CHAPTER I

INTRODUCTION

Nepal is one of the landlocked and least developed countries of the world with per capita income of about USD 470 (2064/65 Economic report). One of the causes of pervasive poverty is the lack of economic resources for the growing population and slow rate of economic growth. The reason behind Nepal's underdeveloped economy is not only because of lack of resources but also due to improper utilization of available resources in efficient manner. For proper and efficient utilization of resources, it needs proper plan and strategy development and for plan, huge amount of capital investment is required. Integrated and speedy development of the country is possible only when competitive banking services reaches nooks and corners of the country.

Financial infrastructure of our economy consists of financial intermediation, financial institution and financial markets. Financial institutions lay an important foundation and play a role of catalyst in the progress of economic growth of the country. They help to promote economic growth through the process of saving mobilization and promotion of productive investment in the country. They play a major role in the proper functioning of the economy. These institutions act as an intermediary between the individuals who lend and borrow. They facilitate allocation of financial resources from its sources to potential users. Such institutions accept deposits and in turn, lend it to people who are in need of financial resources. They make flow of investment easier. There are large numbers of different types of financial institutions.

The present structure of financial institutions is based on the foundation laid by the commercial bank. Commercial banks are major financial institutions which occupy an important place in the framework of every economy because they provide capital for the development of industry, trade and business, and other resources for deficit

sectors by investing the saving collected as deposit. The role commercial banks in every nation of the world are in pursuit of attaining the goal of rapid economic development. Commercial banks are the heart of the financial system. They held the deposits of many persons, government establishment and business units. They make funds available through their lending and investing activities to borrowers, individuals, business firms and government unit. In doing so, they assist both the flow of goods and services form the producers to customers and the financial activities of the government. The ability of commercial bank to create credit and provide numerous banking services like deposit acceptance, overdraft facilities, market making, agency services, investment and general utility services is well appreciated by different sectors, that is why commercial bank prosper in all conditions.

1.1 Development of Banking System in Nepal

Simply, a bank is a financial organization with an aim to accumulate the idle money of the general public and advancing to their profit sector. In addition to taking deposits and making loans, bank has been granted legal "powers" to provide other financial services. The financial services that bank offer have changed over the years as new technologies have emerged (Gup & Kolari, 2005, p.6). Cash management services, consumers loans, debit and credit cards, e-banking, online banking, sms banking, foreign exchange, leasing and financing, insurance activities, real estate loan, home loan, mortgage loan, mutual funds etc. are some examples of expanded services that provided by commercial banks. Thus, banks today, have gained extensive importance in public.

The history of banking system in Nepal may be described as a component of the gradual and orderly evolution in the financial and economic sphere of the Nepalese life. In Nepal, goldsmiths and moneylenders known as "Sahu Mahajana" were the ancestors of bank. During the tenure of the Prime Minister Ronodip Singh around 1877 A.D. a number of economic and financial reforms were introduced. The established of the 'Tejarath Adda' was the outcome of that reform. In the overall development of the banking system in Nepal, the 'Tejarath Adda' may be regarded as the father of modern banking system. However, 'Kaushi Tosh Khana' established during the regime of King Prithvi Narayan Shah is also considered as the first step

towards initiating banking development in Nepal. The basic purpose of establishing the 'Tejarath Adda' was to provide credit facilities to the general public at a very concessional interest rate. The 'Tejarath Adda' disbursed credit to the people on the basis of collateral of gold and silver. However, it extended credit only but did not accepted deposits from the public. Hence, the Adda finally faced financial crisis making it impossible to meet the credit need of general population of the country.

Prior to the establishment of Nepal Bank Limited (NBL), people relied on the borrowing from the corrupt moneylenders, who charged very high interest rates and added other dues. These money lenders extended loans on the collateral of land, house and precious metals like gold & silver (Shrestha, 2007, p.3).

With the cooperation of Imperial Bank of India, NBL came into existence in 1937 A.D. under the Nepal Bank Act 1937. It was the first step of government for the development of banking sector. NBL used to carry out central banking functions also besides commercials banking functions until the establishment of Nepal Rastra Bank (NRB). In 1957 A.D., NRB was established to discharge the central banking responsibilities including guiding the development of the embryonic domestic financial sector. Then, Rastriya Banijya Bank (RBB), a fully government owned bank was established on 1966 A.D.

Until 1984 A.D., the Nepalese financial sectors were dominated by the above two commercial banks. Commercial Bank Act 1974 was amended in 1984 to increase competition among commercial banks. Hence, provision was made to allow private sectors including foreign investments to open commercial banks. As a result, Nepal Arab Bank Ltd. (Nabil) was established on 1984 A.D. with the partnership of Dubai Bank Ltd., Dubai. The numbers of commercial banks operating in the country are increasing everyday and many more are in the pipeline to commence their business (Shrestha, 2007, p.4). At present there are 25 licensed commercial banks operating in different parts of Nepal.

1.2 Background of the Study:

Capital formulation and the investment are highly needed for the healthy economic development of every country. A healthy economy is equally dependent on efficient

transfer of funds from people who are net savers to firms and individuals who need capital that the problem of inadequate of capital formulation can be wiped out. Without efficient transfers, the economy simply could not function and economic efficiency is simply impossible without a good system for allocating capital within the economy. As such, various banks and financial institution that came into existence after the liberalization policy, which play a crucial role in the capital formulation and investment for the economic development of the country. Capital in a free economy is allocated through the price system. The interest rate is the price paid to the borrowed capital. Interest is cost associated with the use of money or credit for a designated time period. It depends on many factors such as risk, inflation rate, economic conditions and money supply. Interest is a revenue source and is therefore, a component of national income (Shim, Siegel).

Banking sector has been known as the integral part of the economy. Banks and other financial institutions perform various activities. Among these, one of the major functions of the banks and other financial institutions is to act as financial intermediaries wherein they collect funds from the surplus units and distributes as loans to those deficit units in the economy by providing interest in depositors and charging interest to the borrowers. In doing so, they provide a link between saving and investment. As a consequence, savers can earn returns from their savings and borrowers can execute their investment plans to earn future profits.

