avenues for Indian banks to generate revenue from. In this respect according to him we see that not only private banks and foreign banks are ahead but also Indian public sector banks are gradually catching it. We can say that it to be an important source available with our banking sector to respond to the squeezing margins and meeting the shareholders expectations.

Sharma's study is almost all focused on only non interest income of banks. Interest income has not been focused. But his study has created much more facts about non interest side, which has become very reliable source to this study as this study consists of non interest income- one of the major component- too. We can find so many resources regarding interest income of banks. Interest income is the most important source of banks. Interest income is always significant for banks. But the confusion is whether non interest income is significant or not. This study has proved that in spite of being extra sources of income, non interest income has been playing vital role in increasing banks total income.

## CHAPTER III

## RESEARCH METHODOLOGY

To achieve the objective of the study an appropriate research methodology is required. Research methodology helps to solve the research problem in a systematic way. This chapter has been designed and developed as a guideline or a plan for the achievement of objectives set and developed for the purpose of this study. This study is based upon significance of interest income \& non-interest income on total profitability (net income in this study) of banks. As this type of study falls under comparative study category, methodology here is designed as per fulfilling its objectives. Overall approach to the research is presented in this chapter.

### 3.1 Research Design:

A research design is the specification of methods and procedures for acquiring the information needed. It explains the methods, procedure and entire process necessary for complete a research work. The present study is related with comparison between interest income \& non-interest income, so comparative research design along with descriptive \& analytical research designs have been selected to get the reliable \& valid outcome while achieving set objectives of the study.

### 3.2 Population and Samples:

The term "population" or universe for research means the universe of research study in which the research is based (wolf \& pant: 2000). Since the research topic is about interest income \& non-interest income of commercial banks, all the commercial banks in Nepal-
specially having at least ten years of operation period- are the member of population study. The population for the study comprises 27 commercial banks of Nepal.

On the basis of establishment \& business (position) or, peer banking group, among population 7 commercial banks have been selected as samples for the study. These samples banks are as follows:

1. EBL
2. HBL
3. BOK
4. NABL
5. NIBL
6. SCBNL
7. NIC

These samples banks are nearest competitors (similar strategic group) in Nepalese banking industry. Their history/banking experience, business and technology seems very similar than rest of others.

### 3.3 Nature and Sources of Data:

As this study is comparative, mainly secondary data have been used, which are collected mainly from published sources like- annual reports, prospectus \& website of sample units. Necessary data \& information from SEBON, NRB, government, and university are also used. Journals, magazines and researches from various websites relating this study have taken as important sources of information. Informal interviews with authentic person of sample banks have been conducted so as to provide real practice of research topic to the study. Personal observations have been also conducted for making analytical part of the study more reliable and valid.

### 3.4 Tools For Data Analysis

Financial and statistical tools have been used for analyzing the data collected for achieving set objective of this study. In order to get the concrete results from this research, data are analyzed, by using different types of tools. As per objective -comparison- of the study and data collection, financial (especially ratio analysis) tools have been given more priority. For further reliability, validity \& clarity some useful statistical tools have been also used.

### 3.4.1 Financial Tools

Ratio Analysis has been used for this study as financial tools, Ratios are as Follows-
a. Comparison between each sample bank's

Interest income and non-interest income
b. Comparison between seven sample banks average interest income and average non-interest income
c. Composition of various non interest income
d. Contribution of interest income and non-interest income on net profit
$>$ interest income vs. net income: Interest Income / Net Income
$>$ non-interest vs. net income: Noninterest Income / Net Income
e. Noninterest income / interest income of industry average (seven sample banks) vs. Noninterest income / Interest income of each individual sample banks

### 3.4.2 $\quad$ Statistical Tools

a. Arithmetic Mean:

The arithmetic mean is also known as the average. It can be only calculated for numerical data. It is arithmetic average of variable. It is calculated by using following formula:

$$
X=\Sigma X
$$

n
Where, $X=$ arithmetic mean/ average

$$
\begin{aligned}
& \Sigma \mathrm{X}=\text { summation of total value of variable } \\
& \mathrm{n}=\text { total number of variables }
\end{aligned}
$$

## b. Standard Deviation:

The standard deviation is a statistic used as a measure of the dispersion or variation in a distribution, equal to the square root of the arithmetic mean of the squares of the deviations from the arithmetic mean. It is the best tools to study fluctuation in any data. It is denoted by sigma (б) \& also known as 'root mean square deviation'. It is computed by using following formula:

$$
\text { s.d }(6)=\sqrt{ } \Sigma(x-x) 2 / n
$$

Greater the magnitude of s.d higher will be the fluctuation and vice versa.

## c. Correlation Analysis:

Correlation may be defined as the degree of linear relationship existing between two or more variables. Two variables are said to be correlated when the change in the value of one variable is accomplished by the change of another variable. The correlation like regression shows the degree and direction of relationship between the variables but, unlike regression, it does not show cause and effect relationship.

Types of correlation: I. simple correlation, II. Partial and multiple correlations.
Simple correlation has been used for this study. Simple or total correlation coefficients measure the degree of simple relationship between the two variables. It assumes that relationship exists only between two variables and there are no other variables to make impact on this relationship.

Karl Pearson's Correlation Coefficient Method:
This method is widely used for calculating simple correlation coefficient. It is denoted by r . this measures the intensity or magnitude of degree of relationship between the two variables and is given by the formula.

$$
\mathrm{R}=\underline{\text { covariance }(\mathrm{X}, \mathrm{Y})}
$$

xy
Where, covariance $(\mathrm{X}, \mathrm{Y})=\underline{1} \Sigma(\mathrm{X}-\mathrm{X})(\mathrm{Y}-\mathrm{Y})$
n

$$
\mathrm{x}=\sqrt{1} \quad \Sigma(\mathrm{X}-\mathrm{X})
$$

n
$\mathrm{y}=\sqrt{ } \underline{1} \quad \Sigma(\mathrm{Y}-\mathrm{Y})$

Where, $\mathrm{n}=$ number of pairs of observations
Formula used for calculating correlation coefficient for this study is actual mean method. This is given as below: Karl Pearson's correlation coefficient is given by,

$$
\begin{aligned}
\mathrm{r} & =\sum \mathrm{xy} \\
& \sqrt{ } \sum \mathrm{x}^{2} \sqrt{ } \sum \mathrm{y}^{2}
\end{aligned}
$$

Where, $\mathrm{x}=\mathrm{X}-\mathrm{X}$

$$
y=Y-Y
$$

$\mathrm{X} \& \mathrm{Y}$ are two variables.

Actual Mean method has been used to calculate correlation coefficient.
Properties of simple correlation coefficient

1. Correlation coefficient is a pure number that is independent of the units of measurement.
2. Correlation coefficient is independent of change of origin and scale.
3. Correlation coefficient lies between -1 and +1
4. Correlation coefficient is the geometric mean of two regression coefficients.

## Table No 3.1

Interpretation of Correlation Coefficient

|  | direction |
| :--- | :--- |


| Degree | Positive | negative |
| :--- | :--- | :--- |
| Perfect | +1 | -1 |
| Significant (very high) | +0.75 to +1 | -0.75 to -1 |
| high | +0.50 to -0.75 | -0.50 to -0.75 |
| low | +0.25 to +0.50 | -0.25 to -0.50 |
| insignificant (very low) | 0 to +0.25 | 0 to -0.25 |
| absent | 0 | 0 |

In this study correlation coefficient of following variables are analyzed-
i. Correlation coefficient between seven sample banks average interest income \& average net income:
ii. Correlation coefficient between seven sample banks average non- interest income \& average net income:
iii. Correlation coefficient between seven sample banks average interest income \& average non-interest income:

## d. Coefficient Of Determination:

It is the square of simple correlation coefficient. It indicates what percentage of total variance is explained by the independent variance.
e. Probable Error (P.E)

It is used to measure the reliability and test of significance of correlation coefficient. It is calculated by the following formula.

$$
\text { PE }=0.6745 \frac{1-\mathrm{r}^{2}}{\sqrt{\mathrm{n}}}
$$

Where, $r=$ the value of correlation coefficient
$\mathrm{N}=$ number of pairs of observations
P.E is used in interpretation whether the calculated value of $r$ is significant or not.
i) If $\mathrm{r}<\mathrm{P}$. E., it is insignificant, i.e. there is no evidence of correlation.
ii) If r $>$ P.E., it is significant.
iii) If $\mathrm{P} . \mathrm{E}<\mathrm{r}<6 \mathrm{PE}$ nothing can be concluded.

## f. t- Test For Significance of an Observed Sample Correlation Coefficient

In order to test if this sample correlation coefficient $r$ is significant of any correlation between the variables in the population or it is just due to fluctuation of sampling, we use t-test for significance of an observed sample correlation as follows:

Null hypothesis: $H_{0}: p=0$ i.e. the variables are not correlated in the population or the population correlation coefficient is zero.

Alternative hypothesis: $\mathrm{H}_{0}: \mathrm{p} \neq 0$ i.e. the variables are correlated in the population or population correlation coefficient is not zero (two tailed test)

Test statistic under H 0 , the test statistic is

$$
\mathrm{t}=\underset{\sqrt{1-\mathrm{r}^{2}}}{\mathrm{r}} * \sqrt{\mathrm{n}-2} \quad \mathrm{t}_{\mathrm{n}-2}
$$

Follows t -distribution with ( $\mathrm{n}-2$ ) degree of freedom
Where, $r=$ sample correlation coefficient

Level of significance: fix the level of significance at $æ=5 \%$ unless or otherwise stated and specify whether the alternative hypothesis is one tailed or two tailed.

Critical value: tabulated or critical value of t is at $\mathfrak{\%} \%$ level of significance for $(\mathrm{n}-2)$ degree of freedom in a one/two tailed test is obtained from $t$ tables.

Decision: if calculated $t$ value ( tcal .) is $\leq$ tabulated t value ( t tab. $)_{x, n-2}$, accept null hypothesis otherwise reject null hypothesis In favor of alternative hypothesis.
g. Graphical Approach

All the necessary information and data can be shown in figures. We can use trend line, pie charts and bar diagrams where necessary.

## CHAPTER IV

## DATA PRESENTATION AND ANALYSIS

### 4.1 Introduction

This chapter is the core of the study which includes detailed presentation, analysis and their interrelationship of the data from which concrete result of Nepalese market can be obtained. In this section, the filtered data are presented and analyzed. The relevant data and information necessary for the study and to show the relationship between variables i.e. between interest income and non interest income on total profitability (net income). This chapter consists of various calculations made for the analysis of impact/contribution of interest income and non interest income on total profitability of sample banks. To make the study effective and result oriented as well as easily understandable, this chapter is categorized into three parts: data presentation, analysis, interpretation and findings. In presentation section data are presented in terms of table, graph chart as per necessity. The study is totally based on secondary data. Those data are then analyzed using various statistical tools as mentioned in previous chapter-iii according to the requirement of the study and at last interpretations is made as per calculated value. Amongst various financial and statistical tools, Ratio analysis under financial tools and graphical analysis, correlation coefficient, correlation determination, \& $t$-statistic under statistical tools have been used to convert the raw data into meaningful basis for analysis focusing the research objectives.

### 4.2 Comparison between Interest Income and Noninterest Income of Each Sample Banks

Interest income and non interest income of each sample banks are presented into tabular and graphical form so as to find each type of income's contribution upon total income for each sample banks during ten fiscal years period.

Table 4.1
EBL Interest Income vs. EBL Non Interest Income

| year | Interest <br> Income | Non interest Income | Total <br> Income | Interest Income /Total Income | Non interest Income/ Total Income |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1999/2000 | 267443270 | 59797950 | 327241220 | 0.817 | 0.183 |
| 2000/01 | 385015938 | 80496710 | 465512648 | 0.827 | 0.173 |
| 2001/02 | 443820894 | 97110232 | 540931126 | 0.820 | 0.180 |
| 2002/03 | 520173468 | 115158880 | 635332348 | 0.819 | 0.181 |
| 2003/04 | 657249073 | 127809682 | 785058755 | 0.837 | 0.163 |
| 2004/05 | 719297855 | 139661126 | 858958981 | 0.837 | 0.163 |
| 2005/06 | 903411137 | 163099082 | 1066510219 | 0.847 | 0.153 |
| 2006/07 | 1144408308 | 215405442 | 1359813750 | 0.842 | 0.158 |
| 2007/08 | 1548657132 | 298369506 | 1847026638 | 0.838 | 0.162 |


| $2008 / 09$ | 2186814992 | 376030215 | 2562845207 | 0.853 | 0.147 |
| :---: | :---: | :---: | :---: | :---: | :--- |
| average | 877629206.7 | 167293882.5 | 1044923089 | 0.834 | 0.166 |

Source: EBL annual report, FY: 1999/2000-2008/2009, EBL

Figure 4.1
EBL Interest Income vs. EBL Non Interest Income


Table 4.1 and Figure 4.1: shows that interest income/total income ratio of EBL have reached from 0.817 in FY 1999/2000 to 0.853 in fiscal year 2008/09, which shows there is an increment of $4.41 \%$ in interest income for EBL during ten years period. In other side non interest income/total income ratio of EBL have reached from 0.183 in FY 1999/2000 to 0.147 in fiscal year 2008/09, which shows non interest income of EBL has decreased by $19.67 \%$ during ten years of period. Comparatively EBL'S current non interest generating capacity has decreased very sharply than its capacity of generating same income in FY 1999/2000. Whereas it can be seen that EBL has strengthen its capacity of generating interest income during this ten years period. If we see the average ratios rather than beginning year
ratios, we find that current FY's interest income/total income ratio exceeds average interest income/total income ratio by $2.28 \%$ ( 0.853 > 0.834 ).but in case of non interest income current year's ratio is lesser than ten year average ratio by $11.45 \%$. This shows that current FY status of EBL's total income depends highly on interest income than previous ten years average status. This shows that out of total income (ten years average) $83.4 \%$ income of EBL has been earned by interest and remaining $16.6 \%$ by non interest side. But if we see the current FY data we find that interest income has $85.3 \%$ contribution on total income whereas non interest income has only $14.7 \%$ contribution. Current status data says that interest income is being more significant for EBL as its ratio is greater than the ten years average ratio $(85.3 \%>83.4 \%)$ and this is adverse incase of non interest income ( $14.7 \%<16.6 \%$ ). Ratios are not same during all ten years. In FY 2000/01 interest income contribution on total income has increased than previous year ( $0.827>0.817$ ) and adverse in case of non interest income $(0.173<0.183)$ in that year. In fy2001/02 interest income contribution has decreased than previous year ( $0.820<0.827$ ), where as non interest income contribution has increased by $4.05 \%$ ( $0.180>0.173$ ). similarly in fy 2002/03 non interest income once again took a pace as in this year it has increased by $0.55 \%$ ( $0.181>0.180$ ), while interest income again decreased. But in fy 2003/04 interest income have become more powerful than that of non interest income as its contribution in this year on total income has increased sharply than previous year $(0.837>0.819)$. FY 2004/05 is neutral year. In this year neither interest income nor has non interest income taken lead. Both incomes stayed same as it stayed in previous year. In FY 2005/06 interest income again overtake non interest income as it has succeed to grow by $1.19 \%$ ( $0.847>0.837$ ) and left non interest income decline ( $0.153<0.163$ ). In FY 2006/07 non interest income took lead by increasing itself with $3.27 \%(0.158>0.153)$, while interest income has decreased ( $0.842<0.847$ ) for this year. In FY 2007/08 again interest income lost its previous year pace by $0.48 \% ~(0.838<0.842$ ), and non interest income succeed to increase its growth by $2.53 \% ~(0.162>0.158)$. In FY 2008/09 interest income increase drastically by $1.79 \% ~(0.853>0.838)$ and non interest income went to decrease by $10.20 \%$ ( $0.147<0.162$ ). This comparison is mutually exclusive as at once only one win, i.e. if interest income increases its contribution upon total income this year than previous year, non interest income decreases its share upon total income this year than previous year and vice versa. Obviously, contribution volume of interest income towards total income is always heavily greater than that of non interest income. But here we are comparing them on the basis of their shares on total income during each of ten years
study period (1999/2000 - 2008/09). In these kinds of comparison both interest income and non interest income have shown their significant contribution upon total income over ten years study period. Out of ten fiscal years comparison years remain only nine fiscal years where out of this four FY have become favorable for interest income, four for non interest income and remaining one has remained idle- neither interest income nor non interest income. So, on this basis it can be said that non interest income has equal $(4 \mathrm{FY}=4 \mathrm{FY})$ importance as interest income has for EBL in the process of generating total income.