The rate of interest is determined by the relation between the supply of money, people are willing to lend, and the amount of money people want to borrow. Interest rates are high when money is scarce. At such times, money is said to be dear. Rates are low and money is said to be cheap, when money is plentiful (World Book Encyclopedia). The supply of money includes savings which are the difference between income and spending. Savings depend on income and on economy. But all savings are not available for lending, because people and firms like to keep part of their savings as in liquid form. Borrowers of cash must pay interest to compensate lenders who give up the convenience possessing the cash. The demand for money comes from people and business that need money for investment, from people who wish to spend more money for investment and from people who wish to spend than they can afford from current income. The rate actually charged will depend on such

factors as the maturity of the loan, the credit worthiness of the borrower, the amount of collateral, tax treatment of interest payments for both parties and special features such as call provisions or sinking fund requirements (Dictionary of Money and Finance).

Interest is the price that one pays for utilizing a certain amount of money for a specific period of time. It is the 'rent' paid for using money provided by a lender. Essentially, there are 3 components in interest rates- risk free rate, risk premium and adjustment for inflationary or deflationary situations. Risk-free rate is paid as compensation for deferred consumption by the borrower to the lender. As a borrower derives satisfaction well in advance by pre-posting the consumption, he is required to pay some price, which can be considered as risk-free part of the interest rate. Risk-free rates are referred to as benchmark rates or cut-off rates. Risk-premium depends on the credit worthiness of the borrower. Higher the perceived risk on part of the lender, more risk premium is added to the risk-free rates and vice-versa. An interest rate also has adjustments for inflationary or deflationary economic situations. When value of money is going to fall in inflationary economy, equivalent amount of premium is added to the interest rates, whereas in deflationary economic interest rates are discounted to factor increase in the value of the money (Jha, 2005, 15 Feb-Mar). Interest rate is the most vital aspect of any financial market and therefore has become a very important mechanism in promoting programs for the betterment.

As an instrument of monetary policy, interest rate is being used to mobilize savings to influence bank liquidity and to determine cost of credit etc. The collection of deposit and its mobilization are the two sides of the same coin, in the absence of one, another can not work i.e. no collection of deposit and no mobilization and no proper mobilization of deposit no collection of deposit. They both get under favorable condition through the proper interest rate. Interest rate affects on the collection of deposits, mobilization of saving and profit position. The margin between the lending and deposit determine the profit of the bank. Banks are purely guided by a business motive; the only upholding objective is a good profitability ratio that is ascertained by an effective and proper interest rate. Obviously, any commercial bank's success or failure can be determined by the rate of profit or loss it

experiences during any given period of time. The profit of commercial banks, as an accounting identity, is equal to the interest from earning assets less the interest cost on deposits (Pant, 1983, p. 71). Interest rates include both rate of deposit and lending rates, and for each level of interest a separate profit position is included, which determines the profitability of the bank.

1.3 Determinants of Interest Rates: (Shahindra, 2004)

The rate of interest is the cost or price of credit. The cost to the borrower is called required return. It reflects the level of expected returns. The different types of assets have different rate of interest for its use. However, rates of interest change together according to time. Hence, it is enough to say that rate of interest is high or low instead of saying the interest rate of a particular financial asset. For example, if the corporate interest rate is higher usually the interest rate of state of local bond is also higher. "In general quote (or normal) interest on a debt security, K is composed of real risk free rate of interest, K* plus several premiums that reflects inflation, the riskiness of the security and the liquidity of security." This relationship can be express as follows:

Quoted interest rate (K) = K*+IP-DRP-LP-MRP

where,

K= The quoted or nominal rate of interest on a given security. There are different securities. Hence, different rates are quoted.

K*= The real risk free rate of interest

IP = Inflation premium

DRP= Default Risk Premium

LP = Liquidity or marketability premiums

MRP = Maturity Risk Premium

1.4 NRB Directives and Interest Rate Strategies in Nepal:

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 institutions in the period of 1960 to 1970. But after 1984 A.D., banks were given the liberty to increase upto 1.5% in saving deposit and 1% in fixed deposits above the prevailing interest rates.

With a view of initiating sound competition amongst banks, they were later given freedom to increase to whatever point they liked above the fixed rate.

Interest Rates Policy:

Complete liberalization of Deposit and Lending Rates: (Thapa, 2005, p.421)

Both deposit and lending rates have been completely liberalized since August 31, 1989. The objective has been to create a more competitive environment in the financial sector. In fact, there have been two objectives of a complete deregulation of interest rates of banks and financial institutions. The first is to encourage banks and financial institutions to mobilize financial resources. The second is to help banks and financial institutions to allocate resources optimally. To support the complete deregulation of interest rates on deposits and lending, a number of policy change in the financial sector were initiated.

Interest Rate Related Development in the Post 1989 period (Thapa, 2005, pp.421-423)

Some anomalies appeared after the complete deregulation of deposit and lending interest rates. One such anomaly was that commercial banks started offering higher interest rates to some depositors and lower to some other. Discrimination of depositors in terms of interest rate differentials without economic basis destroys the trust of the general public in the banking industry. Likewise, discrimination of borrowers in terms of interest rate differentials for the same type of loans also creates distortions in the banking industry. Hence, against the background of these distortions and other development, the following regulatory and policy measures were introduced.

- As a first measure, on 22 August 1993 commercial banks were asked to fix interest rate for at least one year time deposit. No difference of more than 1% point was allowed in interest rate on credit to be provided for the same type and purposes. Banks were also prohibited to fix flat interest rate.
- The second measure was the fixation of interest rate spread. The objective of interest rate deregulation was to help lower the financial intermediation cost in the form of interest rate spread i.e. the difference between deposit rate and lending rate through competition. It was hoped that both depositors and

borrowers would benefit, because commercial banks would compete among themselves through interest rates, offering higher deposit rate and charging lower lending rates. In the process, interest rates spread would come down. But this did not happen. On the contrary, interest rate spread increased even after the deregulation of interest rates.

- The imposition of upper limit for interest rate spread at 6% was introduced since August 22, 1993. The system of penalty was not introduced in the event of violation of interest rate spread. When it was found that commercial banks did not pay attention to NRB's moral suasion, the matter was taken up seriously. Hence, the interest rate spread ceiling was reviewed and made stringent further by lowering it to 5% on July 16, 1998. The main objective of the imposition of stringent interest rate spread was to increase financial intermediation by forcing commercial banks to lower their financial intermediation cost.
- NRB, in the mean time, adopted a number of measures aimed at helping to reduce the spread. CRR was one of them. As CRR acts as a tax on financial intermediation, the higher level of CRR increase the financial intermediation cost implying a higher interest rate spread. The level of CRR was reduced from 12% to 10% in 1998. It was further reduced to 9% in 2001 and 8% in 2002. CRR was cut further to 6% in 2003. On July 19, 2004 CRR was reduced further by one percentage point to 5%.
- NRB announced the withdrawal of interest rate spread fixed at 5% with effect of July 16, 2002. There were various reasons for the withdrawal of the interest rate spread. First, it was argued that the fixation of interest rate spread destroyed the spirit of interest rate deregulation. Second, almost all commercial banks to keep the spread within the limit.

In this way as a central bank, NRB changed the policies and strategies regarding interest rate structure in different time. The aim behind these changes is to mobilize the internal resources fluently, to make economic growth in rapid rates to achieve on overall good performance of financial market, to improve the productivity and show better profitability, price stability, viable balance of payment to develop healthy competition among commercial banks, finance companies and other financial institutions.

1.5 Statement of the Problem:

Capital formulation and its proper utilization are highly essential for economic development of the country. As the banks and financial institutions have a significant role to play in the economic development of a country, more emphasis should be placed on enhancing deposits from savers and lending to those potential investors which require financing from the banks by providing interest to the depositors and charging interest to the borrowers. They attract deposits from customers by offering different rates of interest and different kinds of facilities. As a result, banks have collected lots of deposits. But sometimes the deposited amount may not be seem as properly utilized because of the lack of sound lending policy, lack of knowledge on investment, interest rate risk, default risk, purchasing risk, business risk etc. So this condition will lead the bank to the position of liquidation.

Interest rate is a major tool to change the fortune of the bank. It has always been modified as per situation and economy. After commercial banks received autonomy to determine their own interest rate they have greater burden to carry if it is to shoulder responsibility to drag country towards prosperity. An appropriate interest rate always keeps both parties i.e. depositors and borrowers at profitable position. Due to stiff competition between the banks to increase the volume of deposit and loans; it has been working under very less interest spread which is able to hardly cover total cost. This has been because of excessive availability of financial institutions. Moreover frequent changes of interest rate within and outside the bank has changed the banking habit of individual depositors. The change in interest rates certainly has deep impact on the activities of the commercial banks.

The main attempts of this study will be to answer the following questions.

1. What will be the impact of increasing and decreasing interest rate on deposits, loans and investment?
2. What is the interest spread and its impact on the profitability of the bank?
3. Does high interest rates are associated with higher profitability?
4. Is interest rate main factor to attract customers to bank?
5. Is interest income a dominating income over the total income composition of the commercial banks?

1.6 Objective of the Study:

The general objective of the study is to understand and analyze the impact of interest rate on resource mobilization and its long term effect on the profitability of the bank. To achieve this basic objective the following specific objectives have been considered in the study.

1. To analyze the impact of interest rates on the mobilization of funds.
2. To analyze the interest spread and its impact on the profitability of the bank.
3. To access the relationship between total deposit and total credit of the bank.
4. To measure the dominance of interest income over the total earning of the bank.

1.7 Statement of the hypothesis:

Testing of the hypothesis is one of the vital aspects of the decision making theory. It consists of decision rules required for drawing probabilistic inferences about the population parameters. By testing the hypothesis, one can find out whether it deserves the acceptance or rejection of the hypothesis. Generally, two complementary hypotheses are set up at one time. If one of the hypothesis is accepted then other is rejected and vice-versa. The null hypothesis is also called hypothesis of no difference and the alternative hypothesis is called the hypothesis of difference. In this research study, it is attempt to test the hypothesis in the following form.

- Is there any significance of correlation between deposit interest rate and total deposit of banking industry?

  Null Hypothesis: H_0: b = 0 i.e. value of regression coefficient is insignificant. (Deposit interest rate does not play a significant role in deposit collection)

  Alternative Hypothesis H_1: b ≠ 0 i.e. value of regression coefficient is significant. (Deposit interest rate plays a significant role in deposit collection)

- Is there any significance of correlation coefficient interest rate and total lending of commercial banks?

Null Hypothesis: H_0: b = 0 i.e. value of regression coefficient is insignificant. (Lending interest rate does not play a significant role in loan disbursement)

Alternative Hypothesis H_1: b ≠ 0 i.e. value of regression coefficient is significant. (Lending interest rate plays a significant role in loan disbursement).

1.8 Significance of the Study:

The scope of interest rate policy is broad as its definition. Many genuine research works have been done and many important theories are formed and even applied in the economic world. However, Nepal has yet to achieve a bit of what other foreign students and scholars have achieved. While in a process, this is another effort to fulfill the gap that has been left by other researcher and to continue their genuine work.

This study will help to reveal the impact of interest rates on deposit mobilization and profitability condition of the commercial banks. This study also tries to analyze the interest rate structure of commercial banks in Nepal and try to develop some ideas to know whether it influences deposits and lending. This study will help to shareholders and other stakeholders of bank to know the clear vision of the interest rate policy adopted by the bank. This study may be important for researcher, scholars, investors, banking sectors, students, government and other parties. Hence, it is hoped that the finding of the study to some extent will help the policy makers to make strong policy regarding interest rate charged on deposits and lending in Nepalese context and also will be helpful to those who want to study in further detail and widely in this field. Lastly, this study is deeply concentrated on impact of interest rates on fund mobilization and profitability of bank therefore, it will be helpful to all directly or indirectly related to the economic and banking fields.