## Table 4.2

HBL Interest Income vs. HBL Non Interest Income

| year | Interest <br> Income | Non interest <br> Income | Total <br> Income | Interest <br> Income/Total <br> Income | Non interest <br> Income/ Total <br> Income |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 1033659673 | 209037175 | 1242696848 | 0.832 | 0.168 |
| $2000 / 01$ | 1326378121 | 248870968 | 1575249089 | 0.842 | 0.158 |
| $2001 / 02$ | 1148998491 | 240793557 | 1389792048 | 0.827 | 0.173 |
| $2002 / 03$ | 1201233722 | 253073111 | 1454306833 | 0.826 | 0.174 |
| $2003 / 04$ | 1245895020 | 273723619 | 1519618639 | 0.820 | 0.180 |
| $2004 / 05$ | 1446468083 | 314212128 | 1760680211 | 0.822 | 0.178 |
| $2005 / 06$ | 1626473819 | 417789825 | 2044263644 | 0.796 | 0.204 |
| $2006 / 07$ | 1775582617 | 388683700 | 2164266317 | 0.820 | 0.180 |


| $2007 / 08$ | 1963647472 | 467292879 | 2430940351 | 0.808 | 0.192 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2008 / 09$ | 2342198179 | 584437900 | 2926636079 | 0.800 | 0.200 |
| average | 1511053520 | 339791486.2 | 1850845006 | 0.819 | 0.181 |

Source: HBL annual report, FY: 1999/2000-2008/2009, HBL

Figure 4.2
HBL Interest Income vs. HBL Non Interest Income


Table 4.2 and Figure 4.2: shows that interest income/total income ratio of HBL have reached from 0.832 in FY 1999/2000 to 0.800 in fiscal year 2008/09, which shows there is decrement of $3.85 \%$ in interest income for HBL during ten years period. In other side non interest income/total income ratio of HBL have reached from 0.168 in FY 1999/2000 to 0.200 in fiscal year 2008/09, which shows non interest income of HBL has increased by $19.05 \%$ during ten years of period. Comparatively HBL'S current non interest generating capacity has increased very sharply than its capacity of generating same income in FY 1999/2000. Whereas it can be seen that HBL capacity of generating interest income during this ten years period seems weaker. This comparison is done between beginning \& ending of ten years period. But if we see the average ratios, we find that interest income/total income ratio exceeds non interest income/total income ratio by 0.638 ( $0.819-0.181$ ). This shows that out of total income (ten years average) $81.9 \%$ income of EBL has been earned by interest and remaining $18.1 \%$ by non interest side. But if we see the current FY data we find that interest income has $80 \%$ contribution on total income whereas non interest income has only $20 \%$ contribution. Current status data says that non interest income is being more significant for HBL as its ratio is greater than the ten years average ratio ( $20 \%>18.1 \%$ ), and in case of interest income it is just opposite $(80 \%<81.9 \%)$. Ratios are not same during all ten years. In FY 2000/01 interest income contribution on total income has increased than previous year ( $0.842>0.832$ ), which is decreased in case of non interest income ( $0.158<0.168$ ) in that year. In fy2001/02 interest income contribution has decreased than previous year ( $0.827<0.842$ ), where as non interest income contribution has increased by $9.49 \%$ ( $0.173>0.158$ ). similarly in FY 2002/03 non interest income once again took a pace as in this year it has increased by $0.58 \%$ ( $0.174>0.173$ ), while interest income again decreased by $0.12 \%$. In fy $2003 / 04$ non interest income have become again more powerful than that of interest income as its contribution in this year on total income has increased sharply than previous year ( $0.180>0.174$ )and this year became unfavorable for the growth of interest income as it has again sharply lost its share on total income. FY 2004/05 provided some motivation to interest income as interest income in this year has increased by $0.24 \%(0.822>0.820)$ and this FY has become unfavorable for non interest income ( $0.178<0.180$ ). FY 2005/06 became more pessimistic year for interest income as in this fy interest
income lost its too much shares by $3.16 \%$ ( $0.796<0.822$ ), and for non interest income it has provided $14.61 \%$ growth. In FY 2006/07 interest income recovered its almost all shares it lost previous year and non interest income went to lose similarly. In FY 2007/08 became unfavorable for interest income and non interest income again succeed to increase its growth by $6.67 \%$ ( $0.192>0.180$ ). In FY 2008/09 interest income again lost its share and non interest income succeeds to make a growth by $4.17 \%$. Here we are comparing interest income and non interest income on the basis of their shares on total income during each of ten years study period (1999/2000 - 2008/09). In these kinds of comparison both interest income and non interest income have shown their significant contribution upon total income over ten years study period. Out of ten fiscal years comparison years remain only nine fiscal years where out of this only three FY have become favorable for interest income, remaining six for non interest income. Non interest income exceeds interest income by double. So, on this basis it can be said that non interest income has very significant role in giving shape to total income (6FY > 3FY). HBL needs to give more focus to its non interest generating activities to increase its total profit as study has shown non interest income has taken lead upon interest income by double.

## Table 4.3

BOK Interest Income vs. BOK Non Interest Income

| year | Interest <br> Income | Non interest <br> Income | Total <br> Income | Interest <br> Income/Total <br> Income | Non interest <br> Income/ Total <br> Income |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 371681687.3 | 70362988.34 | 442044675.6 | 0.841 | 0.159 |
| $2000 / 01$ | 465029740 | 109906938 | 574936678 | 0.809 | 0.191 |
| $2001 / 02$ | 473297122 | 98187496 | 571484618 | 0.828 | 0.172 |
| $2002 / 03$ | 496808827 | 139449517 | 636258344 | 0.781 | 0.219 |
| $2003 / 04$ | 567096226 | 159180373 | 726276599 | 0.781 | 0.219 |
| $2004 / 05$ | 607095662 | 148983325 | 756078987 | 0.803 | 0.197 |
| $2005 / 06$ | 718121378 | 167789337 | 885910715 | 0.811 | 0.189 |
| $2006 / 07$ | 819003947 | 658080078 | 1477084025 | 0.554 | 0.446 |
| $2007 / 08$ | 1034157874 | 247159093 | 1281316967 | 0.807 | 0.193 |
| $2008 / 09$ | 1347755382 | 330177700 | 1677933082 | 0.803 | 0.197 |
| average | 690004784.5 | 212927684.5 | 902932469.1 | 0.782 | 0.218 |

Source: BOK annual report, FY: 1999/2000-2008/2009, BOK

Figure 4.3
BOK Interest Income vs. BOK Non Interest Income


Table 4.3 and Figure 4.3: shows that interest income/total income ratio of BOK have reached from 0.841 in FY 1999/2000 to 0.803 in fiscal year 2008/09, which shows there is decrement of $4.52 \%$ in interest income for BOK during ten years period. In other side non interest income/total income ratio of BOK have reached from 0.159 in FY 1999/2000 to 0.197 in fiscal year 2008/09, which shows non interest income of BOK has increased by $23.90 \%$ during ten years of period. Comparatively BOK'S current interest generating capacity has decreased sharply than its capacity of generating same income in FY 1999/2000. Whereas it can be seen that BOK has strengthen its capacity of generating non interest income during this ten years period. If we see the average ratios rather than beginning year ratios, we find that current FY's interest income/total income ratio exceeds average interest income/total income ratio by $2.69 \%$ ( $0.803-0.782$ ).but in case of non interest income current year's ratio is lesser than ten year average ratio by $9.63 \%$. This shows that current FY status of BOK's total income depends highly on interest income than previous ten years average status. Out of total income (ten years average)
$78.2 \%$ income of BOK has been earned by interest and remaining $21.8 \%$ by non interest side. But if we see the current FY data we find that interest income has $80.3 \%$ contribution on total income whereas non interest income has only $19.7 \%$ contribution. Current status data says that interest income is being more significant for BOK as its ratio is greater than the ten years average ratio ( $80.3 \%>78.2 \%$ ) and this is adverse incase of non interest income ( $19.7 \%<21.8 \%$ ). Ratios are not same during all ten years. In FY 2000/01 interest income contribution on total income has decreased than previous year ( $0.809<0.841$ ) and adverse in case of non interest income ( $0.191>0.159$ ). In FY 2001/02 interest income contribution has increased than previous year by $2.35 \%$, where as non interest income contribution has decreased by $9.95 \%$. In FY 2002/03 non interest income took a pace by $27.33 \%$, while interest income decreased by $5.68 \%$. FY 2003/04 is the neutral year, as in this year neither interest income nor has non interest income taken lead. Both incomes stayed same as it stayed in previous year. FY 2004/05 became better year for interest income than previous year as interest income increased by $2.82 \%(0.803>0.781)$, \& opposite for non interest income. In FY 2005/06 interest income again overtake non interest income as it has succeed to grow by $1 \%(0.811>0.803)$, while non interest income declined by $4.06 \%(0.189<0.197)$. In FY 2006/07 interest income declined drastically by $31.69 \%$ ( $0.554<0.811$ ), while non interest income has increased its share on total income by $135.98 \%(0.446>0.189)$. In FY 2007/08 interest income again recovered its pace with $45.67 \%(0.807>0.554)$ growth, and non interest income lost its previous year position ( $0.193<0.446$ ). In FY 2008/09 interest income decreased by $0.5 \%(0.803<0.807)$ and non interest income went increased by $2.07 \%$ ( $0.197>0.193$ ). Obviously, contribution volume of interest income towards total income is always heavily greater than that of non interest income. Comparing them on the basis of their shares on total income during each of ten years study period (1999/2000 - 2008/09). In these kinds of comparison both interest income and non interest income have shown their significant contribution upon total income over ten years study period. Out of ten fiscal years comparison years remain only nine fiscal years where out of this four FY have become favorable for interest income, four for non interest income and remaining one has remained idle- neither interest income nor non interest income. So, on this basis it can be said that non interest income has equal ( $4 \mathrm{FY}=4 \mathrm{FY}$ ) importance as interest income has for BOK in the process of generating total income.

## Table 4.4

NABL Interest Income vs. NABL Non Interest Income

| year | Interest <br> Income | Non interest Income | Total Income | Interest <br> Income <br> /Total <br> Income | Non interest Income/ Total Income |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 1999 / 200 \\ 0 \end{gathered}$ | 1047025191 | 139897258 | 1186922449 | 0.882 | 0.118 |
| 2000/01 | 1266703645 | 273546222 | 1540249867 | 0.822 | 0.178 |
| 2001/02 | 1120184120 | 518931166 | 1639115286 | 0.683 | 0.317 |
| 2002/03 | 1017872280 | 409578044 | 1427450324 | 0.713 | 0.287 |
| 2003/04 | 1001616901 | 424818300 | 1426435201 | 0.702 | 0.298 |
| 2004/05 | 1068746769 | 441937461 | 1510684230 | 0.707 | 0.293 |
| 2005/06 | 1309998500 | 407410761 | 1717409261 | 0.763 | 0.237 |
| 2006/07 | 1587758714 | 453389911 | 2041148625 | 0.778 | 0.222 |
| 2007/08 | 1978696727 | 474250484 | 2452947211 | 0.807 | 0.193 |
| 2008/09 | 2798486196 | 577966984 | 3376453180 | 0.829 | 0.171 |
| average | 1419708904 | 412172659.1 | 1831881563 | 0.769 | 0.231 |

Source: NABL annual report, FY: 1999/2000-2008/2009, NABL

Figure 4.4
NABL Interest Income vs. NABL Non Interest Income

|  | $\square$ Interest Income /Total Income <br> $\square$ Non interest Income/ Total Income |
| :---: | :---: |
| Fiscal year |  |

Table 4.4 and Figure 4.4: shows that interest income/total income ratio of NABL have reached from 0.882 in FY 1999/2000 to 0.829 in fiscal year 2008/09, which shows there is decrement of $6 \%$ in interest income for NABL during ten years period. In other side non interest income/total income ratio of NABL have reached from 0.118 in FY 1999/2000 to 0.171 in fiscal year 2008/09, which shows non interest income of NABL has increased by $44.91 \%$ during ten years of period. Comparatively NABL'S current non interest generating capacity has increased very sharply than its capacity of generating same income in FY 1999/2000. Whereas it can be seen that NABL'S capacity of generating interest income during this ten years period has decreased. If we see the average ratios rather than beginning year ratios, we find that current FY's interest income/total income ratio exceeds average interest income/total income ratio by $7.80 \%$ ( 0.829 > 0.769). But in case of noninterest income, current year's ratio is lesser than ten year average ratio by $25.97 \%$ ( $171<231$ ). This shows that current FY status of NABL's total income depends highly on interest income than previous ten years average status. Above table shows that out of total income (ten years average) $76.9 \%$ income of NABL has been earned by interest and remaining $23.1 \%$ by non interest side. But if we see the current FY data we find that interest income has $82.9 \%$ contribution on total income whereas non interest income has only $17.1 \%$ contribution. Current status data says that interest income is being more significant for NABL as its ratio is greater than
the ten years average ratio $(82.9 \%>76.9 \%)$ and this is adverse incase of non interest income ( $17.1 \%<23.1 \%$ ). Ratios are not same during all ten years. In FY 2000/01 interest income contribution on total income has decreased than previous year ( $0.822<0.882$ ) and adverse in case of non interest income ( $0.178>0.118$ ). In FY 2001/02 interest income contribution has decreased than previous year by $16.91 \%(0.683<0.822)$, where as non interest income contribution has drastically increased by $78.1 \%$ ( $0.317>0.178$ ) for the year. similarly in fy 2002/03 interest income once again took a pace as in this year it has increased by $4.39 \%$ ( $0.713>0.683$ ), while non interest income decreased by $9.46 \%$. But in fy $2003 / 04$ interest income decreased by $1.54 \%(0.702<0.713)$, while non interest income increased by $3.83 \%$. FY 2004/05 became favorable for interest income with $0.7 \%$ growth and unfavorable for non interest income with $1.68 \%$ decline. In FY 2005/06 interest income again overtake non interest income as it has succeed to grow by $7.34 \%$ ( $0.763>0.707$ ) and left non interest income decline by $19.11 \%$ ( $0.237<0.293$ ). In FY $2006 / 07$ interest income took lead by increasing itself with $1.97 \%$ ( $0.778>0.763$ ), while non interest income has decreased by $6.33 \%$ ( $0.222<0.237$ ) for this year. In FY 2007/08 again interest income succeeds to keep its growth by $3.73 \%$ ( $0.807>0.778$ ), and non interest income decreased by $13.1 \%$ ( $0.193<0.222$ ). In FY 2008/09 interest income again increased by $2.73 \%$ ( $0.829>0.807$ ), and non interest income went to decrease by $11.4 \%$ ( $0.171<0.193$ ). Here we are comparing them on the basis of their shares on total income during each of ten years study period (1999/2000 - 2008/09). In these kinds of comparison both interest income and non interest income have shown their significant contribution upon total income over ten years study period. Out of ten fiscal years comparison years remain only nine fiscal years where out of this six FY have become favorable for interest income and remaining three for non interest income. So, on this basis it can be said that interest income has double growth rate $(6 \mathrm{FY}>3 \mathrm{FY})$ than that of non interest income during study period. For NABL interest income plays vital role for increasing bank's total income.

## Table 4.5

NIBL Interest Income vs. NIBL Non Interest Income

| year | Interest <br> Income | Non interest <br> Income | Interest <br> Income | Income <br> /Total <br> Income | Non interest <br> Income/ Total <br> Income |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 279864426 | 70501824 | 350366250 | 0.799 | 0.201 |
| $2000 / 01$ | 349755054 | 71837626 | 421592680 | 0.830 | 0.170 |
| $2001 / 02$ | 326223712 | 92562412 | 418786124 | 0.779 | 0.221 |
| $2002 / 03$ | 459509886 | 155568029 | 615077915 | 0.747 | 0.253 |
| $2003 / 04$ | 731402930 | 182310929 | 913713859 | 0.800 | 0.200 |
| $2004 / 05$ | 886799959 | 258828494 | 1145628453 | 0.774 | 0.226 |
| $2005 / 06$ | 1172742193 | 277982505 | 1450724698 | 0.808 | 0.192 |
| $2006 / 07$ | 1584987354 | 347999309 | 1932986663 | 0.820 | 0.180 |
| $2007 / 08$ | 2194275722 | 454555335 | 2648831057 | 0.828 | 0.172 |
| $2008 / 09$ | 3267941142 | 538646581 | 3806587723 | 0.858 | 0.142 |
| average | 1125350238 | 245079304.4 | 1370429542 | 0.804 | 0.196 |

Source: NIBL annual report, FY: 1999/2000-2008/2009, NIBL

## Figure 4.5

NIBL Interest Income vs. NIBL Non Interest Income


Table 4.5 and Figure 4.5: shows that interest income/total income ratio of NIBL have reached from 0.799 in FY 1999/2000 to 0.858 in fiscal year 2008/09, which shows there is an increment of $7.38 \%$ in interest income for NIBL during ten years period. In other side non interest income/total income ratio of NIBL have reached from 0.201 in FY 1999/2000 to 0.142 in fiscal year 2008/09, which shows non interest income of NIBL has decreased by $29.35 \%$ during ten years of period. Comparatively NIBL'S current non interest generating capacity has decreased very sharply than its capacity of generating same income in FY 1999/2000. Whereas it can be seen that NIBL has strengthen its capacity of generating interest income during this ten years period. If we see the average ratios rather than beginning year ratios, we find that current FY 's interest income/total income ratio exceeds average interest income/total income ratio by $6.72 \%$ ( 0.858 > 0.804).but in case of non interest income current year's ratio is lesser than ten year average ratio by $27.55 \%$. This shows that current FY status of NIBL's total income depends highly on interest income than previous ten years average status. This shows that out of total income (ten years average) $80.4 \%$ income of EBL has been earned by interest and remaining $19.6 \%$ by non interest side. But if we see
the current FY data we find that interest income has $85.8 \%$ contribution on total income whereas non interest income has only $14.2 \%$ contribution. Current status data says that interest income is being more significant for NIBL as its ratio is greater than the ten years average ratio $(85.8 \%>80.4 \%)$ and this is adverse incase of non interest income ( $14.2 \%<19.6 \%$ ). Ratios are not same during all ten years. In FY 2000/01 interest income contribution on total income has increased than previous year ( $0.830>0.799$ ) and adverse in case of non interest income $(0.170<0.201)$ in that year. In FY 2001/02 interest income contribution has decreased than previous year ( $0.779<0.830$ ), where as non interest income contribution has increased by $30 \%$ ( $0.221>0.170$ ). similarly in fy 2002/03 non interest income once again took a pace as in this year it has increased by $14.48 \%$ ( $0.253>0.221$ ), while interest income again decreased. But in FY 2003/04 interest income have become more powerful than that of non interest income as its contribution in this year on total income has increased sharply than previous year ( $0.800>0.747$ ). In FY 2004/05 interest income decreased by $3.25 \%$ ( $0.774<0.800$ ) and non interest income increased by $13 \%$. In FY 2005/06 interest income again overtake non interest income as it has succeed to grow by $4.4 \%$ ( $0.808>0.774$ ) and left non interest income declined by $15 \%$ ( $0.192<0.226$ ). In FY 2006/07 again interest income took lead by increasing itself with $1.5 \%$ ( $0.820>0.808$ ), while non interest income has decreased by $6.25 \% ~(0.180<0.192)$ for this year. In FY 2007/08 again interest income takeover its previous year pace by $0.98 \% ~(0.828>0.820)$, and non interest income decreased by $4.44 \% ~(0.172<0.180)$. In FY 2008/09 interest income increased by $3.6 \%(0.858>0.828)$ and non interest income went to decrease by $17.44 \%(0.142<0.172)$. Here we are comparing them on the basis of their shares on total income during each of ten years study period (1999/2000 - 2008/09). In these kinds of comparison both interest income and non interest income have shown their significant contribution upon total income over ten years study period. Out of ten fiscal years comparison years remain only nine fiscal years where out of this six FY have become favorable for interest income and remaining three for non interest income. On this basis it can be said that interest income has got double (6fy>3fy) significant effect upon total income over ten FY study period. For NIBL interest income seems to be more effective and significant source of total income.