1.9 Limitation of the Study:

Following are major limitation of the study:

1. This study is only concentrated to the area of deposit, loan and investment of the commercial banks.

2. There are many factors which affect deposit mobilization decision. However only interest rate is considered in this study.
3. It will cover only 5 years period from fiscal year 2003/04 to 2007/08.
4. The major part of the data in this study will be secondary, therefore the comprehensibility and accuracy of the figures and information published in document and annual reports of concerned firm.
5. The profitability of the bank is examined only in relation to the interest rate.
6. The data will be taken as sample from the listed commercial banks of Nepal and mainly from joint venture banks i.e. only 4 banks are taken as sample banks.
7. This study should be conducted and completed within a short span of time. As a result, all the concerned area might not be covered.
8. This study is done for the partial fulfillment for M.B.S. degree in management; therefore, it is not a comprehensive study.

1.10 Organization of the study:

The study will be organized into 5 chapters. Each chapter has its importance and deals with important aspect of the study.

Chapter one: **Introduction**

The first chapter consists of the subject matter of the study that is, introduction of the study, background of the study, statement of problems, objectives of the study, significance of the study, limitation of the study and plan of the study.

Chapter two: Review of Literature

This chapter deals with review of literature. It includes a discussion on the conceptual framework, review of books, previous research work, articles, publications and policy documents.

Chapter three: **Research Methodology**

This chapter explains the research methodology that used to evaluate which deals with hypothesis to be tested if necessary, research designs, research questions, population and sample size, sources of data, data collection and processing techniques and analysis of tools i.e. statistical tools and financial tools.

Chapter four: **Presentation and Analysis of Data**

This chapter attempts to analyze and evaluate data with the help of analytical tools and interpret all the results into the unit of empirical findings and results by using various tools.

Chapter five: **Summary, Conclusion and Recommendations**

This chapter covers on the results and findings and recommendation of the study.

CHAPTER II

REVIEW OF LITERATURE

This chapter reviews the related studies; conceptual review and research review. Conceptual review covers the concepts of basic terms used in the study and research review includes the reviews of articles published in different journals, dissertations, reports and other related published and unpublished materials.

2.1 Conceptual Review

2.1.1 Concepts and meaning of Interest Rates:

Interest is the amount paid by a borrower to a lender above the amount that has been borrowed. The original amount lent is called the principal and the percentage of the principal which must be paid annually as interest is called the interest rate. Conceptually, interest is both a payment and receipt for the use of money. Interest, therefore, can be considered from the two points. If the interest is paid, it can be considered as a 'cost', on the other hand, if interest is received, it can be considered as a 'return'.

According to classical economists, it is only by postponing consumption that capital can be created. Since to abstain consumption is disagreeable and painful, for this lender is paid a reward in the form of interest. Where people abstains consumption they save and thus interest becomes the reward for saving. The neo-classical economists however defined the interest as the price for the use of loanable funds. But the modern economists in their effort to avoid these divergent and controversial views about the nature of interest, have explained it in terms of productivity, saving, liquidity preference and money. In other words, interest is simultaneously the rewards for the pure yield of capital, for saving, for the forgoing of liquidity and the supply of money.

An important aspect of interest rate policy is the setting of an appropriate margin between the lending and deposit rate. If the margin is too high, banks will make excessive profits and this lead to waste of saved resources. If it is too low, it will discourage intermediation and devitalize financial institutions. At the same time, the demand for credit goes on increasing being affected by the cheap loan rates. Hence, it can be concluded that changes in interest rate structure produces either positive or negative impact upon the growth of a developing economy such as ours.

Interest rate is one of the crucial indicators of financial as well as economic system of the country. Interest rates send price signals to borrowers, lenders, savers and investors. For example, higher interest rate generally brings grater volume of saving and stimulates the lending of funds. Lower rate of interest, on the other hand, tends to dampen the flow of saving and reduce lending activity. Higher interest rate tends to reduce the volume of borrowing and capital investment and lower interest rates stimulate borrowing and investment spending.

2.1.2 Functions of the Interest Rate in the economy: (Rose, 2003, p.113)

The rate of interest performs several important functions in the economy.

- It helps guarantee that current savings will flow into investment to promote economic growth.
- It rations the available supply of credit, generally providing loanable funds to those investment projects with the highest expected returns.
- It brings into balance the supply of money with the public's demand for money.
- It is also an important tool of government policy through its influence government maintains control over the volume of saving and investment. If the economy is growing too slowly and unemployment is rising, the government can use this tool to lower interest rates in order to stimulate borrowing and investment and accelerate the production and development. On the other hand, an economy experiencing rapid inflation has traditionally called for a government policy of higher interest rates to slow both borrowing and spending.

2.1.3 Interest Rates and Investment:

Interest rates influence the investment decision on the economy. Interest rate has an inverse relation with investment because at lower level of interest, cost of the borrowing is lower and profit for investors is higher so that there is a higher investment at a lower level of interest. Symbolically, investment is a function of interest rate.

2.1.4 Interest Rates and Fund mobilization:

Interest is the price paid for the acceptance of deposits and remuneration received for allowing other to use unutilized deposits for their benefit. A high interest rate diverts the resources from unproductive tangible assets into financial claims. Higher the interest rate, higher would be the saving. Changing interest rates in deposits changes the saving habits of the people. High interest rate in deposit helped to raise the savings, especially from rural areas.

2.1.5 Interest Rates and Monetary Policy:

Interest is paid for the sacrifice made by the income holder by deferring consumption for the time being and imparting with liquidity, and to reward the income holder for making saving. These exists a wide array of interest rates in the economy. This is either because of wider varieties of securities having different liquidity, term structure and degree of risk or market imperfection. The main monetary policy variables at the disposal of the monetary authority for achieving policy goals like growth and stability are the quantity of money, bank credit and interest rates (Khatiwada, 2005, pp.279-294).

There is deep relationship between interest rates and monetary policy. Monetary policy works by controlling the cost and availability of credit. During inflation the central bank raise the cost of borrowing and reduce the credit creating capacity of the commercial banks, this ultimately increases the interest rates of bank. Increasing the money stock can lower the interest rates.