Table 4.6
SCBNL Interest Income vs. SCBNL Non Interest Income

|  |  |  |  | Interest <br> Income <br> year | Interest <br> Income |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Non interest <br> Income | Total <br> Income | Non interest <br> Income/ Total <br> Income |  |  |  |
| $1999 / 2000$ | 1052355941 | 320437744 | 1372793685 | 0.767 | 0.233 |
| $2000 / 01$ | 1242919442 | 408318201 | 1651237643 | 0.753 | 0.247 |
| $2001 / 02$ | 1013635699 | 433179134 | 1446814833 | 0.701 | 0.299 |
| $2002 / 03$ | 1001359505 | 503202811 | 1504562316 | 0.666 | 0.334 |


| $2003 / 04$ | 1042175628 | 541832340 | 1584007968 | 0.658 | 0.342 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 1058677576 | 517596856 | 1576274432 | 0.672 | 0.328 |
| $2005 / 06$ | 1189602957 | 533275529 | 1722878486 | 0.690 | 0.310 |
| $2006 / 07$ | 1411981867 | 568570897 | 1980552764 | 0.713 | 0.287 |
| $2007 / 08$ | 1591195526 | 656361869 | 2247557395 | 0.708 | 0.292 |
| $2008 / 09$ | 1887221257 | 770789327 | 2658010584 | 0.710 | 0.290 |
| average | 1249112540 | 525356470.8 | 1774469011 | 0.704 | 0.296 |

Source: SCBNL annual report, FY: 1999/2000-2008/2009, SCBNL
Figure 4.6
SCBNL Interest Income vs. SCBNL Non Interest Income


Table 4.6 and Figure 4.6: shows that interest income/total income ratio of SCBNL have reached from 0.767 in FY 1999/2000 to 0.710 in fiscal year 2008/09, which shows there decrement of $7.43 \%$ in interest income for SCBNL during ten years period. In other side non interest income/total income ratio of SCBNL have reached from 0.233 in FY 1999/2000 to 0.290 in fiscal year 2008/09, which shows
non interest income of SCBNL has increased by $24.46 \%$ during ten years of period. Comparatively SCBNL's current interest generating capacity has decreased very sharply than its capacity of generating same income in FY 1999/2000. Whereas it can be seen that SCBNL has strengthen its capacity of generating non interest income during this ten years period. If we see the average ratios rather than beginning year ratios, we find that current FY's interest income/total income ratio exceeds average interest income/total income ratio by $0.85 \%$ ( $0.710>0.704$ ). But in case of non interest income current year's ratio is lesser than ten year average ratio by $2.03 \%$ ( $0.290<0.296$ ).This shows that current FY status of SCBNL's total income depends highly on interest income than previous ten years average status. This shows that out of total income (ten years average) $70.4 \%$ income of EBL has been earned by interest and remaining $29.6 \%$ by non interest side. But if we see the current FY data we find that interest income has $71.0 \%$ contribution on total income whereas non interest income has only $29.0 \%$ contribution. Current status data says that interest income is being more significant for SCBNL as its ratio is greater than the ten years average ratio ( $71 \%>70.4 \%$ ) and this is adverse incase of non interest income ( $29 \%<$ $29.6 \%$ ). Ratios are not same during all ten years. In FY 2000/01 interest income contribution on total income has decreased than previous year ( $0.753<0.767$ ) and adverse in case of non interest income ( $0.247>0.233$ ) in that year. In fy2001/02 interest income contribution has decreased than previous year ( $0.701<0.753$ ), where as non interest income contribution has increased by $21.1 \%$ ( $0.299>0.247$ ). similarly in fy 2002/03 non interest income once again took a pace as in this year it has increased by $11.71 \%$ ( $0.334>0.299$ ), while interest income again decreased by $5 \%$. In FY 2003/04 again interest income have decreased by $1.22 \%(0.658<0.666)$ and non interest income increased by $2.4 \%$ ( $0.342>0.334$ ). But in FY 2004/05 interest income has taken lead by $2.13 \%$ ( $0.672>0.658$ ), while non interest income have decreased by $4.1 \%$ ( $0.328<0.342$ ). In FY 2005/06 interest income again overtake non interest income as it has succeed to grow by $2.7 \%$ ( $0.690>0.672$ ) and left non interest income declined by $5.5 \%$ ( $0.310<0.328$ ). In FY 2006/07 interest income took lead by increasing itself with $3.3 \%$ ( $0.713>0.690$ ), while non interest income has decreased by $7.4 \%$ ( $0.287<0.310$ ) for this year. But in FY 2007/08 interest income lost its previous year pace by $0.7 \% ~(0.708<0.713)$, and non interest income succeed to increase its growth by $1.74 \%$ ( $0.292>0.287$ ). In FY 2008/09 interest income increased by $0.28 \% ~(0.710>0.708)$ and non interest income went to decrease by $0.68 \%$ ( $0.290<0.292$ ). Here we are comparing them on the basis of their shares on total income during each of ten years study period (1999/2000

- 2008/09). In these kinds of comparison both interest income and non interest income have shown their significant contribution upon total income over ten years study period. Out of ten fiscal years comparison years remain only nine fiscal years where out of this four FY have become favorable for interest income, and remaining five for non interest income. So, on this basis it can be said that non interest income has got more impact upon total income ( $5 \mathrm{FY}>4 \mathrm{FY}$ ) of SCBNL over ten years study period. For SCBNL non interest income is more important in the process of generating total income.

Table 4.7
NIC Interest Income vs. NIC Non Interest Income

| year | Interest <br> Income | Non interest Income | Total <br> Income | Interest <br> Income <br> /Total <br> Income | Non interest Income/ Total Income |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1999/2000 | 155363373 | 32672975 | 188036348 | 0.826 | 0.174 |
| 2000/01 | 294219351.5 | 2653646776 | 2947866128 | 0.855 | 0.145 |
| 2001/02 | 297764333 | 39491087 | 337255420 | 0.883 | 0.117 |
| 2002/03 | 291143390 | 36624171 | 327767561 | 0.888 | 0.112 |
| 2003/04 | 363037482 | 53670191 | 416707673 | 0.871 | 0.129 |
| 2004/05 | 457609969 | 61172914 | 518782883 | 0.882 | 0.118 |
| 2005/06 | 579979428 | 75136950 | 655116378 | 0.885 | 0.115 |
| 2006/07 | 725819040 | 106877649 | 832696689 | 0.872 | 0.128 |
| 2007/08 | 931400562 | 131585375 | 1062985937 | 0.876 | 0.124 |


| $2008 / 09$ | 1283520711 | 206086018 | 1489606729 | 0.862 | 0.138 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| average | 537985763.9 | 79328622.48 | 617314386.4 | 0.870 | 0.130 |

Source: NIC annual report, FY: 1999/2000-2008/2009, NIC

## Figure 4.7

NIC Interest Income vs. NIC Non Interest Income


Table 4.7 and Figure 4.7: shows that interest income/total income ratio of NIC have reached from 0.826in FY 1999/2000 to 0.862 in fiscal year 2008/09, which shows there is an increment of $4.36 \%$ in interest income for NIC during ten years period. In other side non interest income/total income ratio of EBL have reached from 0.174 in FY 1999/2000 to 0.138 in fiscal year 2008/09, which shows non interest income of NIC has decreased by $20.69 \%$ during ten years of period. Comparatively NIC's current non interest generating capacity has decreased very sharply than its capacity of generating same income in FY 1999/2000. Whereas it can be seen that NIC has strengthen its capacity of generating interest income during this ten years period. If we see the average ratios rather than beginning year ratios, we find that current FY's non interest income/total income ratio exceeds average non interest income/total income ratio by $6.15 \%$ ( $0.138>0.130$ ). But in case of interest income current year's ratio is lesser than ten year average ratio by $0.92 \%(0.862<0.870)$.This
shows that current FY status of NIC's total income depends highly on non interest income than previous ten years average status. This shows that out of total income (ten years average) $87 \%$ income of EBL has been earned by interest and remaining $13 \%$ by non interest side but if we see the current FY data we find that interest income has $86.2 \%$ contribution on total income whereas non interest income has only $13.8 \%$ contribution. Current status data says that non interest income is being more significant for SCBNL as its ratio is greater than the ten years average ratio ( $13.8 \%>13 \%$ ) and this is adverse incase of interest income ( $86.2 \%<87 \%$ ). Ratios are not same during all ten years. In FY 2000/01 interest income contribution on total income has increased than previous year ( $0.855>0.826$ ) and adverse in case of non interest income ( $0.145<0.174$ ) in that year. In fy2001/02 interest income contribution has again increased than previous year ( $0.883>0.855$ ), where as non interest income contribution has decreased by $19.31 \%$ ( $0.117<0.145$ ). Similarly in FY 2002/03 interest income once again took a pace as in this year it has increased by $0.57 \%$ ( $0.888>0.883$ ), while non interest income again decreased by $4.27 \%$. But in FY 2003/04 non interest income have become more powerful than that of interest income as its contribution in this year on total income has increased sharply than previous year, by $15.18 \%$ ( $0.129>0.112$ ), whereas interest income lost its previous status by $1.91 \%$. In FY 2004/05 interest income has increased by $1.26 \% ~(0.882>0.871)$ and non interest income decreased by $8.53 \%$ ( $0.118<0.129$ ). In FY 2005/06 interest income again overtake non interest income as it has succeed to grow by $0.34 \%$ ( $0.885>0.882$ ) and left non interest income declined by $2.54 \%$ ( $0.115<0.118$ ). In FY 2006/07 non interest income took lead by increasing itself with $11.30 \%(0.128>0.115)$, while interest income has decreased by $1.47 \%(0.872<0.885)$ for this year. But In FY 2007/08 interest income regained its previous year pace by increasing its growth rate by $0.46 \%$ ( $0.876>0.872$ ), and non interest income decreased by $3.12 \%$ ( $0.124<0.128$ ). In FY 2008/09 non interest income increase by $11.29 \%$ ( $0.138>0.124$ ) and interest income went to decrease by $1.60 \%$ $(0.862<0.876)$. Obviously, contribution volume of interest income towards total income is always heavily greater than that of non interest income. But here we are comparing them on the basis of their shares on total income during each of ten years study period (1999/2000 2008/09). In these kinds of comparison both interest income and non interest income have shown their significant contribution upon total income over ten years study period. Out of ten fiscal years comparison years remain only nine fiscal years where out of this six FY have become favorable for interest income and remaining three for non interest income. So, on this basis it can be said that interest income has
more significant effect ( $6 \mathrm{FY}>34 \mathrm{FY}$ ) on total income of NIC bank. Therefore NIC bank should give more emphasis on its interest generating activities.

### 4.3 Comparison between Sample Banks Interest Income and Sample Banks Non interest Income of

## Table 4.8

Sample Banks Average Interest Income vs. Sample Banks Average Non Interest Income

| year | Interest <br> Income(average <br> of sample <br> banks) | Non interest <br> Income <br> (average of <br> sample banks) | Total <br> Income | Interest <br> Income <br> Income | Non interest <br> Income/ Total <br> Income |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 601056223 | 128958273.5 | 730014496.5 | 0.823 | 0.177 |
| $2000 / 01$ | 761431613.1 | 177563651.4 | 938995264.5 | 0.811 | 0.189 |
| $2001 / 02$ | 689132053 | 217179297.7 | 906311350.7 | 0.760 | 0.240 |
| $2002 / 03$ | 712585868.3 | 230379223.3 | 942965091.6 | 0.756 | 0.244 |
| $2003 / 04$ | 801210465.7 | 251906490.6 | 1053116956 | 0.761 | 0.239 |
| $2004 / 05$ | 892099410.4 | 268913186.3 | 1161012597 | 0.768 | 0.232 |
| $2005 / 06$ | 1071475630 | 291783427 | 1363259057 | 0.786 | 0.214 |


| $2006 / 07$ | 1292791692 | 391286712.3 | 1684078405 | 0.768 | 0.232 |
| :---: | :---: | :---: | :---: | :---: | :--- |
| $2007 / 08$ | 1606004431 | 389939220.1 | 1995943651 | 0.805 | 0.195 |
| $2008 / 09$ | 2159133980 | 483447817.9 | 2642581798 | 0.817 | 0.183 |
| average | 1058692137 | 283135730 | 1341827867 | 0.785 | 0.215 |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC

Figure 4.8
Sample Banks Average Interest Income vs. Sample Banks Average Non Interest Income


Table 4.8 and Figure 4.8: shows that SAMPLE BANK'S interest income/total income ratios (average of seven sample banks) have reached from 0.823 in FY 1999/2000 to 0.817 in fiscal year 2008/09, which shows there is decrement of $0.73 \%$ in interest income for SAMPLE BANKs during ten years period. In other side non interest income/total income ratio of SAMPLE BANKs have reached from 0.177 in FY 1999/2000 to 0.183 in fiscal year 2008/09, which shows non interest income of SAMPLE BANKs has increased by $3.39 \%$ during ten years of period. Comparatively SAMPLE BANK'S current non interest generating capacity has increased very sharply than its capacity of generating same income in FY 1999/2000. Whereas it can be seen that SAMPLE BANK'S capacity of generating interest income during this ten years period has decreased. If we see the average ratios rather than beginning year ratios, we find that current FY's interest income/total income ratio exceeds average interest income/total income ratio by $4.08 \%$ ( $0.817>0.785$ ). But in case of noninterest income, current year's ratio is lesser than ten year average ratio by $14.88 \%(0.183<0.215)$. This shows that current FY status of SAMPLE BANK's total income depends highly on interest income than previous ten years average status. Above table shows that out of total income (ten years average) $78.5 \%$ income of SAMPLE BANKs have been earned by interest and remaining $21.5 \%$ by non interest side. But if we see the current FY data we find that interest income has $81.7 \%$ contribution on total income whereas non interest income has only $18.3 \%$ contribution. Current status data says that interest income is being more significant for SAMPLE BANKs as its ratio is greater than the ten years average ratio $(81.7 \%>78.5 \%)$ and this is adverse incase of non interest income ( $18.3 \%<21.5 \%$ ). Ratios are not same during all ten years. In FY 2000/01 interest income contribution on total income has decreased than previous year $(0.811<0.823)$ and adverse in case of non interest income ( $0.189>0.177$ ). In FY 2001/02 interest income contribution has decreased than previous year by $6.29 \% ~(0.760<0.811)$, where as non interest income contribution has drastically increased by $26.98 \%(0.240>0.189)$ for the year. Similarly in FY 2002/03 non interest income once again took a pace as in this year it has increased by $1.67 \%$ ( $0.244>0.240$ ), while interest income decreased by $0.53 \%$. But in FY 2003/04 interest income increased by $0.66 \%$ ( $0.761>0.756$ ), while noninterest income decreased by $2.05 \%$. FY 2004/05 became favorable for interest income with $0.92 \%$ growth and unfavorable for non interest
income with $2.93 \%$ decline. In FY 2005/06 interest income again overtake non interest income as it has succeed to grow by $2.34 \%$ ( $0.786>0.768$ ) and left non interest income decline by $7.76 \%$ ( $0.214<0.232$ ). In FY 2006/07 non interest income took lead by increasing itself with $8.41 \% ~(0.232>0.214)$, while interest income has decreased by $2.29 \%$ ( $0.768<0.786$ ) for this year. In FY 2007/08 again interest income succeeds to keep its growth by $4.82 \%$ ( $0.805>0.768$ ), and non interest income decreased by $15.95 \%$ ( $0.195<0.232$ ). In FY 2008/09 interest income again increased by $1.49 \%$ ( $0.817>0.805$ ), and non interest income went to decrease by $6.15 \%$ ( $0.183<0.195$ ). Here we are comparing them on the basis of their shares on total income during each of ten years study period (1999/2000 - 2008/09). In these kinds of comparison both interest income and non interest income have shown their significant contribution upon total income over ten years study period. Out of ten fiscal years comparison years remain only nine fiscal years where out of this five FY have become favorable for interest income and remaining four for non interest income. So, on this basis it can be said that interest income has more growth rate ( $5 \mathrm{FY}>4 \mathrm{FY}$ ) than that of non interest income during study period. FOR SAMPLE BANKS HAVE PLAYED interest income plays vital role for increasing bank's total income. But difference is not too big as $55.56 \%$ contribution goes to total income from interest income and remaining $44.44 \%$ from non interest income. Non interest income has also shown significant impact upon total income over ten year study period but interest income's impact upon total income in the period is more. During nine years competition interest income won five times and non interest income for four times.