2.1.6 Interest Rates and Profitability:

Schulz (1978) has explained that an important aspect of interest rate policy is the setting of an appropriate margin between the lending and deposit rate. If the margin is too high, banks will make excessive profits and this may lead to waste of saved resources. If it is too low, it will discourage intermediation and devitalize financial institution. The profit of commercial banks, as an accounting identity, is equal to the interest from earning assets less the interest cost on deposit. So the change in interest rate structure has positive impact on profit position.

2.1.7 Interest Rates and Price Level Changes:

The changes in the interest rate and price level move together because they are interlinked with one another. Their relation with each other is termed below:

- "High" interest rates accompany "high" prices and "low" interest rates accompany "low" prices.
- Interest rates and weighted average of past price level changes are correlated with each other.
- Interest rates tend to be high when prices are rising and vice-versa.
- Interest rates movements lag behind price level changes.

Weston and Brigham (1978) mentioned that price level trends affect interest rates in two important ways. First, the "nominal" interest rates the contract, or stated interest rate reflects expectations about future price level behaviour. If prices are rising and expected to rise further, the expected rate of inflation is added to the interest rte that would have prevailed in the absence of inflation to adjust for the decline in purchasing power represented by price increases.

2.1.8 Interest Rates and Liquidity:

Liquidity is generally a term that refers to an assets ability to be easily converted through an act of buying or selling without causing a significant movement in the price and with minimum loss of value. In financial and banking sector, liquidity is the ability to meet obligations when they come due without incurring unacceptable losses. Managing liquidity is a daily process requiring bankers to monitor and cash flows to ensure adequate liquidity is maintained. Banks have several additional

options for generating liquidity such as selling loans, borrowing from a central bank, and raising additional capital (Giri: 2065). Thus, the capacity of banks to exchange cash for deposit is the liquidity. It is the assets of bank in the form of cash and near about cash. It is the part of the total assets, which can be paid immediately to meet the current obligation. A commercial bank needs high degree of liquidity in its assets. In Nepal, banks must hold sufficient liquidity in the form of cash and liquid assets such as government securities CRR in the central bank.

The bank's sensitivity to changes in interest rates is source of liquidity problems. When interest rates fall, some depositors will withdraw their funds in search of higher returns elsewhere. This trend will decrease the liquidity in the bank significantly. At the same time, many loan customers may flow into banks for loan requests or speed up their drawings on those credit lines that carry lower interest rates. When interest rates rise, many depositors may rush into bank to deposit in their fund. Bank interest rate is very sensible. It means comparatively little difference increase or decrease the volume of bank deposit because majority of bank customers are always looking for higher interest rate. At the same time, when interest rates rise, many loan customers may postpone new loan requests or speed up their drawings on those credit lines that carry lower interest rates. Thus, changing interest rates affect both customers' demand for deposits and customers' demand for loans. Both of them have a potent impact on a bank's liquidity position. Moreover, movements in interest rates affect the market values of bank assets. Banks may need to sell in order to raise additional liquidity funds, and they directly affect the cost of borrowing in the money market (Singh, 2007, p. 176).

2.1.9 Liquidity Vs Profitability: (Koch and Cott, 2003, p.529)

There is a short run trade off between liquidity and profitability. The more liquid a bank is, the lower are its return on equity and ROA, all other things being equal. Both asset and liability liquidity contribute to this relationship. Asset liquidity is influenced by the composition and maturity of funds. Large holdings of cash assets clearly decrease profits because of the opportunity loss of interest income. In terms of the investment portfolio, short term securities normally carry lower yield than comparable long term securities. Banks that purchase short term securities thus

increase liquidity, but at the expense of higher potential returns. A bank loan portfolio displays the same trade off loans carrying the highest yields are the least liquid. Yields are high because default risk or interest rate risk is substantial and the loan administration expense is high.

2.1.10 Theories on Interest Rate:

Various theories on interest rates have been propounded by various economists, which describe how interest rate is determined in various situations. Some well known theories of interest rates are as follows:

Classical theory of Interest:

One of the oldest theories concerning the determinants of pure or risk-free interest rate is the classical theory of interest rates which is developed during the 18^{th} and 19^{th} centuries by a number of British economists and elaborated by Irving Fisher in 1930. According to this theory, the rate of interest is determined by the supply and demand of capital. The supply of capital is governed by the time preference and the demand for capital by the expected productivity of capital. Both time preference and productivity of capital depend upon waiting or saving or thrift. The theory is also known as supply and demand theory of saving.

Demand Side:
The demand for capital consists of the demand for productive and consumptive purpose. The demand for investment capital is mainly comes from the business sector. At a higher rate of interest the demand for capital is low and it is high at a lower rate of interest. Thus the demand for interest and the demand for capital are inversely related to the rate of interest and the demand schedule for capital or investment curve slope downward from left to right.

Supply Side:
The supply of capital depends upon saving. The supply of savings derived mainly from households, firms and government.

The classical economists believe that interest rate in the financial markets are determined by the interaction of supply and demand for investment.

The Loanable Fund Theory of Interest:

The loanable funds theory of interest was propounded by the Swedish Economist Knut Wicksell. This theory is also called as neo-classical theory of interest. This theory explains the determination of interest in terms of demand and supply of loanable funds or credit. According to this theory, interest is a reward for the use of loanable funds and the rate of interest is determined by the demand for and supply of loanable funds.

Demand for loanable funds:

The demand for loanable funds has primarily three sources: government, businessmen and customers who need then for purposes of investment, hoarding and consumption. The total demand for the loanable fund is the sum of government's demand, business demand and consumer's demand.

Supply of loanable funds:

The supply of loanable funds comes from savings, dishoardings, disinvestment and bank money. Savings are made out by individuals, persons, families, corporate saving, etc. Though savings depends upon the income level, yet taking the level of income as given, they are regarded as interest elastic. The higher the rate of interest, the greater will be the inducement to save and vice-versa. People hoard some portion of their past income in the form of liquid. When such hoarded idle money is invested, then it is called dishoardings. Such funds are directly related to rate of interest. The higher the interest rate the larger the funds that will be coming out of hoards and vice-versa.

The two forces of supply and demand for loanable funds determine not only the volume of lending and borrowing in the economy but also the rate of interest.

The Liquidity Preference Theory of Interest: (Keynes, 1936, p.167)

According to Prof. J.M. Keynes, the rate of interest is calculated by means of money and the interest is purely monetary phenomenon. Therefore, the 'Keynesian theory of interest' is also called the 'monetary theory of interest'. Keynes defines the rate of interest as the reward of not hoarding but the reward for parting with liquidity for the

specified period. Thus, the rate of interest is determined by the demand for and supply of money.

Supply of Money:

Of the two determinants of interest rates, supply of money refers to total quantity of money in the country for all purposes at any time. Though the supply of money is a function of the rate of interest to a degree, yet it is considered to be fixed by the monetary authorities, that is, the supply curve of money is taken as perfectly inelastic. This total quantity of money is changed by the central bank of a country.

Demand for Money:

Liquidity preference is the desire to hold cash. This preference of cash has a great influence on the determination of the rate of interest. If the liquidity preference is greater, the rate of interest is also higher and if the liquidity preference is smaller, the rate of interest is also lower. Similarly, if current rate of interest is higher in market, people prefer less cash money to hold, and if the current rate of interest is lower, people prefer too much cash money to hold with then. According to Keynes, there are three motives behind the desire of the people to hold liquid cash i.e. transaction motive, precautionary motive and speculative motive.

Modern Theory of Interest: (Joshi, 2058)

Prof. Hicks and Hansen have propounded this modern theory of interest. This theory is also called the Determinate Theory of Interest. These modern economists have attempted to mix from one side the classical and the neo-classical theories and from the other side the Keynesian theory of interest in their modern theory of interest.

According to this theory, (i) saving function, (ii) investment function, (iii) liquidity preference function and (iv) supply (quantity) of money are included in the determination of the rate of interest. To present a combination of these different factors, Prof. Hicks has constructed an IS (Income and Saving) curve and Prof. Hansen has constructed an LM (Liquidity = demand for cash; Money = Supply of money). The rate of interest is determined at a point where the two curves i.e. IS and LM curve intersect each other.

2.1.11 Impact of Inflation on interest rate:

Inflation occurs when the average price level in the economy rises. Interest rate is represents the "price" of credit. Interest rate is affected by the inflation. There is positive correlation between interest rates and inflation i.e. increase in inflation increases the interest rates. Inflation means a state in which the value of money is falling i.e. prices are increasing. During inflation, the cost of living increasing rapidly, so inflation severely hurts the people who depend on the income securities like bonds and preferred stock. Similarly, as purchasing power of money falls the debtors gain and creditor loses.

Inflation has severe social, political and economic effect. Hence, some like to call it 'worst than taxes' and 'legal robbery'. Today each and every nation of the world is suffering from the economic evil i.e. inflation. The trend of rising prices has the general phenomenon of every country. The most developed and industrialized countries have adopted various methods like credit control via bank interest rates, checking money supply and various other price control policies. Since the inflation reduces the purchasing power of consumer (investors), they must be compensated for the decreased purchasing power. Therefore, and increase in inflation leads to increase in quoted market interest rate to maintain purchasing power. This increment in interest rate is known as inflation premium.

The Nominal and Real Interest Rates:

The nominal rate is published or quoted interest rates that are used to transact with the customers. In other words, "nominal rate of return are money rates of return that are not adjusted for the effect of inflation." Similarly, the real interest rate is the return to the lender or investor measured in terms of its actual purchasing power. In a period of inflation, the real rate will be lower than the nominal rate. An investment's real rate of interest during some period is calculated by removing the rate of inflation from the nominal return. Mathematically,

$$(1\Gamma rr)\,X\frac{(1\Gamma r)}{(1\Gamma q)}$$

where,
rr = real rate of return

r = nominal rate of return

q = inflation rate

There are several views on inflation that effect on interest rates. Important views among them are:

The Fisher Effect:

Irving Fisher has developed a relationship between nominal and real rate of interest. According to Fisher, if expected real interest rate is held fixed, changes in nominal rate will reflect shifting inflation premiums. It means that if inflation premium increases then nominal rate also increases. The Fisher's equation can be written as;
Nominal Interest Rate = Expected Real Rate + Inflation Premium

The Harrod-Keynes Effect of Inflation:

This view conflict with that of Fisher's effect. It is based upon the Keynesian liquidity preference theory of interest rate. Sir Roy Harrod argues that the real rate will be affected by inflation but the nominal rates need not to be. Following the liquidity preference theory, the nominal interest rate determined by the demand for and supply of money. Therefore, unless inflation affects either the demand for and supply of money, the nominal rate must remain unchanged whatever may be the expectation of inflation. Harrod argues that rise in inflationary expectation will lower the real rate of interest (Rose, 1997, p.245).

2.1.12 Factors Affecting the Difference in Interest Rates:

Though it is assumed that deposit increases as interest increases but interest rate is affected by numerous factors. In real world, different financial institutions quote different interest rate. It means that the same type of instrument carries different interest rate at the same time, so there is presence of interest spread. For this, there are various factors affecting the difference in interest rates.

Credit or Default Risk:

The important factor causing interest rate to differ one from another is the degree of default risk carried by individual securities. Default risk is that a borrower will not make all promised payments at the agreed-upon times. All securities are subject to varying degree positively related to the risk of borrower default as perceived by investor's yield on risky security.

Yield on risky security = Risk free rate of interest + Default risk premium.

The higher the default risk associated with a risky security, the higher the default risk premium on that security and greater the required rate of return (yield) that must be attached to the security as demanded by investors in the market place.

Liquidity Risk:

An asset is liquid if it can be turned into cash quickly without loss. A liquid financial asset is readily marketable. In addition, its price tends to be stable over time and it is reversible, meaning the holder of the asset can usually recover his/her funds upon resale with little risk of loss. Because the liquidity feature of financial assets lowers their risk, liquid assets carry lower interest rates. But it is the risk that the lender might not be able to liquidate the debt on short notice. The difference in interest rate due to liquidity risk is called liquidity spread.