Table 4.9
Sample Banks Average Composition of Non Interest Income

| year |  <br> discount <br> (average of <br> sample banks) | Other operating <br> income (average <br> of sample banks) | Exchange <br> income (average <br> of sample banks) | Non-operating <br> income (average <br> of sample banks) |
| :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 0.552 | 0.056 | 0.382 | 0.010 |
| $2000 / 01$ | 0.420 | 0.051 | 0.516 | 0.013 |
| $2001 / 02$ | 0.328 | 0.244 | 0.423 | 0.005 |
| $2002 / 03$ | 0.401 | 0.112 | 0.425 | 0.062 |
| $2003 / 04$ | 0.393 | 0.120 | 0.422 | 0.065 |
| $2004 / 05$ | 0.381 | 0.139 | 0.433 | 0.046 |
| $2005 / 06$ | 0.411 | 0.138 | 0.446 | 0.004 |
| $2006 / 07$ | 0.497 | 0.144 | 0.350 | 0.008 |
| $2007 / 08$ | 0.430 | 0.146 | 0.402 | 0.021 |
| $2008 / 09$ | 0.407 | 0.149 | 0.432 | 0.011 |
| average | 0.420 | 0.137 | 0.419 | 0.023 |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC

Figure 4.9
Sample Banks Average Composition of Non Interest Income (Trend of Components of Non Interest Income over Ten FY)


Figure4.10
Sample Banks Average Composition of Non Interest Income


Table 4.9, Figure 4.9, \& Figure 4.10: shows the relative composition of four non interest incomes- commission \& discount, other operating income, exchange income \& non operating income- of seven sample banks average for shaping total non interest income. This shows that how much contribution upon total non interest income (average of sample banks) over the ten years study period has been done by each of these non interest (average of sample banks) items. It can be seen that contribution from these four items are not same for all ten years period. This shows that none of them have leading position all over the study period. In FY 1999/2000, out of total non interest income (total of these four items), the contribution of commissions \& discounts, other operating income, exchange income, and non operating income are $55.2 \%, 5.6 \%, 38.2 \%$ and $1 \%$ respectively. This shows that commissions \& discount has highest contribution, exchange income has second highest contribution, and other operating income has come third and non-operating last with very few points. At the beginning of this study period commission and discount has more than $55 \%$ shares upon total non interest income. But In $2000 / 01$, this portfolio changed by $42 \%, 5.1 \%, 51.6 \%$ and $1.3 \%$ respectively. Here exchange income has take over remaining all others with $51.6 \%$, and commission and discount went to take second position. In FY 2001/02, again exchange income lead the other remaining with $42.3 \%$ and again commission \& discount remain at second position. Here in this FY new remarkable thing is other operating income grew drastically by $378.43 \% ~(24.4 \%>5.1 \%)$ than previous FY In FY 2002/03, again exchange income lead the other remaining with $42.5 \%$ and again commission \& discount remain at second position but it has increased its share than previous FY. In FY 2003/04, again
exchange income lead the other remaining with $42.2 \%$ in spite of decreasing its share than previous FY and again commission \& discount remain at second position but it has decreased its share than previous FY, other operating income have increased its share in this FY but it again remained at third position. Similarly in 2004/05, their position has remained same as previous FY, but exchange income \& other operating income have increased their shares, while commission \& discount and non operating income have decreased its shares than previous FY. In FY 2005/06, again their position has remained unchanged than that of previous year, but here in this FY commission \& discount and exchange income have succeed to increase their shares. In FY 2006/07, all three items have increased except exchange income. Here their position has also changed. Commission \& discount increased drastically and took first position with 49.7\% making exchange income second. Remaining others has same position as they used to be. In FY 2007/08, position has unchanged but except commission \& discount all three items have increased. In FY 2008/09, there has been change in the position, exchange income has once again come at first position and commission and discount went to take second position. Here in this FY all three items has increased their shares except non operating income.
This table shows that out of ten comparative FY, commission \& discount has got highest shares upon total non interest income for three FY, whereas exchange income has got these highest shares upon total non interest income for seven FYs. Other operating income and non operating income have remained always third and last position respectively over the study period having big difference of shares upon total non interest income. Here it can be said that exchange income have played most significant role in increasing total non interest income as it has got highest shares ( 7 out of 10) over this study period. Similarly commission and discount has also played significant role in this work as it has got three FYs in its favor out of ten. If we compare the composition on the basis of ten years averages with current FY, we get difference result. Here commission \& discount exceeds remaining all others. But its difference with exchange income is very little $(42 \%>41.9 \%)$. Current FY has become favorable for commission \& discount, and non operating income comparing with ten FY's average contribution. In case of other income and exchange income, they both have decreased currently than their ten FY's average contribution upon total non interest income. At last it can be said that exchange income and commission \& discount have played
significant role for shaping total non interest income over this ten FY study period. Other operating income has medium contribution and non- operating have very little contribution upon total non interest income.

Above figure no. 4-4.10: shows that the ten FY's average contribution upon total non interest income of sample banks from commission \& discount, other operating income, exchange income and non operating income have $42 \%, 13.7 \%, 41.9 \%$ and $2.3 \%$ respectively. Commission \& discount have highest contribution but contribution of exchange income is almost equal with commission \& discount. Other operating income has $13.7 \%$ contribution. But non operating income has very low-2.3\% contribution.

On the basis of all ten FYs exchange income has most important role in building total non interest income as out of ten seven FYs have been lead by it, while commission \& discount has lead only remaining three years. But average contribution of commission \& discount is more than that of exchange income, which shows that this non interest item is more fluctuating -higher average but lead only three FYs out of ten- than that of exchange income.

### 4.5 Contribution of Interest Income and Non Interest Income On Net Profit

Table 4.10
Sample Banks Average Interest Income vs. Sample Banks Average Net Income

| Rear | Interest <br> Income | Net income | Interest <br> Income/ Net <br> income | Single ratios <br> vs. ten FY <br> average ratio |
| :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 601.056223 | 161.4243027 | $372 \%$ | $372>262 \%$ |
| $2000 / 01$ | 761.4316131 | 355.9314149 | $214 \%$ | $214<262 \%$ |
| $2001 / 02$ | 689.132053 | 358.8419951 | $192 \%$ | $192<262 \%$ |
| $2002 / 03$ | 712.5858683 | 418.0989703 | $170 \%$ | $170>262 \%$ |
| $2003 / 04$ | 801.2104657 | 358.4542056 | $224 \%$ | $224<262 \%$ |
| $2004 / 05$ | 892.0994104 | 288.9078796 | $309 \%$ | $309>262 \%$ |
| $2005 / 06$ | 1071.47563 | 376.9045109 | $284 \%$ | $284>262 \%$ |
| $2006 / 07$ | 1292.791692 | 439.4458331 | $294 \%$ | $294>262 \%$ |
| $2007 / 08$ | 1606.004431 | 554.4648961 | $290 \%$ | $290>262 \%$ |
|  |  |  |  |  |
| $2008 / 09$ | 2159.13398 | 732.4461781 | $295 \%$ | $295 \%>262 \%$ |
| average | 1058.692137 | 404.4920186 | $262 \%$ |  |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC
Figure 4.1

Ratio of Sample Banks Ten Years Average Interest Income and Sample Banks Ten Years Average Net Income


Table 4.10 and Figure 4.11: shows the relationship between average interest income and net income over ten FY study period of sample banks. It can be seen that the contribution of interest income upon net income for first four FYs have been in declining trend- $372 \%$, $214 \%, 192 \%$ and $170 \%$ respectively. In FY 1999/2000 interest income is $372 \%$ of net income, it has decreased to $214 \%$ in FY2000/01, $192 \%$ in FY2001/02, and $170 \%$ FY2002/03 respectively. But in FY 2003/04, 2004/05 this contribution has increased to $224 \%$ and $309 \%$ respectively. This says that in these FYs interest income has more contribution upon net income than that of previous four years. In FY 2005/06 the percentage of interest income on net income has decreased to $284 \%$. In FY 2006/07 this ratio has increased to $294 \%$, which has further decreased to $290 \%$ in FY2007/08. In FY 2008/09 this ratio has increased to $295 \%$ from $290 \%$ of previous FY. The contribution of interest income upon net income in current FY (fy2008/09) is more than ten FYs average contribution ( $295 \%>262 \%$ ). This shows that interest income has been increasing to increase net income currently. Above table 4.12 and figure 4.12 reflects the relationship between interest income and net income. We can see that sample banks ten years average Interest income is $262 \%$ of sample banks ten years average net income. This ratio is lower than this study's beginning FY and end FY, which says that interest income is more powerful at beginning and ending FYs than remaining middle FYs. From this table we can see that out of nine comparative FYs,
interest income has succeeded to grow its share upon net income- than previous FY- for three FYs. Six FYs has become unfavorable to interest income, as in these FYs it has lost its share upon net income of sample banks. From this it can be said that for sample banks net income, interest income contribution has not become more effective as out of nine FY, interest income/net income ratio has increased only for three FY during the study period.

If we compare the single FY interest income/net income ratio of sample banks with ten FYs average ratio, we get seven FYs having more impact of interest income upon net income, and four lesser impact than ten FYs average impact of interest income upon net income.

## Table 4.11

Sample Banks Average Non Interest Income vs. Sample Banks Average Net Income

| year | Non interest <br> Income | Net income | Non interest <br> Income/ Net <br> income | Single ratios vs. <br> ten FY average <br> ratio |
| :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 128.9582735 | 161.4243027 | $80 \%$ | $80 \%>70 \%$ |
| $2000 / 01$ | 177.5636514 | 355.9314149 | $50 \%$ | $50 \%<70 \%$ |
| $2001 / 02$ | 217.1792977 | 358.8419951 | $61 \%$ | $61 \%<70 \%$ |
| $2002 / 03$ | 230.3792233 | 418.0989703 | $55 \%$ | $55 \%<70 \%$ |
| $2003 / 04$ | 251.9064906 | 358.4542056 | $70 \%$ | $70 \%=70 \%$ |
| $2004 / 05$ | 268.9131863 | 288.9078796 | $93 \%$ | $93 \%>70 \%$ |
| $2005 / 06$ | 291.783427 | 376.9045109 | $77 \%$ | $77 \%>70 \%$ |
| $2006 / 07$ | 391.2867123 | 439.4458331 | $89 \%$ | $89 \%>70 \%$ |
| $2007 / 08$ | 389.9392201 | 554.4648961 | $70 \%$ | $70 \%=70 \%$ |
| $2008 / 09$ | 483.4478179 | 732.4461781 | $66 \%$ | $66 \%<70 \%$ |
| average | 283.13573 | 404.4920186 | $70 \%$ |  |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC

Figure 4.12
Ratio of Sample Banks Ten Years Average Non Interest Income and Sample Banks Ten Years Average Net Income


Table 4.11 and Figure 4.12: shows the contribution of sample banks average non interest income upon their net income. In FY $1999 / 2000$, total contribution of non interest income of sample banks upon their net income is $80 \%$. This shows that in the process of shaping net income non interest income has contributed $80 \%$ of shares of net income. But this contribution ratio has decreased in FY 2000/01 to $50 \%$. But in FY 2001/02 this ratio increased from previous FY $50 \%$ to $61 \%$, which means non interest income has increased its shares on net income in this FY by 22\%. This has again decreased in FY2002/03 by 9.84\% (55 \%< 61\%). But in FY 2003/04, shares of non interest income upon net income for sample banks has increased from previous year $55 \%$ to $70 \%$, which means in this FY non interest income has increased by $27.27 \%$ to increase net income. Such growth has also taken place in FY 2004/05. In this FY non interest income/income interest ratio has increased to $93 \%$ from previous $\mathrm{FY} 70 \%$, which is also highest ratio during ten FY study period. This shows that in this FY non interest income impact upon net income is highest. In this FY non interest income has played most important role in increasing net income of sample banks than remaining FYs. But this growth trend has broken in FY 2005/06 (77\% < 93\%). In this FY non interest income/net income ratio has decreased by $17.20 \%$. But in FY 2006/07 non interest income has succeed to increase its shares upon net income by $15.58 \% ~(89 \%>77 \%)$. In both FYs 2007/08 and 2008/09, non interest income/net income ratio of sample banks has decreased by $21.35 \%$ and $5.71 \%$ respectively. This shows that in these FYs non interest income has lost its shares upon net income compared to previous FY. If we see the ten FY average ratios we find that non interest income of sample banks is around $70 \%$ of
its net income. From this table we can see that out of nine comparative FYs, non interest income has succeeded to grow its share upon net income- than previous FY- for four FYs. Five FYs has become unfavorable to non interest income, as in these FY it has lost its share upon net income of sample banks. From this it can be said that for sample banks net income non interest income contribution has not become more effective as out of nine FY, non interest income/net income ratio has increased only for four FYs.

Table 4.11 and Figure 4.12 also show the sample banks ten years average non interest income and sample banks ten years average net income. It shows that net income of sample banks is 1.43 times more than that of non interest income during the ten FY study period (1999/2000 - 2008/09), which shows that non interest income has around $70 \%$ contribution upon net income during the period.

If we compare the single FY ratio with ten FYs average ratio, we get four FYs having more impact of non interest income upon net income, two equal impacts, and four lesser impact than ten FYs average impact of non interest income upon net income.

Industry Average (Seven Sample Banks) Vs. Each Individual Sample Banks Non Interest Income/Interest Income Ratio Analysis

## Table 4.12

EBL non interest income/interest ratio vs. industry average non interest income/interest ratio

| year | Industry(non <br> interest/interest <br> income | EBL(non <br> interest/interest <br> income | Change(+,-) <br> [COI.3- <br> COL.2] |
| :---: | :---: | :---: | :---: |
| $1999 / 2000$ | $21.46 \%$ | $22.36 \%$ | $0.90 \%$ |
| $2000 / 01$ | $23.32 \%$ | $20.91 \%$ | $-2.41 \%$ |
| $2001 / 02$ | $31.51 \%$ | $21.88 \%$ | $-9.63 \%$ |
| $2002 / 03$ | $32.33 \%$ | $22.14 \%$ | $-10.19 \%$ |
| $2003 / 04$ | $31.44 \%$ | $19.45 \%$ | $-11.99 \%$ |
| $2004 / 05$ | $30.14 \%$ | $19.42 \%$ | $-10.73 \%$ |
| $2005 / 06$ | $27.23 \%$ | $18.05 \%$ | $-9.18 \%$ |
| $2006 / 07$ | $30.27 \%$ | $18.82 \%$ | $-11.44 \%$ |
| $2007 / 08$ | $24.28 \%$ | $19.27 \%$ | $-5.01 \%$ |
| $2008 / 09$ | $22.39 \%$ | $17.20 \%$ | $-5.20 \%$ |
| average | $26.74 \%$ | $19.06 \%$ | $-7.68 \%$ |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC

Table 4.12: shows that EBL non interest/interest ratio exceeds industry non interest /interest income ratio in FY $1999 / 2000$ by $0.90 \%$. This means at the beginning FY of this study period non interest income has become more significant for EBL than its industry average. But after FY 1999/2000, this ratio for EBL has become lower than industry average ratio in each FY till the ending FY (2008/09). But
difference between ratios for every FY is not same. EBL'S ratios are lower than industry average ratios by $2.41 \%, 9.63 \%, 10.19 \%$, $11.99 \%, 10.73 \%, 9.18 \%, 11.44 \%, 5.01 \%$ and $5.20 \%$ in FY 2000/01, 2001/02, 2002/03, 2003/04, 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 respectively. Out of ten FYs only one FY (1999/2000) has become favorable for EBL taking non interest income as an important income source, remaining FYs have become unfavorable for EBL as in these FYs EBL'S non interest/interest are lesser than the industry average ratio and just opposite result has created for interest income. This shows that in beginning FY (2000/01) difference between ratios of EBL and industry average is small, but in middle FYs (2001/02 - 2006/07) of the study period this differences are too big, but in ending FYs again these differences have narrowed. This shows that EBLs non interest/interest ratios are very lower than industry average ratios during middle FYs of the study period, which means during this period interest income has increased much more than non interest income. If we see ten FYs average ratio, we find that EBL'S non interest/interest ratio is lesser than industry average ratio (19.06 \%< $26.74 \%$ ) by $7.68 \%$. this shows that EBL interest income has got lesser impact from non interest income than industry average or growth of interest income for EBL is more than non interest income.

## Table 4.13

HBL non interest income/interest ratio vs. industry average non interest income/interest ratio

| year | Industry(non <br> interest/interest <br> income | HBL(non <br> interest/interest <br> income | Change(+,-) <br> [COI.3- <br> COL.2] |
| :---: | :---: | :---: | :---: |
| $1999 / 2000$ | $21.46 \%$ | $20.22 \%$ | $-1.23 \%$ |
| $2000 / 01$ | $23.32 \%$ | $18.76 \%$ | $-4.56 \%$ |
| $2001 / 02$ | $31.51 \%$ | $20.96 \%$ | $-10.56 \%$ |


| $2002 / 03$ | $32.33 \%$ | $21.07 \%$ | $-11.26 \%$ |
| :---: | :---: | :---: | :---: |
| $2003 / 04$ | $31.44 \%$ | $21.97 \%$ | $-9.47 \%$ |
| $2004 / 05$ | $30.14 \%$ | $21.72 \%$ | $-8.42 \%$ |
| $2005 / 06$ | $27.23 \%$ | $25.69 \%$ | $-1.55 \%$ |
| $2006 / 07$ | $30.27 \%$ | $21.89 \%$ | $-8.38 \%$ |
| $2007 / 08$ | $24.28 \%$ | $23.80 \%$ | $-0.48 \%$ |
| $2008 / 09$ | $22.39 \%$ | $24.95 \%$ | $2.56 \%$ |
| average | $26.74 \%$ | $22.49 \%$ | $-4.26 \%$ |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC
Table 4.13: shows the trend of non interest income and interest income of industry and HBL. In FY 1999/2000, HBL non interest income/interest income ratio is $20.22 \%$ whereas at the same time this ratio for industry average is $21.46 \%$. This has shown that non interest income over interest income of HBL in FY 1999/2000 is lesser than industry average. This means that HBL has greater impact of interest income than industry average in FY 1999/2000. The weight of non interest income of HBL upon this ratio has further decreased for all next eight years compared to industry average as HBL non interest income/interest income ratio is lesser than that of industry average ratio for fy2001/02, 2002/03, 2003/04, 2004/05, 2005/06, 2006/07, 2007/08 respectively. But in FY 2001/02, 2002/03, $2003 / 04$. 2004/05 and 2006/07 non interest income of HBL have lower performance on the ratio value- comparing to interest income- than that of industry average ratio value. But FY 2008/09 shows opposite result than preceding years results; in this FYHBL non interest income has become more effective than that of industry average non interest income ( $24.95 \%>22.39 \%$ ). If we see the ten FYs average ratio we find that non interest income of HBL is lesser effective than that of industry average non interest income i.e., interest income of HBL is more effective than that of industry average interest income.

## Table 4.14

BOK Non Interest Income/Interest Ratio vs. Industry Average Non Interest Income/Interest Ratio

| year | Industry(non <br> interest/interest <br> income | BOK(non <br> interest/interest <br> income | Change(+,-) <br> [COI.3- <br> COL.2] |
| :---: | :---: | :---: | :---: |
| $1999 / 2000$ | $21.46 \%$ | $18.931 \%$ | $-2.52 \%$ |
| $2000 / 01$ | $23.32 \%$ | $23.634 \%$ | $0.31 \%$ |
| $2001 / 02$ | $31.51 \%$ | $20.745 \%$ | $-10.77 \%$ |
| $2002 / 03$ | $32.33 \%$ | $28.069 \%$ | $-4.26 \%$ |
| $2003 / 04$ | $31.44 \%$ | $28.069 \%$ | $-3.37 \%$ |
| $2004 / 05$ | $30.14 \%$ | $24.540 \%$ | $-5.60 \%$ |
| $2005 / 06$ | $27.23 \%$ | $23.365 \%$ | $-3.87 \%$ |
| $2006 / 07$ | $30.27 \%$ | $80.351 \%$ | $50.08 \%$ |
| $2007 / 08$ | $24.28 \%$ | $23.900 \%$ | $-0.38 \%$ |
| $2008 / 09$ | $22.39 \%$ | $24.498 \%$ | $2.11 \%$ |
| average | $26.74 \%$ | $30.859 \%$ | $4.11 \%$ |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC
Table 4.14: shows the relationship between non interest income and interest income of BOK. This shows that in FY 1999/2000 this relationship for BOK become weaker than industry average. In this FY non interest income of BOK has got $18.931 \%$ of its income
interest for the same year but in industry non interest income has represented $21.46 \%$ of its interest income. But in FY $2000 / 01 \mathrm{BOK}$ non interest income has been closer with interest income than industry average ( $23.634 \%>23.32 \%$ ). BOK's non interest income has been closer with its interest than industry average just in FY 2006/07 and 2008/09. Remaining FYs have increased the difference between non interest income and interest income of BOK than industry average in corresponding FYs. Out of ten FYs only four FYs have become favorable to BOK for increasing its non interest income and interest income relationship than that of industry average non interest and interest relationship. If we see the ten year average ratio, we find that BOK'S non interest income interest income relationship is closer than that of industry average non interest income interest income relationship ( $30.859 \%>26.74 \%$ ).

## Table 4.15

NABL Non Interest Income/Interest Ratio vs. Industry Average Non Interest Income/Interest Ratio

| year | Industry(non <br> interest/interest <br> income | NABL(non <br> interest/interest <br> income | Change(+,-) <br> [COI.3- <br> COL.2] |
| :---: | :---: | :---: | :---: |
| $1999 / 2000$ | $21.46 \%$ | $13.36 \%$ | $-8.09 \%$ |
| $2000 / 01$ | $23.32 \%$ | $21.60 \%$ | $-1.72 \%$ |
| $2001 / 02$ | $31.51 \%$ | $46.33 \%$ | $14.81 \%$ |
| $2002 / 03$ | $32.33 \%$ | $40.24 \%$ | $7.91 \%$ |
| $2003 / 04$ | $31.44 \%$ | $42.41 \%$ | $10.97 \%$ |
| $2004 / 05$ | $30.14 \%$ | $41.35 \%$ | $11.21 \%$ |


| $2005 / 06$ | $27.23 \%$ | $31.10 \%$ | $3.87 \%$ |
| :---: | :---: | :---: | :---: |
| $2006 / 07$ | $30.27 \%$ | $28.56 \%$ | $-1.71 \%$ |
| $2007 / 08$ | $24.28 \%$ | $23.97 \%$ | $-0.31 \%$ |
| $2008 / 09$ | $22.39 \%$ | $20.65 \%$ | $-1.74 \%$ |
| average | $26.74 \%$ | $29.03 \%$ | $2.29 \%$ |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC
Table 4.15: shows the combination of non interest income and interest income of NABL for ten FYs study period. During this period non interest income of NABL has been closer with its interest income for five FYs- 2001/02, 2002/03, 2003/04, 2004/05, 2005/06- than industry average. In Remaining five FYs- 1999/2000, 2000/2001, 2006/07, 2007/08, 2008/09- NABL non interest income/interest income ratio has become lower than the same ratio of industry. In FY 2003/04 and 2004/05 this ratio for NABL is very higher than industry average. This shows that during these FYs non interest income has increased more for NABL than industry. It we see the ten FYs average ratios for both industry and NABL; we find that NABL non interest income relationship with its interest income is closer than industry average. For NABL this ratio is $29.03 \%$, which means non interest income is $29.03 \%$ of total interest income. But for industry this ratio is only $26.74 \%$, which shows that interest income has been affected by non interest income with $26.74 \%$.

## Table 4.16

NIBL Non Interest Income/Interest Ratio vs. Industry Average Non Interest Income/Interest Ratio

| year | Industry(non <br> interest/interest | NIBL(non <br> interest/interest | Change(+,-) <br> $[C O I .3-$ |
| :---: | :---: | :---: | :---: |


|  | income | income | COL.2] |
| :---: | :---: | :---: | :---: |
| $1999 / 2000$ | $21.46 \%$ | $25.19 \%$ | $3.74 \%$ |
| $2000 / 01$ | $23.32 \%$ | $20.54 \%$ | $-2.78 \%$ |
| $2001 / 02$ | $31.51 \%$ | $28.37 \%$ | $-3.14 \%$ |
| $2002 / 03$ | $32.33 \%$ | $33.86 \%$ | $1.53 \%$ |
| $2003 / 04$ | $31.44 \%$ | $24.93 \%$ | $-6.51 \%$ |
| $2004 / 05$ | $30.14 \%$ | $29.19 \%$ | $-0.96 \%$ |
| $2005 / 06$ | $27.23 \%$ | $23.70 \%$ | $-3.53 \%$ |
| $2006 / 07$ | $30.27 \%$ | $21.96 \%$ | $-8.31 \%$ |
| $2007 / 08$ | $24.28 \%$ | $20.72 \%$ | $-3.56 \%$ |
| $2008 / 09$ | $22.39 \%$ | $16.48 \%$ | $-5.91 \%$ |
| average | $26.74 \%$ | $21.78 \%$ | $-4.97 \%$ |

[^0]Table 4.16: shows the non interest income/interest income ratio of NIBL for ten FY study period. This table shows that in FY 1999/2000, this ratio for NIBL is $25.19 \%$, which is $3.74 \%$ greater than same ratio of industry in the same FY. This shows that in this FY non interest income has increased for NIBL on interest income comparing to the industry average non interest income on interest income. For NIBL this ratio has become favorable for only one more FY- 2002/03. In this FY this ratio for NIBL is $33.86 \%$, which is only $32.33 \%$ for industry. But in all remaining eight FYs has become unfavorable for NIBL regarding this ratio. This ratio has been lesser for NIBL than industry by $2.78 \%, 3.14 \%, 6.51 \%, 0.96 \%, 3.53 \%, 8.31 \%, 3.56 \%, 5.91 \%$ in FYs 2000/01, 2001/02, 2003/04, 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. If we see the average data, we find that NIBL non interest income/interest income ratio is lesser by
$4.97 \%$ than that of industry average ratio $(21.78 \%<26.74 \%)$. This shows that in an average for NIBL non interest income is lesser than interest income comparing to industry average.

## Table 4.17

SCBNL Non Interest Income/Interest Ratio vs. Industry Average Non Interest Income/Interest Ratio

| year | Industry(non <br> interest/interest <br> income | SCBNL(non <br> interest/interest <br> income | Change(+,-) <br> [COI.3- <br> COL.2] |
| :---: | :---: | :---: | :---: |
| $1999 / 2000$ | $21.46 \%$ | $30.45 \%$ | $8.99 \%$ |
| $2000 / 01$ | $23.32 \%$ | $32.85 \%$ | $9.53 \%$ |
| $2001 / 02$ | $31.51 \%$ | $42.74 \%$ | $11.22 \%$ |
| $2002 / 03$ | $32.33 \%$ | $50.25 \%$ | $17.92 \%$ |
| $2003 / 04$ | $31.44 \%$ | $51.99 \%$ | $20.55 \%$ |
| $2004 / 05$ | $30.14 \%$ | $48.89 \%$ | $18.75 \%$ |
| $2005 / 06$ | $27.23 \%$ | $44.83 \%$ | $17.60 \%$ |
| $2006 / 07$ | $30.27 \%$ | $40.27 \%$ | $10.00 \%$ |
| $2007 / 08$ | $24.28 \%$ | $41.25 \%$ | $16.97 \%$ |
| $2008 / 09$ | $22.39 \%$ | $40.84 \%$ | $18.45 \%$ |
| average | $26.74 \%$ | $42.06 \%$ | $15.31 \%$ |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC

Table 4.17: shows the non interest income/income interest of SCBNL for ten FYs period. It can be seen that during all ten FYs this ratios of SCBNL is greater than corresponding industry average ratios- $30.45 \%>21.46 \%, 32.85 \%>23.32 \%, 42.74 \%>31.51 \%, 50.25 \%>32.33 \%$, $51.99 \%>31.44 \%, 48.89 \%>30.14 \%, 44.83 \%>27.23 \%, 40.27 \%>30.27 \%, 41.25 \%>24.28 \%, 40.84 \%>22.39 \%$ in fy $1999 / 2000,2000 / 01$, 2001/02, 2002/03, 2003/04, 2004/05, 2005/06, 2006/07, 2007/08, 2008/09 respectively. This means the role of non interest income in SCBNL is more than role of non interest in industry taking interest income as basis. But these differences between ratios are not same for all FYs. In beginning of FY SCBNL ratio is greater than industry by $8.99 \%$, which further increase in FY 2000/01, 2001/02, 2002/03 and 2003/04 by $9.53 \%, 11.22 \%, 17.92$, \& $20.55 \%$ respectively. In FY 2003/04 this difference is the highest- 20.55\%, which means in this FY non interest income played most effective role for SCBNL. After FY 2003/04, this ratio has decreased for SCBNL than its own previous year ratio. This decline trend continued for SCBNL till FY2006/07. In FY 2007/08 this ratio has increased for SCBNL from previous FY $10.00 \%$ to $16.97 \%$. This also increased in FY $2008 / 09$ to $18.45 \%$ from previous year $16.97 \%$. In FY 2008/09 non interest income of SCBNL is more important than industry average by $18.45 \%$ taking interest income as basis. This shows that non interest has taken more significance role for SCBNL than industry. If we see the average ratios we get similar result we got in above explanation. These ten FYs average ratios shows that non interest income is $15.31 \%$ more effective for SCBNL than industry as for SCBNL non interest income represents $42.06 \%$ of its interest income, whereas this is only $26.74 \%$ for industry. This means looking overall ten fiscal years data, we find that non interest income compared to interest income interest has increased for SCBNL than industry average for same period.

## Table 4.18

NIC Non Interest Income/Interest Ratio vs. Industry Average Non Interest Income/Interest Ratio

| year | Industry(non | NIC(non | Change(+,-) |
| :---: | :---: | :---: | :---: |
| interest/interest | interest/interest | [COI.3-${ }^{\text {[COI }}$ |  |


|  | income | income | COL.2] |
| :---: | :---: | :---: | :---: |
| $1999 / 2000$ | $21.46 \%$ | $21.03 \%$ | $-0.43 \%$ |
| $2000 / 01$ | $23.32 \%$ | $16.98 \%$ | $-6.34 \%$ |
| $2001 / 02$ | $31.51 \%$ | $13.26 \%$ | $-18.25 \%$ |
| $2002 / 03$ | $32.33 \%$ | $12.58 \%$ | $-19.75 \%$ |
| $2003 / 04$ | $31.44 \%$ | $14.78 \%$ | $-16.66 \%$ |
| $2004 / 05$ | $30.14 \%$ | $13.37 \%$ | $-16.78 \%$ |
| $2005 / 06$ | $27.23 \%$ | $12.96 \%$ | $-14.28 \%$ |
| $2006 / 07$ | $30.27 \%$ | $14.73 \%$ | $-15.54 \%$ |
| $2007 / 08$ | $24.28 \%$ | $14.13 \%$ | $-10.15 \%$ |
| $2008 / 09$ | $22.39 \%$ | $16.06 \%$ | $-6.33 \%$ |
| average | $26.74 \%$ | $14.75 \%$ | $-12.00 \%$ |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC

Table 4.18: shows the non interest income and interest income relationships of NIC during ten FY study period. Looking at glance, we see that in all ten FYs NIC non interest income seems lesser effective than industry average as all FY (1999/2000 - 2008/09) non interest income/interest income ratio for NIC is lesser than that of industry average ratios for the same period by $0.43 \%, 6.34 \%, 18.25 \%, 19.75 \%$, $16.66 \%, 16.78 \%, 14.28 \%, 15.54 \%, 10.15 \%$ and $6.33 \%$ respectively. This means for NIC non interest income has lesser contribution than industry for all ten FY. In FY 2002/03 this ratio for NIC is $12.58 \%$ whereas industry average ratio for that period is $32.33 \%$. This is the lowest ratio for NIC in this comparative study. This shows that the effect of non interest income upon interest income of NIC is only
$12.58 \%$, which is $32.33 \%$ for industry. Non interest income has become lowest effective upon interest income of NIC than industry for this FY. In FY 2008/09 the gap between these ratios have decreased to $6.33 \%$, which means non interest income is only $6.33 \%$ lesser effective upon interest income for NIC than that of industry. This means at the ending of study period non interest income of seems progressing upon its interest income than industry's non interest income doing upon its interest income. If we see the average ratios we see that non interest income/interest income ratio of NIC is lesser than same ratio of industry by $12 \%$. This means non interest income of NIC has lesser impact upon its interest income than industry average during ten FY study period. NIC interest income portion seems more effective than its non interest income during ten FY study period compared to industry as ten FY average non interest income/interest income ratios for NIC is $14.75 \%$, which is $26.74 \%$ for industry. This means non interest income is $26.75 \%$ of interest income for industry but, in case of NIC it is only $14.75 \%$. Here NIC's non interest income has reduced its contribution upon interest income than industry, during ten FY study period.
4.7 Statistical Tools

### 4.7.1 Correlation of Coefficient, Coefficient of Determination, Probable Error and t-Statistic between interest income \& net income variables

Table 4.19

Correlation of Coefficient, Coefficient of Determination, Probable Error and t-Statistic between interest income \& net income variables during FY 1999/00-2008/09

| Tool | Value | Outcome |
| :--- | :--- | :--- |
| Correlation of Coefficient (r) | 0.91 | Positive with very high degree |
| Coefficient of Determination (r) ${ }^{2}$ | $82.81 \%$ | Highly dependent |
| Probable Error (P.E) | P.E $=0.037$ | r>6 P.E |
|  | 6.P.E $=0.222$ |  |
| t-Statistic | t-cal=6.208 | t-cal > t-tab |
|  | t-tab=2.306 |  |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC

Table 4.19: shows the correlation coefficient between interest income and net income ( r ) of sample banks is +0.91 . This coefficient is positive and of "very high degree"-significant. This indicates that there is highly positive relationship between interest income and net income. It means that increase in interest income result increase in net income $\&$ vice versa. This situation is also practically accepted as interest income is one of the most important component/source of net income. Similarly, the coefficient of determination (r) ${ }^{\mathbf{2}}$ is $82.81 \%$. This means- taking interest income as independent variable and net income dependent variable, $82.81 \%$ of total variation in dependent variable is explained by interest income and remaining $17.19 \%$ is due to effect of other variables (other incomes) of the sample banks.

Here, correlation coefficient (r) 0.91 is greater than six times of probable error (P.E) - $0.91>6$ P.E. (i.e., 0.222), this shows that calculated correlation coefficient is significantly reliable.

Again, the test of significance of correlation coefficient between interest income and net income also verify the fact. In order to verify strongness or weakness of relation, calculation of $t$ - statistic is necessary. The calculated value of $t$-statistics is +6.208 which is greater than the t tabulated at $5 \%$ level significance for two tails at 8 degree of freedom $(t-t a b=2.306)$. In this condition $(t-c a l .>t-t a b$.$) , null$ hypothesis (H0) is rejected and alternative hypothesis (H1) is accepted. It means that the calculated correlation (between interest income and net income) is statistically significant/strong. So in this case the magnitude of correlation coefficient is significant- interest income is one of the strongest as well as important factors that shape the net income i.e., movements in interest income affect the movements in net income in similar direction significantly. In conclusion, the relationship between interest income and net income is practically applicable for sample banks according to the theory.

### 4.7.2 Correlation of Coefficient, Coefficient of Determination, Probable Error and t-Statistic between noninterest income $\&$ net income variables

Table 4.20
Correlation of Coefficient, Coefficient of Determination, Probable Error and t-Statistic between noninterest income \& net income variables during FY 1999/00- 2008/09

| Tool | Value | Outcome |
| :--- | :--- | :--- |
| Correlation of Coefficient (r) | 0.89 | Positive with very high degree |
| Coefficient of Determination (r) ${ }^{2}$ | $79.21 \%$ | Highly dependent |
| Probable Error (P.E) | P.E $=0.044$ | r >6 P.E |
|  | 6.P.E $=0.264$ |  |


| t -Statistic | $\mathrm{t}-\mathrm{cal}=5.521$ <br> $\mathrm{t}-\mathrm{tab}=2.306$ | t -cal > t-tab |
| :--- | :--- | :--- |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC
Table 4.20: shows the correlation coefficient between non-interest income and net income (r) of sample banks is +0.89 . This coefficient is positive and of "very high degree"-significant. This indicates that there is highly positive relationship between non-interest income and net income. It means that increase in non-interest income result increase in net income \& vice versa. This situation is also practically accepted as non-interest income is one of the most important component/source of net income. Similarly, the coefficient of determination (r) ${ }^{2}$ is $79.21 \%$. This means- taking non-interest income as independent variable and net income dependent variable, $79.21 \%$ of total variation in dependent variable is explained by non-interest income and remaining $20.79 \%$ is due to effect of other variables (other incomes) of the sample banks.

Here, correlation coefficient (r) 0.89 is greater than six times of probable error (P.E) $-0.89>6$ P.E. (i.e., 0.264 ), this shows that calculated correlation coefficient is significantly reliable.