Marketability Risk:

Marketability is the capacity of being sold quickly at low transaction cost. Marketability risk deals with the degree of difficulty in being able to convert a financial claim into cash at its most recent transaction price or very close to it. Savers who purchase poorly marketable investments expect to be compensated for the lack of marketability. This represents an additional interest spread and is referred to as the marketability risk premium.

Call or Prepayment Risk:

Some financial claims after the borrower the right to repay the principal debt prior to maturity on financial claims, like bond, these provisions is referred to as call

provision and on some financial claims such as home mortgage and installment auto loans, they are called prepayment provisions. These provisions are options. The borrower has the option to call or repay the debt before the maturity date. The investor in such callable financial claim must accept repayment risk. The repayment risk is that if interest rates fall, the borrower will call the bond or prepay the mortgage. The investor receiving cash cannot reinvest it at an interest rate as high as the rate on the previous investment. This risk is called a call or prepayment risk. The compensation that investors demand to accept this risk is an additional interest spread offered as the call premium.

Servicing Cost:

Some financial claims are difficult to service. This means that the process of collecting interest and principal payments, providing accurate records, or monitoring the ongoing credit position of the borrower involves considerable operation cost. Lenders must be compensated for the servicing costs. This cost is included in the interest rate charged and is referred to as the servicing cost.

Exchange Rate Risk:

As our financial market has become more global, there has been a significant growth in the borrowing and investing in foreign denominated financial claims. A U.S. company establishing manufacturing facility in Nepal might be inclined to issue shares and/or bonds denominated in Nepalese rupees rather than U.S. dollars. Investors also have available to them many investments involve exchange rate risk. This risk refers to the potentiality that the rate of exchange between the domestic currency and foreign denominated currency will change as a result of any factors. The primary risk for the borrower is that the devaluation of the domestic currency. This results in an unexpected cost on the international loans. Since, the loan would have to be repaid in the foreign currency. This potential change in currency values must be reflected in computing the cost of borrowing (Theygerson, 1992, p.40).

Taxability:

The income from most securities -interest or dividends and capital gains, is subject to taxation at the stipulated rate. This tax treatment reduces the investor's real

income. Thus the security, the income from which is subject to higher taxation, carries higher rate than the securities, the income from which is subject to lower tax or tax exemption. Therefore, a corporate bond issuer must pay high yield than a municipal bond.

2.1.13 Some other important terminologies used in the Research:

Commercial Bank:

Bank undertaking business with the objective of earning profits is commercial bank. Commercial banks pool scattered fund and channel it to productive use. Commercial Bank Act 1974 defines as "A commercial bank means bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions. Commercial banks are major financial institutions which occupy an important place in the framework of every economy because they provide capital for the development of industry, trade and business and other resources for deficit sectors by investing the saving collected as deposit. Therefore, commercial banks assist in feasible balance growth by reducing the regional disparity amongst the deposit and requirements of loans (Mishra, 1982, p.306).

In this way they contribute to the economic growth of the nation. Besides this, commercial banks render numerous services to their customers in view of facilitating their economic and social life. They work as an agent of customers to receive and make payment, pay and collect rent, pay insurance premium, provides references about the financial position of their customers, arranges the amount of foreign exchange required by various organization and travelers etc. From these services, besides interest income, commercial banks become successful to generate large amount of non-interest income. Commercial banks operation records the economic pulse reflecting economic situation of the country (Vaish, 1993, p.246).

Commercial banks, by playing active roles, have changed the economic structure of the world. Thus, they have become the heart of financial system. Commercial banks today, have gained extensive importance in public. Their major function is being confined to acceptance of deposit and extending loans to productive sectors. Banks collects deposit by offering various deposit schemes with attractive interest rates. Due to various marketing tools such as debit card, there has been increase in

deposits. Funds collected through acceptance of deposit are being mobilized through different ways. One of the major means is lending. Lending part mainly comprise of business lending and personal lending. Business lending of a bank represents financing of trade, letter of credit, procurement guarantee, current assets like inventories and receivables. Likewise, lending of a bank represents financing of auto loan, mortgage loan, housing loan and various other personal loans. Lending is one of the major means for the proper utilization of collected deposits (funds). Lending covers maximum proportion in mobilization of deposit.

Deposit:

Concept of Deposit:

From the viewpoint of both the bankers and public, the essence of the commercial bank can best be captured if it is thought of as a department store of financial services (Anonymous). Deposits are the funds collected by bank from account holders for the security and transaction motives. It is the amount of money or a valuable item that is received into a bank as security against possible loss. Deposits are the foundation upon which banks thrive and grow (Singh, 2007, p.216). Deposits provide most of the raw material for bank loans. It represents the ultimate source of bank profits and growth. Deposits generates cash reserves fund. Maintaining required cash reserve, the excess cash fund, a bank holds is lent to borrowers. Thus deposits create loans.

The account holders retain rights to their deposit, although restrictions placed on access depend upon the terms and conditions of the account and the provider. The deposit account would be shown as a liability owned by the bank to its customers. Commercial Bank Act 2031 defines "deposit" as the amount deposited in a current, saving or fixed accounts of a bank or financial institution (Bhandari, 2003, p.73). The deposits are subject to withdrawals by means of cheque on short notice by customers. There are several restrictions on these deposits, regarding the amount of deposits, number of withdrawal etc. They are used more as investments and hence they earn some interest. The rate of interest varies depending on the nature of the deposits. The bank attracts deposits from customers by offering different rates of interest and different kinds of facilities.

Types of Deposit:

There are three major types of deposits: demand deposits, saving deposits and time deposit. What distinguish one type from another are the conditions under which the deposited funds may be withdrawn.