Again, the test of significance of correlation coefficient between non-interest income and net income also verify the fact. In order to verify strong ness or weakness of relation, calculation of $t$ - statistic is necessary. The calculated value of $t-$ statistics is +5.521 which is greater than the t tabulated at $5 \%$ level significance for two tails at 8 degree of freedom $(\mathrm{t}-\mathrm{tab}=2.306)$. In this condition ( $\mathrm{t}-\mathrm{cal}$. $>\mathrm{t}-$ tab.), null hypothesis (H0) is rejected and alternative hypothesis (H1) is accepted. It means that the calculated correlation (between noninterest income and net income) is statistically significant/strong. So in this case the magnitude of correlation coefficient is significant-non-interest income is one of the strongest as well as important factors that shape the net income i.e., movements in non-interest income affect the movements in net income in similar direction significantly. In conclusion, the relationship between non-interest income and net income is practically applicable for sample banks according to the theory.

### 4.7.3 Correlation of Coefficient, Coefficient of Determination, Probable Error and t-Statistic between interest income \& noninterest income variables

## Table 4.21

Correlation of Coefficient, Coefficient of Determination, Probable Error and t-Statistic between interest income \& noninterest income variables during FY 1999/00-2008/09

| Tool | Value | Outcome |
| :--- | :--- | :--- |
| Correlation of Coefficient (r) | 0.95 | Positive with very high degree |
| Coefficient of Determination (r) ${ }^{2}$ | $90.25 \%$ | Highly dependent |
| Probable Error (P.E) | P.E $=0.021$ | r >6 P.E |
|  | 6.P.E $=0.126$ |  |
| t-Statistic | t-cal $=8.605$ <br> t-tab $=2.306$ | t-cal > t-tab |

Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL, HBL, BOK, NABL, NIBL, SCBNL \& NIC
Table 4.21: shows the correlation coefficient between interest income and non-interest income (r) of sample banks is +0.95 . This coefficient is positive and of "very high degree"-significant. This indicates that there is highly positive relationship between interest income and non-interest income. It means that increase in interest income result increase in non-interest income \& vice versa. This situation is also practically accepted as interest income \& non-interest income both depends upon volume of loan \& advances of sample banks- interest income is based upon loan and advances, higher the loan and advances higher will be interest income for sample banks which is very closely related with the movement of various non-interest type of income - commitment charges on overdraft/hypothecation
loan, credit information charge(CIC) on any type of loan \& advances, service charge from newly sanctioned loan, loan \& advances renewal charges and so, of banks. This indicates that non-interest Income has highly positive relationships with interest income as they both depend upon same basis called volume of loan and advances of banks. Similarly, the coefficient of determination (r ) $)^{2}$ is $90.25 \%$. This means- taking interest income as independent variable and non-interest income dependent variable, $90.25 \%$ of total variation in dependent variable is explained by interest income and remaining $9.75 \%$ is due to effect of other variables (other incomes) of the sample banks.

Here, correlation coefficient (r) 0.95 is greater than six times of probable error (P.E) - $0.95>6$ P.E. (i.e., 0.126), this shows that calculated correlation coefficient is significantly reliable.

Again, the test of significance of correlation coefficient between interest income and non-interest income also verify the fact. In order to verify strong ness or weakness of relation, calculation of $t$ - statistic is necessary. The calculated value of $t-$ statistics is +8.605 which is greater than the t tabulated at $5 \%$ level significance for two tails at 8 degree of freedom ( $\mathrm{t}-\mathrm{tab}=2.306$ ). In this condition ( $\mathrm{t}-\mathrm{cal}$. > t tab.), null hypothesis ( H 0 ) is rejected and alternative hypothesis ( H 1 ) is accepted. It means that the calculated correlation (between interest income and non-interest income) is statistically significant/strong. So in this case the magnitude of correlation coefficient is significant- interest income is one of the strongest as well as important factors that shape the non-interest income i.e., movements in interest income affect the movements in non- income in similar direction significantly. In conclusion, the relationship between interest income and non-interest income is practically applicable for sample banks according to the theory.

Table 4.22
Findings

| Findin gs Objectives | Basis of comparison (during ten fiscal year study period) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Seven sample banks (ten FY average) |  |  |  |  |  | $\begin{aligned} & \hline \begin{array}{l} \text { Single } \\ \text { average }) \end{array} \end{aligned} \text { bank } \text { (ten FY }$ |  |  |
|  | Ten year average | Growth in FY | > Ten year averag <br> e | < Ten year averag e | Correl ation analysi s | Significanc e or, not significanc e | Ratio analysis |  |  |
|  |  |  |  |  |  |  | bank | Ratio | $\begin{aligned} & \text { Rati } \\ & \text { o \% } \end{aligned}$ |
| 1. <br> Contribution <br> of <br> Interest <br> income on <br> total <br> Profit/income | $\begin{aligned} & \text { INT / NI } \\ & \text { ratio=262 } \\ & \% \end{aligned}$ | 3FY | 7FY | 3FY | INT \& |  | EBL | INT /T I | 83.4 |
|  |  |  |  |  |  |  | HBL | INT /T I |  |
|  |  |  |  |  |  |  |  |  | 81.9 |
|  |  |  |  |  | 0.91 | positive | BOK | INT /T I | \% |
|  |  |  |  |  |  |  | NAB | INT /T I | 78.2 |
|  |  |  |  |  | $\mathrm{r}^{2}$ : |  |  | INT /T I | \% |
|  |  |  |  |  | 82.81 | highly | NIBL | INT /T I | 76.9 |
|  |  |  |  |  |  | dependent | SCB |  | \% |
|  |  |  |  |  |  |  | NL | INT /T I | 80.4 |
|  |  |  |  |  | $\begin{aligned} & \text { P.E: } \\ & 0.037 \end{aligned}$ | significant | NIC |  | \% |
|  |  |  |  |  |  |  |  |  | 70.4 |
|  |  |  |  |  | Cal-t: <br> 6.208 | significant |  |  | \% |


|  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| 3. <br> comparative <br> Contribution <br> of interest <br>  <br> non- interest <br> income on <br> total <br> profit/income | a. (INT / <br> NI <br> ratio $=262$ <br> \% <br> NONINT/ <br> NI <br> ratio=70\% <br> ) <br> b. (INT /T <br> I <br> ratio $=78.5$ <br> \% <br> NONINT <br> / T I <br> ratio $=21.5$ <br> \%) <br> c. <br> NONINT/ <br> INT ratio= <br> 26.74\% | $\begin{aligned} & \text { INT=5F } \\ & \text { Y } \\ & \quad> \\ & \text { NONIN } \\ & \text { T=4FY } \end{aligned}$ | $\begin{aligned} & \text { INT= } \\ & 5 \mathrm{FY} \\ & = \\ & \text { NONI } \\ & \text { NT=5 } \\ & \text { FY } \end{aligned}$ | $\begin{array}{\|l} \ell \\ \mathrm{I}=5 \mathrm{FY} \\ > \\ \text { № } \\ \mathrm{i}=4 \mathrm{FY} \end{array}$ | INT \& NONI NT r: 0.95 $\mathrm{r}^{2}$ 90.25 \% P.E: <br> 0.021 <br> Cal-t: <br> 8.605 | highly positive <br> highly dependent <br> significant <br> significant | $\begin{aligned} & \text { EBL } \\ & \text { HBL } \\ & \text { BOK } \\ & \text { NAB } \\ & \text { L } \\ & \text { NIBL } \\ & \text { SCB } \\ & \text { NL } \\ & \text { NIC } \end{aligned}$ | NONINT / INT <br> NONINT / INT <br> NONINT / INT <br> NONINT / INT <br> NONINT / INT <br> NONINT / INT <br> NONINT / INT | $\begin{aligned} & 19.0 \\ & 6 \% \\ & 22.4 \\ & 9 \% \\ & 30.8 \\ & 6 \% \\ & 29.0 \\ & 3 \% \\ & 21.7 \\ & 8 \% \\ & 42.0 \\ & 6 \% \\ & 14.7 \\ & 5 \% \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4.Relationship | Subjective j | gment: |  |  |  |  |  |  |  |


| between two major sources of incomeinterest income \& non interest income- \& customers sensitiveness upon them. | On the basis of the outcomes from various mathematical tools and statistical tools used in this study, it can be said that both interest and non interest income have played vital role in increasing Nepalese commercial banks. Growth rate of these income sources during ten fiscal year study period has shown that Nepalese commercial banks customer is sensitive towards the interest and $n$ non interest income as they have been ready to pay extra commission and fees to their banks against the modern banking facilities. Banks have generated more non interest income for more modern banking facilities they provide to their customers, even they have been succeed to provide loan and advances at higher rate by the help of these hi fi banking technology. The very highly positive degree of coefficient of correlation has also proved that both income sources are dependent upon each other to generate total income. |
| :---: | :---: |
| 5.Compositio <br> n of non interest income(ten FY average) | This study has also found that commission \& discount, exchange income and other operating income are major sources of non interest for Nepalese commercial banks. Non operating income is one the sources of non interest income, but it has very lesser contribution than remaining other three sources. Out of total non interest $42 \%$ Is generated from commission and discounts, $41.9 \%$ from exchange income, $13.7 \%$ from other operating income and remaining $2.3 \%$ from non operating income. Here commission \& discount and exchange income have highest and almost equal shares upon total non interest income, other operating income have third and medium shares and non -operating has lowest shares upon total non interest income. From this it can be concluded that commission \& discount and exchange income are most significant sources of non interest income of Nepalese commercial banks. |

The major objective of this study is to find out truth of major sources of total income of Nepalese commercial banks. Keeping this fact in major priority list, this study is mainly focused on four objectives. First objective is to find the Contribution of interest income on total profit/income. Similarly second objective is to find the Contribution of non- interest income on total profit/income. Likewise third
objective is to explore the comparative Contribution of interest income \& non- interest income on total profit (in terms of volume \& stability). And finally fourth and final objective is to find the Relationship between two major sources of income- interest income \& non interest income.

After completing chapter iv- presentation and analysis of relevant data of sample banks under study using various analytical tools (mathematical \& statistical) four findings for the four research objectives are obtained. They are:
$>$ The analysis of contribution of interest income upon total profit/income shows that in practically interest contributes upon total income as almost all ratios and statistical tools used in this study has shown that there is high and positive relationship between interest income and total income.
$>$ This study has also found that in most of the fiscal years- during the study period- non interest income has contributed total income significantly. This means there is the significant contribution of non interest income upon total income of Nepalese commercial banks.
$>$ Another important finding of this study is about the joint/comparative contribution of both interest income and non interest income upon total income of Nepalese commercial banks. According to this finding both interests income and non interest income are highly correlated with each other's while generating total income. Their movements have shown that in income generating process they contribute together-whatever the quantity of income- according to their capacity nature.
$>\quad$ The fourth and last finding of this thesis study is the relationship between non interest income and interest income and their joint effect on customers of these commercial banks. This shows that both interest and non interest income have been growing during this ten FY study period and almost all ratios and all statistical tools used in the study is in favor of close relationship between these two incomes. And it can be said that Nepalese banking customer is not against of the non interest income that their banks collect from them.

The growing trend of non interest income of Nepalese commercial banks proves this. Traditionally only interest income used to generate total income for Nepalese commercial banks, but in this modern time both interest income and non interest income have been playing vital role in generating total income for Nepalese commercial banks.

## CHAPTER -V

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is last part of the research study which includes overall materials, in short, of all previous chapters. When a study is completed, it is necessary to summarize and conclude in specific form, as it is an import issue in research. This chapter consists of summary, conclusion and recommendation. Summary part of this chapter summarizes the all previous four chapters. Conclusion part is result oriented part. This part reflects the truth of study whether the truth support study hypotheses or not, which is just based upon findings from research study. Whole research is summed up in this part. Recommendation part belongs to the usefulness of research to the concerned individuals and organizations. Here in this part suggestion and recommendation is made based upon research findings/output and experience of thesis. This part is important for bringing awareness of concerned parties to improve present situation and providing basic updated guidelines regarding the study for further researcher so that further research study takes benefit of so far reliable \& updated ground, lower cost, time etc.

### 5.1 Summary

Nepal has adopted mixed and liberal economic policy. As a result of the liberal economic policy thrust adopted in the eighties, various multinational companies, finance companies and joint venture banks came into existence. This had given complete autonomy to banks and non banks in determining the interest rates and other commissions \&fees (interest rate deregulation). During that period banking was seen as a major industry to uplift/upgrade the economic conditions of other industries, general public. Therefore that campaign forced government to bring the policies which reduces almost all regulations upon financial institutions from its side. Banking in true sense of term started with the establishment of Nepal bank ltd (commercial bank). On $30^{\text {th }}$ kartik, 1994 B.S. It was established 128 years
after the establishment of first commercial bank in India. So far in Nepalese banking industry 28 commercial banks are operating, and Mega bank is the youngest commercial bank which started its operation from 2067/06/01 B.S.

There was full discretion to NRB in determining interest rate structure of banks and financial institution in the period of 1960 to 1975. The financial system reforms started after the liberalization of interest rates in 1984 when commercial banks were given autonomy to fix interest rates over and above the central banks rates by 1.5 percentage points on saving and 1 percentage point on term deposits. The financial institutions got freedom in fixing their interest rates in their deposit and loans in 1986. However, there was limitation imposed on certain sectors of lending such as the rates of maximization of 15 percent on the priority sectors loan and for the other kinds of loans financial institutions were given freedom to maintain the interest rate structure. Commercial banks were obliged to publish their interest rates and variations were permitted only to the extent of 1 percent on deposit and 2 percent in the lending rates between borrowers for the same purpose. in 2002 and now the interest rate spread required to be maintained by commercial banks and financial institutions has also been removed.

In Nepal banking industry has become one of the most developed industries on the basis of their numbers, profit \& tax, modern banking facilities and their access to the rural areas, and the employment opportunities with impressive salary \& incentives to general people. This large number of banks representation in the industry has shown that this industry has potential opportunities.

Most of the Nepalese commercial banks in industry are operating with big profit comparing to their investment. They are increasing their income, but how they generate this income \& what are the major sources of their income has become the major intention/interest of this study. It is very simple to find the income of commercial banks, they are- interest income and non interest income. In this study it has been tried to find the contribution of interest income and non interest income on total profitability/income. Traditionally the function of commercial bank was only to provide loan and accept deposit for which it had to take interest on loan and give interest on deposit. Only income interest income was source of total income of banks at that time. But now a day condition is very different. The financial
liberalization has changed the behavior of the commercial banks in almost all countries including also Nepal. Banks have been increasingly diversifying into non-interest income activities as against traditional banking to have more stable source of income. By the help of modern banking software's, high speed internet facilities and new banking concept and practices- being basis for generating non interest income from customer as extra facilities- banks have been providing reliable and faster services to their customers and success to earn more non-interest income. They are providing any branch banking facilities (ABBS) for which there are tough competition between banks to extend their branches within entire nation to increase number of customer \& income too. Commissions and discounts of banks have been increasing from these activities, which also contributes their total income.
Likewise modern banking activities have been also increasing other operating incomes, foreign currency exchange income and some non operating incomes too. Banks income now a days is not limited upon only interest income as this used to be traditionally. But this doesn't mean that interest income has becoming lesser effective. This income has been also increasing but the difference is its share upon total income has been decreasing as non interest income has come in existence with significant contribution upon total income. Nowadays costumer- as their living standard \& business have also modernized- do not compare banks on the basis of interest schemes, they also see other modern banking facilities that the banks are providing to their customers. This type of demand and desire has been changing Nepalese banking industry from generating only interest income to generating interest income with non interest income too. Thinking this kind of changing trend in the industry, this study has been conducted whether non interest income has really significant contribution upon total income/profitability- along with interest income- for Nepalese commercial banks.

To explore the truth brief introduction about Nepalese economy- mainly banking sectors, interest income \& non interest income, statement of problem, objective of the study, significance of the study, limitation of the study, conceptual framework and organization of the study has prepared in the first chapter of this thesis study.

In second chapter, theoretical review as well as review of previous research has been made. Concept of interest income, factors affecting the difference in interest rates, components of interest income, concept of non interest income, components of non interest income, and so on are explained. Various related articles, journals have been review in order to reach achieve research objectives more accurately.

In third chapter, research methodology related subject matters have been made. Comparative research design has been used along with analytical \& descriptive research design. Seven commercial banks have taken as sample banks out of twenty eight commercial banks from Nepalese commercial banking industry. Mainly secondary data have been used for the study. Mathematical and statistical tools have been selected for analyzing data.

Lastly In fourth chapter, collected data have been presented in tabular and graphic form and analyzed using various ratios as mathematical tool and arithmetic mean, standard deviation, correlation analysis, coefficient determination, probable error, student t - test (hypotheses testing), so on as statistical tools.

### 5.2 Conclusion

From this study it is found that both interest income and non interest income have significant role in increasing Nepalese commercial banks total profit/ total income.

* Interest income shares upon net income over ten FY periods have reached to $262 \%$. Interest income has got growth for 3 FYs among ten. Among ten FYs seven FY's interest income shares upon net income is greater than ten FYs average shares. Highly positive
degree of coefficient of correlation has shown that there is a very close and positive degree relationship between interest income and net income and its reliability has been proved by $\mathrm{r}, \mathrm{r}^{2}$, P.E and t-cal.
* It can be also concluded that each of the sample banks have got very high contribution of interest income upon total income over the ten FY study period. For NIC, EBL, HBL and NIBL this contribution is more (all above 80\%) than remaining sample banks. Among them NIC \& SCBNL total income consists of highest $(87 \%)$ \& lowest ( $70.4 \%$ ) shares of interest income as compared to other five banks over ten years study period respectively.
* Another conclusion of this study is about non interest income. The contribution of non interest income also seems quite significant for Nepalese commercial banks. This income has contributed $70 \%$ resources to net income. During ten FY study period it has succeed to grow its shares for four FY, and out of ten FY its shares has remained more for four FY than its ten FY average shares (two FY shares has remained equal to fen FY average) upon net income of sample banks. The significant relationship between non interest income and net income has been also proved statistically as $r$, $r^{2}$, P.E and Cal-t has given highly positive result regarding this relationship. So, this growth \& volume of non interest income upon net income over ten FY study period has proved that for Nepalese commercial banks this type of income is very significant for their income generating process.
* For each sample banks of this study non interest income has also played vital role like average sample banks. SCBNL non interest income has got highest (29.6) contribution upon its total income, whereas NIC has lowest (13\%) than others during ten FY period. NABL, BOK, NIBL, HBL \& EBL have got $23.1 \%, 21.8 \%, 19.6 \%, 18.1 \% \& 16.6 \%$ contribution of non interest income upon total income during ten FY period respectively. It can be concluded that among seven sample banks SCBNL, NABL, BOK, and NIBL banks have been highly contributed by non interest income for their total income generation process.
* Next important conclusion of this study is about comparative contribution of interest income and non interest income upon net income of seven sample banks during ten FYs study period. It can be said that obviously interest income is more significant for banks as
it is the major source of income- non interest income is secondary source. On the basis of study it can be conclude that interest income has $262 \%$ contribution upon net income, whereas non interest has only $70 \%$. Out of ten FY study period interest income has succeed to grow for 5 fy this is four FY in case of non interest income, taking net income as base. But if we see average growth in terms of stability both are same in this matter as both income stream have five FY out of ten on which their shares upon net income is more than their ten FY average shares upon net income. Statistical analysis has also shown that there is very close relationship between interest income $\&$ non interest income as $\mathrm{r}, \mathrm{r}^{2}$, P.E and Cal-t has given highly positive result regarding this relationship. At last it is concluded that for Nepalese commercial banks interest income is more important on the basis of absolute \& relative measurement than non interest income. But, that doesn't mean that non interest income is not important. Non interest income has also very significant contribution (stability \& growing) source upon total income, but it comes after interest income ( $21.5 \%<78.5 \%$, or, non interest income is only $26.74 \%$ of interest income) in terms of volume. Study (statistical analysis) has also found that interest income and non interest income are not each other's competitors; rather they have got close and positive relationship.
* For each of sample non interest income has supported interest income in the process of increasing total income. The shares of non interest income upon interest income for SCBNL are highest, which is lowest for NIC during ten FY study period than others. It can be concluded that SCBNL, BOK, NABL non interest income is very close with their interest income. On total income of these banks, non interest income's share is more than remaining other four banks.
* As we know that both interest and non interest income are important to increase total profit/income of banks, it can be said that they both are significant for generation banks income. There is not any doubt that interest income plays vital role in increasing banks total income, as it has got most of the shares in total income and one more thing is interest falls under core banking activities. We cannot separate income from bank. But in modern days banking due to the availability of hi fi modern technology and revolutionary banking concepts/practices, banks have been succeed to generate other income for increasing their total income except interest- known as non interest income. This study has shown the significant growth of this type of income for almost all sample banks during ten fiscal years
study period. This is the message to every Nepalese commercial banks that diversification of banking activities can create more incomes for them. Engaging only with traditional banking activities has no more future in this high competitive market. Only interest factors do not increasing business. Business depends upon the demand of customer. Modern customers do not only see lower interest rate, they also see the extra banking facilities of the banks. in practice it can be also seen that customer becomes ready pay higher interest rate for getting extra banking facilities. This also proves that this kind of diversification is not only favorable to generate non interest income, even it is important for increasing interest income too.

Neither interest income nor non interest income, both interest and non interest income can provide better profit for Nepalese commercial banks. it is very good to see that actually Nepalese commercial banking industry has brought revolutionary change- traditional banking to modern banking, like the banking of developed nation- in spite of being the industry of developing nation.

### 5.3 Recommendation

Base on the above conclusion some suggestions can be recommended to related banks and concerned parties. And it is concerned that this research will be fruitful for concerned banks, bankers, academicians and future researchers to improve the present condition as well as further research. So, based on the study findings and made conclusion, certain major recommendation of the study are:

4 Contribution of interest income on total income/profit/net income of Nepalese commercial banks is very high and growing. These commercial banks are suggested to make their interest generating activities more effective in coming days. NIC, EBL, HBL and NIBL have better interest income growth so, they are suggested to continue their interest generating activities in coming says with more effort, whereas, SCBNL, NABL and BOK are suggested to bring new schemes regarding interest generating activities to increase their interest income with very high degree of growth as their interest income growth is lower than others.

4 Contribution of non interest income on total income/profit/net income of Nepalese commercial banks is also high and has growing trend. As study has shown that non interest income has significant contribution upon total income all Nepalese commercial banks are suggested to bring new banking concept and activities as per desire of now a day's customers to generate more and more non interest income along with interest income to increase their total income and profit. This study has shown that there is high and positive relationship between non interest income and net income, which proves that non interest income has been becoming one of the most important and reliable source of net income. As SCBNL, NABL and BOK have got higher degree contribution of non interest income upon total income, they are suggested to continue their present practices of generating non interest income more efficiently. For NIC, EBL, HBL and NIBL, suggestion from this study is to bring new concepts and practices so as to increase their non interest income share upon total profit as their non interest income growth during this study period has seen lesser than rest of others.

4 Interest income and non interest income relationship as per this study is very close and positive. When interest income has increased non interest income has also increased at that time, which tells that they are not each other's competitors. So Nepalese commercial banks are suggested to give equal priority to both income sources in coming days banking activities.

4 Modern banking activities have brought new sources of income for commercial banks in Nepal. Banks which have been diversified banking practices have succeeded to increase their total income. Nowadays customer's different types of desires and demand upon banking industry have increased drastically. They want very modern banking facilities and services, which make their profession and personal life comfortable and high standard of living, from banks, and they are also ready to pay for this. They are in side of modern banking practices in Nepal. So, it is suggested to Nepalese commercial banks for bringing new modern banking technology (by understanding their customers desire \& demand) to fulfill such customer's desire and generate higher total income.

4 At last all Nepalese commercial banks are suggested to increase their low cost deposit and qualitative investment. Here loan and advances are major sources of banks investment. If this loan \& advances increases automatically interest income increases- interest of
loan \& advances, which further increases non interest income- credit information charge/commission(CIC), commission while granting loan, loan renewable charge etc. qualitative investment increases both interest and non interest income. Low cost of deposit also increases (directly or indirectly) both interest and non interest income. Low cost deposit increases bank interest spread and investment too. It also increases non interest incomes- debit card charge, cheque book charge, renewal of debit card, ABBS, draft, balance certificate commission etc.

## APPENDICES

## APPENDIX

## Profile of Sample Banks (Data Based On Annual Report of 2008/09)

## Everest Bank Limited.

| 1. Established year | 1994 |
| :--- | :--- |
| 2. Life | 16 |
| 3. General reserve | 1364804055 |
| 4. Paid up capital | 838821000 |
| 5. Capital structure | Common stock, convertible preferred stock and debt |
| 6. Net profit | 638732757 |
| 7. Total assets | 36916848654 |
| 8. Branches | 37 |
| 9. Software | Finacle |

Himalayan Bank Limited.

| 1. Established year | 1993 , joint venture with Habib bank ltd Pakistan |
| :--- | :--- |
| 2. Life | 17 |
| 3. General reserve | 1903665537 |
| 4. Paid up capital | 1216215000 |
| 5. Net profit | 752834735 |
| 6. BOD members | Mr. Manoj Bahadur Shrestha(Chairman), Mr. Ashok Sjb. Rana <br> (CEO) |
| 7. Total assets | 39320322069 |
| 8. Branches | 33 |
| 9. Software | Globus |

Bank of Kathmandu Limited.

| 1. Established year | 1995 |
| :--- | :--- |
| 2. Life | 15 |
| 3. General reserve | 897192263 |
| 4. Paid up capital | 844397900 |
| 5. Net profit | 461334911 |
| 6. BOD members | Mr. Narendra Kumar Basnyat (Chairman), Mr. Ajay Shrestha <br> (CEO) |
| 7. Total assets | 20496005483 |
| 8. Branches | 38 |
| 9. Software | Finacle |

Nabil Bank Limited.

| 1. Established year | 1984 |
| :--- | :--- |
| 2. Life | 26 |
| 3. General reserve | 2164493637 |
| 4. Paid up capital | 965747000 |
| 5. Net profit | 1031053098 |
| 6. BOD members | Mr. Statyendra Pyara Shrestha (Chairman), Mr. Amrit Charan <br> Shrestha (Officiating CEO) |
| 7. Total assets | 43687397504 |
| 8. Branches | 43 |
| 9. Software | Finacle |

## Investment Bank Limited.

| 1. Established year | 1986 |
| :--- | :--- |
| 2. Life | 24 |
| 3. General reserve | 1500770808 |
| 4. Paid up capital | 2407068900 |
| 5. Net profit | 900619072 |
| 6. BOD members | Mr. Prithivi B Pande (Chairman \& Chief Executive Director), <br> Jyoti Prakash Pandey (GM) |
| 7. Total assets | 53010803126 |
| 8. Branches | 40 |
| 9. Software | Finacle |

## Standard Chartered Bank Limited.

1. Established year

1987

| 2. Life | 23 |
| :--- | :--- |
| 3. General reserve | 2120503331 |
| 4. Paid up capital | 931966400 |
| 5. Net profit | 1025114536 |
| 6. BOD members | Mr. Neeraj Sharoop (Chairman), Mr. Sujit Mundul (CEO) |
| 7. Branches | 13 |
| 8. Total assets | 40587468009 |

Nepal Credit and Commercial Bank Limited.

| 1. | Established year | 1998 |
| :--- | :--- | :--- |
| 2. | Life | 12 |
| 3. | General reserve | 519773799 |
| 4. | Paid up capital | 1140480000 |
| 5. | Net profit | 317434138 |
| 6. | BOD members | Jagadish Prasad Agrawal (Chairman), Sashin Joshi (CEO) |
| 7. | Branches | 26 |
| 8. | Software | Pumari |

## 1. SELF COMPARED EBL

| Year | Commission <br> \&discount | Other operating <br> income | Exchange <br> gain/loss | Non operating <br> income | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 25900227 | 28936712 | 3495589 | 1465422 | 59797950 |
| $2000 / 01$ | 30556932 | 32043021 | 16501724 | 1395033 | 80496710 |
| $2001 / 02$ | 36772876 | 13782812 | 45413926 | 1140618 | 97110232 |
| $2002 / 03$ | 61503871 | 20198007 | 32207956 | 1249046 | 115158880 |
| $2003 / 04$ | 74331079 | 23817848 | 27793563 | 1867192 | 127809682 |
| $2004 / 05$ | 78130046 | 31479208 | 27077784 | 2974088 | 139661126 |
| $2005 / 06$ | 96839264 | 48902381 | 14397970 | 2959467 | 163099082 |
| $2006 / 07$ | 117718162 | 67967525 | 28404544 | 1315211 | 215405442 |
| $2007 / 08$ | 150264074 | 79133767 | 64452378 | 4519287 | 298369506 |
| $2008 / 09$ | 202094446 | 106403694 | 62526819 | 5005256 | 376030215 |
| average | 87411097.7 | 45266497.5 | 32227225.3 | 2389062 | 167293882.5 |

## 2. SELF COMPARED HBL

| Year | Commission <br> \&discount | Other operating <br> income | Exchange <br> gain/loss | Non operating <br> income | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 110330189 | 9685119 | 87326958 | 1694909 | 209037175 |
| $2000 / 01$ | 125974697 | 6354446 | 114216836 | 2324989 | 248870968 |
| $2001 / 02$ | 101704124 | 32037501 | 104601011 | 2450921 | 240793557 |
| $2002 / 03$ | 102560741 | 30153519 | 109599294 | 10759557 | 253073111 |
| $2003 / 04$ | 123928995 | 34076151 | 112419406 | 3299067 | 273723619 |
| $2004 / 05$ | 132815882 | 41300617 | 137300987 | 2794642 | 314212128 |
| $2005 / 06$ | 165447872 | 52324749 | 198130134 | 1887070 | 417789825 |
| $2006 / 07$ | 193224228 | 40328872 | 151637322 | 3493278 | 388683700 |
| $2007 / 08$ | 202888358 | 62103241 | 192600803 | 9700477 | 467292879 |
| $2008 / 09$ | 284302277 | 46342872 | 249982606 | 3810145 | 584437900 |
| average | 154317736.3 | 35470708.7 | 145781535.7 |  | 4221505.5 | 3339791486.28.

3. SELF COMPARED BOK

| Year | Commission <br> \&discount | Other <br> operating <br> income | Exchange <br> gain/loss | Non <br> operating <br> income | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 30474945.45 | 1110035.15 | 38664332.74 | 113675 | 70362988.34 |
| $2000 / 01$ | 46222166 | 626450 | 63058322 |  | 109906938 |
| $2001 / 02$ | 47871798 | 740047 | 48646049 | 929602 | 98187496 |
| $2002 / 03$ | 60745881 | 11236710 | 67443873 | 23053 | 139449517 |
| $2003 / 04$ | 77707811 | 1966448 | 64046314 | 15459800 | 159180373 |


| $2004 / 05$ | 72351675 | 4467286 | 72114868 | 49496 | 148983325 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 06$ | 70776158 | 16967545 | 78955495 | 1090139 | 167789337 |
| $2006 / 07$ | 479822936 | 97431129 | 80826013 |  | 658080078 |
| $2007 / 08$ | 129415582 | 23167724 | 93765039 | 810748 | 247159093 |
| $2008 / 09$ | 150919291 | 43222093 | 136036316 |  | 330177700 |
| average | 116630824.3 | 20093546.72 | 74355662.17 | 1847651.3 | 212927684.5 |

## 4. SELF COMPARED NABL

| Year | Commission \&discount | Other operating income | Exchange gain/loss | Non operating income | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1999/2000 | 139586477 | 310781 |  |  | 139897258 |
| 2000/01 | 97144244 | 14978762 | 159514025 | 1909191 | 273546222 |
| 2001/02 | 114336964 | 250374804 | 154219398 |  | 518931166 |
| 2002/03 | 144405701 | 34150842 | 144075171 | 86946330 | 409578044 |
| 2003/04 | 135958435 | 38754927 | 157324299 | 92780639 | 424818300 |
| 2004/05 | 128883480 | 55933830 | 184878868 | 72241283 | 441937461 |
| 2005/06 | 138293913 | 82897862 | 185483662 | 735324 | 407410761 |
| 2006/07 | 150608550 | 87574553 | 209926167 | 5280641 | 453389911 |
| 2007/08 | 156234754 | 97444578 | 196487415 | 24083737 | 474250484 |
| 2008/09 | 179693027 | 144164143 | 251919712 | 2190102 | 577966984 |

## 5. SELF COMPARED NIBL

| Year | Commission |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \&discount | Other operating <br> income | Exchange <br> gain/loss | Non operating <br> income | Total |  |
| $1999 / 2000$ | 18351281 | 7237858 | 44799860 | 112825 | 70501824 |
| $2000 / 01$ | 16204123 | 5798785 | 49834718 |  | 71837626 |
| $2001 / 02$ | 16197893 | 30403674 | 42856394 | 3104451 | 92562412 |
| $2002 / 03$ | 40811770 | 26288349 | 87980293 | 487617 | 1555568029 |
| $2003 / 04$ | 55747480 | 36815524 | 87980293 | 1767632 | 182310929 |
| $2004 / 05$ | 93550933 | 56567142 | 102517923 | 6192496 | 258828494 |
| $2005 / 06$ | 115942016 | 35902340 | 125747407 | 390742 | 277982505 |
| $2006 / 07$ | 163899110 | 47318720 | 135355345 | 1426134 | 347999309 |
| $2007 / 08$ | 215292193 | 66376659 | 165838748 | 7047735 | 454555335 |
| $2008 / 09$ | 262791664 | 87574794 | 185327111 | 2953012 | 538646581 |
| average | 99878846.3 | 40028384.5 | 102823809.2 | 2348264.4 | 245079304.4 |

6. SELF COMPARED SCBNL

| Year | Commission <br> \&discount | Other operating <br> income | Exchange <br> gain/loss | Non operating <br> income | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 154337915 | 3138504 | 157082285 | 5879040 | 320437744 |
| $2000 / 01$ | 179462952 | 3017761 | 214860838 | 10976650 | 408318201 |
| $2001 / 02$ | 163463248 | 41615584 | 228100302 |  | 433179134 |


| $2002 / 03$ | 215200938 | 55479840 | 232522033 |  | 503202811 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2003 / 04$ | 198947574 | 69834726 | 273050040 |  | 541832340 |
| $2004 / 05$ | 184830433 | 62944549 | 266864869 | 2957005 | 517596856 |
| $2005 / 06$ | 222928812 | 25442174 | 283471852 | 1432691 | 533275529 |
| $2006 / 07$ | 221207433 | 28784880 | 309086504 | 9492080 | 568570897 |
| $2007 / 08$ | 276432255 | 32594085 | 345653020 | 1682509 | 656361869 |
| $2008 / 09$ | 235468846 | 33191251 | 480030913 | 22098317 | 770789327 |
| average | 205228040.6 | 35604335.4 | 279072265.6 | 5451829.2 | 525356470.8 |

## 7. SELF COMPARED NIC

| Year | Commission <br> \&discount | Other operating <br> income | Exchange <br> gain/loss | Non operating <br> income | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 19440332 |  | 13232228 | 415 | 32672975 |
| $2000 / 01$ | 2629977658 |  | 23668788.21 | 330 | 2653646776 |
| $2001 / 02$ | 18563400 | 2096473 | 18831214 |  | 39491087 |
| $2002 / 03$ | 21965581 | 2475748 | 12182842 |  | 36624171 |
| $2003 / 04$ | 27236000 | 5561412 | 20832347 | 40432 | 53670191 |
| $2004 / 05$ | 27101792 | 9180305 | 24605930 | 284887 | 61172914 |
| $2005 / 06$ | 29447261 | 20242413 | 25387941 | 59335 | 75136950 |
| $2006 / 07$ | 36017034 | 26174612 | 44276889 | 409114 | 106877649 |
| $2007 / 08$ | 43373395 | 37905045 | 39657785 | 10649150 | 131585375 |
| $2008 / 09$ | 61895316 | 44028178 | 97673440 | 2489084 | 206086018 |
| average | 291501776.9 | 14766418.6 | 32034940.42 | 1393274.7 | 339696410.6 |

i. Composition of Non Interest Income

## Commission \& Discount

| year | EBL | HBL | BOK | NABL | NIBL | SCBNL | NIC | TOTAL | AVERAGE |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1999 / 2000$ | 2590027 | 110330189 | 30474945.45 | 139586477 | 18351281 | 154337915 | 19440332 | 498421366.5 | 71203052.35 |
| $2000 / 01$ | 30556932 | 125974697 | 46222166 | 97144244 | 16204123 | 179462952 | 26299776.58 | 521864890.6 | 74552127.23 |
| $2001 / 02$ | 36772876 | 101704124 | 47871798 | 114336964 | 16197893 | 163463248 | 18563400 | 498910303 | 71272900.43 |
| $2002 / 03$ | 61503871 | 102560741 | 60745881 | 144405701 | 40811770 | 215200938 | 21965581 | 647194483 | 92456354.71 |
| $2003 / 04$ | 74331079 | 123928995 | 77707811 | 135958435 | 55747480 | 198947574 | 27236000 | 693857374 | 99122482 |


| $2004 / 05$ | 78130046 | 132815882 | 72351675 | 128883480 | 93550933 | 184830433 | 27101792 | 717664241 | 102523463 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2005 / 06$ | 96839264 | 165447872 | 70776158 | 138293913 | 115942016 | 222928812 | 29447261 | 839675296 | 119953613.7 |
| $2006 / 07$ | 117718162 | 193224228 | 479822936 | 150608550 | 163899110 | 221207433 | 36017034 | 1362497453 | 194642493.3 |
| $2007 / 08$ | 150264074 | 202888358 | 129415582 | 156234754 | 215292193 | 276432255 | 43373395 | 1173900611 | 167700087.3 |
| $2008 / 09$ | 202094446 | 284302277 | 150919291 | 179693027 | 262791664 | 235468846 | 61895316 | 1377164867 | 196737838.1 |
| average | 87411097.7 | 154317736.3 | 116630824.3 | 138514554.5 | 99878846.3 | 205228040.6 | 31133988.76 | 833115088.5 | 119016441.2 |

## Other Operating

| year | EBL | HBL | BOK | NABL | NIBL | SCBNL | NIC | TOTAL | AVERAGE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1999/2000 | 28936712 | 9685119 | 1110035.15 | 310781 | 7237858 | 3138504 |  | 50419009.15 | 7202715.593 |
| 2000/01 | 32043021 | 6354446 | 626450 | 14978762 | 5798785 | 3017761 |  | 62819225 | 8974175 |
| 2001/02 | 13782812 | 32037501 | 740047 | 250374804 | 30403674 | 41615584 | 2096473 | 371050895 | 53007270.71 |
| 2002/03 | 20198007 | 30153519 | 11236710 | 34150842 | 26288349 | 55479840 | 2475748 | 179983015 | 25711859.29 |
| 2003/04 | 23817848 | 34076151 | 1966448 | 38754927 | 36815524 | 69834726 | 5561412 | 210827036 | 30118148 |
| 2004/05 | 31479208 | 41300617 | 4467286 | 55933830 | 56567142 | 62944549 | 9180305 | 261872937 | 37410419.57 |
| 2005/06 | 48902381 | 52324749 | 16967545 | 82897862 | 35902340 | 25442174 | 20242413 | 282679464 | 40382780.57 |
| 2006/07 | 67967525 | 40328872 | 97431129 | 87574553 | 47318720 | 28784880 | 26174612 | 395580291 | 56511470.14 |
| 2007/08 | 79133767 | 62103241 | 23167724 | 97444578 | 66376659 | 32594085 | 37905045 | 398725099 | 56960728.43 |
| 2008/09 | 106403694 | 46342872 | 43222093 | 144164143 | 87574794 | 33191251 | 44028178 | 504927025 | 72132432.14 |
| average | 45266497.5 | 35470708.7 | 20093546.72 | 80658508.2 | 40028384.5 | 35604335.4 | 14766418.6 | 271888399.6 | 38841199.95 |

## Exchange Income

|  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Non Operating Income

| ar | EBL | HBL | BOK | NABL | NIBL | SCBNL | NIC | TOTAL | AVERAG |
| :--- | :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | :--- | :--- |
| $99 / 2000$ | 1465422 | 1694909 | 113675 |  | 112825 | 5879040 | 415 | 9266286 | 1323755.1 |
| $00 / 01$ | 1395033 | 2324989 |  | 1909191 |  | 10976650 | 330 | 16606193 | 2372313.2 |
| $01 / 02$ | 1140618 | 2450921 | 929602 |  | 3104451 |  |  | 7625592 | 1089370.2 |
| $22 / 03$ | 1249046 | 10759557 | 23053 | 86946330 | 487617 |  |  | 99465603 | 14209371. |
| $03 / 04$ | 1867192 | 3299067 | 15459800 | 92780639 | 1767632 |  | 40432 | 115214762 | 16459251. |
| $04 / 05$ | 2974088 | 2794642 | 49496 | 72241283 | 6192496 | 2957005 | 284887 | 87493897 | 12499128. |
| $05 / 06$ | 2959467 | 1887070 | 1090139 | 735324 | 390742 | 1432691 | 59335 | 8554768 | 1222109.7 |
| $06 / 07$ | 1315211 | 3493278 |  | 5280641 | 1426134 | 9492080 | 409114 | 21416458 | 30594 |
| $07 / 08$ | 4519287 | 9700477 | 810748 | 24083737 | 7047735 | 1682509 | 10649150 | 58493643 | 8356234.7 |
| $08 / 09$ | 5005256 | 3810145 |  | 2190102 | 2953012 | 22098317 | 2489084 | 38545916 | 5506559.4 |
| erage | 2389062 | 4221505.5 | 1847651.3 | 28616724.7 | 2348264.4 | 5451829.2 | 1393274.7 | 46268311.8 | 6609758.8 |

Relative Form

| mmission discount | Other operating income | Exchange income | Non operating income | Total | Commission and discount ratio | Other operating income. ratio | Exchange income .ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 203052.35 | 7202715.593 | 49228750.39 | 1323755.143 | 128958273.5 | 0.552 | 0.056 | 0.382 |
| 552127.23 | 8974175 | 91665035.89 | 2372313.286 | 177563651.4 | 0.420 | 0.051 | 0.516 |
| 272900.43 | 53007270.71 | 91809756.29 | 1089370.286 | 217179297.7 | 0.328 | 0.244 | 0.423 |
| 456354.71 | 25711859.29 | 98001637.43 | 14209371.86 | 230379223.3 | 0.401 | 0.112 | 0.425 |
| 9122482 | 30118148 | 106206608.9 | 16459251.71 | 251906490.6 | 0.393 | 0.120 | 0.422 |
| 2523463 | 37410419.57 | 116480175.6 | 12499128.14 | 268913186.3 | 0.381 | 0.139 | 0.433 |
| 9953613.7 | 40382780.57 | 130224923 | 1222109.714 | 291783427 | 0.411 | 0.138 | 0.446 |
| 4642493.3 | 56511470.14 | 137073254.9 | 3059494 | 391286712.3 | 0.497 | 0.144 | 0.350 |
| 7700087.3 | 56960728.43 | 156922169.7 | 8356234.714 | 389939220.1 | 0.430 | 0.146 | 0.402 |
| 5737838.1 | 72132432.14 | 209070988.1 | 5506559.429 | 483447817.9 | 0.407 | 0.149 | 0.432 |
| 9016441.2 | 38841199.95 | 118668330 | 6609758.829 | 283135730 | 0.420 | 0.137 | 0.419 |

## Correlation Coefficient between Interest Income and Net Income(Actual mean method)

Rupees in million

|  | $\begin{gathered} \text { Interest } \\ \text { income(X) } \end{gathered}$ | $\begin{gathered} \text { Net } \\ \text { income }(\mathbf{Y}) \end{gathered}$ | $\mathbf{x}=\mathbf{X}-\mathbf{X}$ | $\mathbf{Y}=\mathbf{Y}-\mathbf{Y}$ | xy | $\mathbf{x}^{2}$ | $\mathbf{y}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 000 | 601.056 | 161.424 | -457.64 | -243.07 | 111235.64 | 209430.80 | 59080.9 |
| 01 | 761.432 | 355.931 | -297.26 | -48.56 | 14434.53 | 88363.57 | 2357.94 |
| 02 | 689.132 | 358.842 | -369.56 | -45.65 | 16869.68 | 136574.67 | 2083.74 |
| 03 | 712.586 | 418.099 | -346.11 | 13.61 | -4710.15 | 119789.43 | 185.20 |
| 04 | 801.210 | 358.454 | -257.48 | -46.04 | 11853.39 | 66297.03 | 2119.29 |
| 05 | 892.099 | 288.908 | -166.59 | -115.58 | 19255.18 | 27753.26 | 13359.2 |
| 06 | 1071.476 | 376.905 | 12.78 | -27.59 | -352.65 | 163.43 | 760.96 |
| 07 | 1292.792 | 439.446 | 234.10 | 34.96 | 8183.16 | 54802.76 | 1221.91 |
| 08 | 1606.004 | 554.465 | 547.31 | 149.97 | 82083.05 | 299550.32 | 22492.4 |
| 99 | 2159.134 | 732.446 | 1100.44 | 327.96 | 360896.72 | 1210972.38 | 107555.2 |
|  | $\begin{gathered} \Sigma \mathrm{X}= \\ 10586.921 \end{gathered}$ | $\begin{gathered} \sum \mathrm{Y}= \\ 4044.920 \end{gathered}$ |  |  | $\begin{gathered} \sum \mathrm{X} \sum \mathrm{Y}= \\ 619748.55 \end{gathered}$ | $\begin{gathered} \Sigma \mathrm{X}^{2}= \\ 2213697.64 \end{gathered}$ | $\begin{array}{r} \sum \mathrm{Y}^{2}= \\ 211216.9 \end{array}$ |

We have,

$$
\begin{array}{rl}
X= & \underline{\sum X}=\underline{10586.92} \\
n & 10 \\
& Y=\frac{\sum X}{}=\underline{4044.920}=404.49 \\
n & 10
\end{array}
$$

Karl Pearson's correlation coefficient is given by,

$$
\begin{aligned}
& \mathrm{r}= \sum \mathrm{x} \sum \mathrm{y} \\
& \sqrt{\sum \mathrm{x}^{2} \sqrt{ } \sum \mathrm{y}^{2}} \\
&=\quad \underline{\sqrt{619748.55}} \\
&=\quad 0.91
\end{aligned}
$$

Coefficient of Determinant

$$
(\mathrm{r})^{2}=(0.91)^{2} \quad=0.8281 \quad=82.81 \%
$$

Probable Error (PE)

$$
\begin{aligned}
\mathrm{PE} & =0.6745 \frac{1-\mathrm{r}^{2}}{V_{\mathrm{n}}} \\
& =0.037
\end{aligned}
$$

t-test for Significance of an Observed Sample Correlation Coefficient
Test statistic under Ho, the test statistic is

$$
\mathrm{t}=\mathrm{r}_{\sqrt{ }-\mathrm{r}^{2}} * \sqrt{\mathrm{n}-2}
$$

Follows t -distribution with ( $\mathrm{n}-2$ ) degree of freedom
Where,
$r=$ sample correlation coefficient
T calculated $=6.208$

Correlation Coefficient Between Non- Interest Income and Net Income (Actual mean method)

| Year | Non- <br> Interest <br> income(X) | Net <br> income(Y) | $\mathbf{x}=\mathbf{X}-$ <br> $\mathbf{X}$ | $\mathbf{Y = Y}$ <br> $\mathbf{Y}$ | $\mathbf{x y}$ | $\mathbf{x}^{\mathbf{2}}$ | $\mathbf{y}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1999 / 2000$ | 128.958 | 161.424 | - <br> 154.18 | - <br> 243.07 | 37475.24 | 23770.68 | 59080.93 |
| $2000 / 01$ | 177.564 | 355.931 | 105.57 | -48.56 | 5126.43 | 11145.46 | 2357.94 |
| $2001 / 02$ | 217.179 | 358.842 | -65.96 | -45.65 | 3010.78 | 4350.25 | 2083.74 |
| $2002 / 03$ | 230.379 | 418.099 | -52.76 | 13.61 | -717.96 | 2783.25 | 185.20 |
| $2003 / 04$ | 251.906 | 358.454 | -31.23 | -46.04 | 1437.66 | 975.26 | 2119.29 |
|  |  |  | -14.22 | - | 1643.87 | 202.28 | 13359.23 |
| $2004 / 05$ | 268.913 | 288.908 |  | 115.58 |  |  |  |
| $2005 / 06$ | 291.783 | 376.905 | 8.65 | -27.59 | -238.55 | 74.78 | 760.96 |
| $2006 / 07$ | 391.287 | 439.446 | 108.15 | 34.96 | 3780.51 | 11696.64 | 1221.91 |
| $2007 / 08$ | 389.939 | 554.465 | 106.80 | 149.97 | 16017.85 | 11406.99 | 22492.47 |
| $2008 / 09$ | 483.448 | 732.446 | 200.31 | 327.96 | 65693.60 | 40124.94 | 107555.25 |
| - | $\Sigma \mathrm{X}=$ | $\sum \mathrm{Y}=$ |  |  | $\sum \mathrm{x} \sum \mathrm{y}=$ | $\sum \mathrm{x}^{2}=$ | $\sum \mathrm{y}^{2}=$ |
| 2831.357 | 4044.920 |  |  | 133229.42 | 106530.534 | 211216.928 |  |

We have,

$$
\begin{array}{r}
\mathrm{X}=\quad \frac{\sum \mathrm{X}}{\mathrm{~N}}=\frac{2831.357}{10}=283.136 \\
\mathrm{Y}=\frac{\sum \mathrm{Y}}{\mathrm{~N}} \quad=\frac{4044.920}{10}=404.492
\end{array}
$$

Karl Pearson's correlation coefficient is given by,

$$
\begin{aligned}
r & =\frac{\sum \mathrm{x} \sum \mathrm{y}}{\sqrt{ } \sum \mathrm{x}^{2} \sqrt{ } \sum \mathrm{y}^{2}} \\
& =\frac{133229.42}{\sqrt{ } 106530.534 * \sqrt{ } 211216.928}=0.89
\end{aligned}
$$

Coefficient of Determination

$$
(\mathrm{r})^{2}=(0.89)^{2} \quad=0.7921=79.21 \%
$$

Probable Error (PE)
PE $\quad=0.67451-\mathrm{r}^{2} \quad V_{\mathrm{n}}=0.044$
t -test for Significance of an Observed Sample Correlation Coefficient
Test statistic under Ho, the test statistic is

$$
\mathrm{t}=\mathrm{r}_{\sqrt{1-\mathrm{r}^{2}}} * \sqrt{\mathrm{n}-2}
$$

Follows t -distribution with ( $\mathrm{n}-2$ ) degree of freedom
Where, $r=$ sample correlation coefficient
T calculated $=5.521$

Correlation Coefficient between Interest Income and Non-Interest Income(Actual
mean method)

| ar | Interest income(X) | Non-interest come(Y) | $\mathbf{x}=\mathbf{X}-\mathbf{X}$ | $\mathbf{Y}=\mathbf{Y}-\mathbf{Y}$ | $\mathbf{x y}$ | $\mathbf{x}^{2}$ | $\mathbf{y}^{\mathbf{2}}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $999 / 2000$ | 601.056 | 128.958 | -457.64 | -154.18 | 70557.24 | 209430.80 | 23770.7 |
| $2000 / 01$ | 761.432 | 177.564 | -297.26 | -105.57 | 31382.22 | 88363.57 | 11145.3 |
| $2001 / 02$ | 689.132 | 217.179 | -369.56 | -65.96 | 24374.93 | 136574.67 | 4350.2 |
| $2002 / 03$ | 712.586 | 230.379 | -346.11 | -52.76 | 18259.38 | 119789.43 | 2783.2 |
| $2003 / 04$ | 801.210 | 251.906 | -257.48 | -31.23 | 8041.06 | 66297.03 | 975.29 |
| $2004 / 05$ | 892.099 | 268.913 | -166.59 | -14.22 | 2369.39 | 27753.26 | 202.28 |
| $2005 / 06$ | 1071.476 | 291.783 | 12.78 | 8.65 | 110.55 | 163.43 | 74.78 |
| $2006 / 07$ | 1292.792 | 391.287 | 234.10 | 108.15 | 25318.23 | 54802.76 | 11696.7 |
| $2007 / 08$ | 1606.004 | 389.939 | 547.31 | 106.80 | 58454.77 | 299550.32 | 11406.9 |
| $2008 / 09$ | 2159.134 | 483.448 | 1100.44 | 200.31 | 220432.16 | 1210972.38 | 40125.0 |
| - | $\Sigma \mathrm{X}=$ | $\sum \mathrm{Y}=$ | 2831.35 |  |  | $\sum \mathrm{x} \sum \mathrm{y}=$ | $\sum \mathrm{x}^{2}=$ |
|  | 10586.92 |  |  |  | 459299.92 | 2213697.64 | 106530. |
|  |  |  |  |  |  |  |  |

We have,

$$
X=\frac{\sum X}{N}=\frac{10586.92}{10}=1058.69
$$

Karl Pearson's correlation coefficient is given by,

$$
\begin{aligned}
r & =\sum \mathrm{x} \sum \mathrm{y} \quad \sum \mathrm{x}^{2} \sqrt{ } \sum \mathrm{y}^{2} \\
& =\underline{459299.92}
\end{aligned}
$$

$$
\sqrt{2} 213697.64 * \sqrt{ } 106530.72
$$

$=\quad 459299.92$

$$
1487.85 * 326.390447=0.95
$$

Coefficient of Determinant

$$
(r)^{2}=(0.95)^{2} \quad=0.9025 \quad=90.25 \%
$$

Probable Error (PE)

$$
\begin{aligned}
\text { PE } & =0.6745 \frac{1-\mathrm{r}^{2}}{\sqrt{ } \mathrm{n}} \\
& =0.021
\end{aligned}
$$

t-test for Significance of an Observed Sample Correlation Coefficient

Test statistic under Ho, the test statistic is

$$
\mathrm{t}=\mathrm{r}_{\sqrt{1}-\mathrm{r}^{2}} * \sqrt{\mathrm{n}-2}
$$

Follows t-distribution with (n-2) degree of freedom
Where,
$r=$ sample correlation coefficient
T calculated $=8.605$

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[^0]:    Source: Sample banks annual report, FY: 1999/2000-2008/2009, EBL; HBL; BOK; NABL; NIBL; SCBNL \& NIC