Demand Deposit:

Demand deposits are also called as current deposit. A demand deposit is a deposit that can be withdrawn on demand at any time and in any amount up to the full amount of the deposits. The primary purpose of demand accounts is to facilitate cashless payments by means of cheque, bank draft, direct debit, electronic funds transfer, etc. These accounts are generally opened by business houses, corporate bodies, public institutions and other organizations whose banking transactions are numerous and frequent so that the amount being paid into and drawn out of the account continuously. As these deposit are payable on demand, banker is obliged to keep larger cash reserves than are needed in the case of fixed and saving deposits. This type of account is just a facility offered by the bank to its customers. So, generally, no interest is payable on this deposit but provide the customers with payment services, safe keeping funds and record keeping for any transactions carried out by cheques. The account holders of current deposits can be given the overdraft facility after a special arrangement between the bank and account holders (Singh, 2007, p.219).

Saving Deposit:

It is an interest bearing account. In such accounts, interest is provided on daily average balance or on minimum balance, depending on the bank's policy to attract deposits (Shrestha, 2007, p.56). According to Commercial Bank Act 2031 saving account means "an account of amount deposited in a bank for saving purposes." Saving deposits are accounts maintained by commercial banks, saving and loan associations, credit unions and mutual saving banks that pay interest but cannot be used directly as money (for example writing a cheque). Saving accounts are maintained by a customer with a depository institution for the purpose of accumulating funds over a period of time. Funds deposited in a savings account may

be withdrawn only by the account owner or a duly authorized agent, or on the owner's nontransferable order. The bank fixed the minimum and maximum amount of withdrawals through a cheque from the deposit. Saving deposits are different from demand deposits because depositors cannot write cheques against regular saving accounts. Saving accounts cannot be used directly as money to purchase goods and services. There is also a limit of amount in cheque and frequency in withdrawals. Bank requires the pre-notice for withdrawal of amount limit.

Time Deposit:

Time deposit is also known as fixed deposit. Bank offers fixed interest rates on this deposit and repayment principal together with interest at fixed maturity or pay interest on regular interval but principal only at the maturity (Dahal, 1999, p.26). A fixed deposit is a money deposit at a bank that cannot be withdrawn for certain "term" or period of time. When the term is over it can withdrawn or it can be held for another term. The longer the term, there will be better yield on the money. However, if the customer requires fund earlier than its maturity period, one can liquidate the time deposit before its maturity. In such situation, accumulated interest for one month or for the entire period is not provided which largely depends on the bank and its policy (Shrestha, 2007, p.57). In case the pledge the time deposit matures, one can pledge the time deposit and obtain loan.

Loans and Advances:

Loans and advances are the important item on the assets side of the balance sheet of commercial banks. "Banks earn interest on credits and advances, which is one of the major sources of income for the banks. Banks prepare credit portfolio otherwise it will not only add bad debts, but also affect profitability adversely." (Varshney and Swaroop, 1994, p.6)

Loan is the sum lent to others to charge interest on principal. When money belonging to one is advanced to another to be used for certain time period, it is called loan. The basic objective of loan advancement is to earn interest as the reward for lending the sum for specific period (Singh, 2007:254).

Overdraft:

Overdraft connects the excess amount withdrawn over their deposit. The situation of overdraft evolves when banks honor the cheque to an agreed limit. It is a kind of working capital loan and allowed only in current accounts. The account balance fluctuates frequently since withdraw and repayment of money took place and interest on overdraft is charged on debit balance on daily basis.

There are various types of loans that bank offers to its customers. Such as working capital loan, demand loan, term loan, hire purchase loan, real estate loan, project loan, consortium loan, auto loan, letter of credit, etc. In return of this service bank charges a certain rate of interest as per terms and condition.

Investments:

According to F. Amling, "Investment may be defined as the purchase by an individual or institutional investor of a financial or real asset that produces a return proportional to the risk assured over some future investment period."
Investment can of 2 forms:

(i) Financial Investment
(ii) Real Investment

Financial Investment:

Investment in financial assets like common stocks, bonds are called financial investment. It is an asset that is usually documented by some forms of legal representation. They are of intangible in nature. Commercial banks make financial investment on various sectors such as:

Investment on Government Securities, Shares & Debentures:

Though a commercial bank can earn interest and dividend from the investment on government securities, shares and debentures, it is not the major portion of income. But it is treated as a second source of banking business. A commercial bank may

extent credit by purchasing government securities bond and debenture and shares for several reasons, some of them are given as:

- It may want to space it's maturating so that the inflow of cash coincides with expected withdrawals by depositor or large loan demands of its customers.
- It may wish to have high -grade marketable securities to liquidate if its primary of reserves become inadequate.
- It may also be forced to invest because to demand for loans have decreased as it not sufficient to absorb its excess resources (Khati, 2003).

Investment on other company's shares and Debentures:

Due to excess of funds but least opportunity to invest these funds in much more profitable sector and to meet the requirement of NRB's directors, many commercial banks have to utilize their funds to purchase shares and debentures of other financial and non-financial companies.

Real Investment:

A real asset represents an actual tangible asset that may be seen, felt, held or collected e.g. real estate, gold, etc. Investment in such tangible asset is called real investment. Commercial banks make investment on real assets such as purchase of land, building, plant and machinery, etc. Investment made on construction of road, bridge, hydropower project, etc. are some other examples of real investments.

2.2 Research Review:

For the depth understanding of interest rate and its impact, some relevant books, research papers, articles in national level and in international level, and genuine thesis are also reviewed to share the knowledge left by past researcher.

2.2.1 Review of Relevant Books:

A more thorough definition of an interest rate can be found in the "Dictionary of Economics." Interest rate is the proportion of a sum of money that is paid over a specified period of time in payment its loan. It is the price a borrower has to pay enjoy the use of cash which s/he does not own, and the return a lender enjoys for

differing her/his consumption or parting with liquidity. The rate of interest is a price that can be analysed in the normal framework of demand and supply.

J.M. Keynes (1936:136), in his book "The General Theory of Employment, Interest and Money" brought forward his view about the rate of interest. According to him, community's liquidity preferences and quantity of money determine the level of or rate of interest. These three things liquidity preferences, quantity of money and rate of interest are negatively correlated. At low rate of interest, the liquidity preference of community is high and it is low at high rate of interest.

According to the Modern view interest rate determination depends upon the investment, saving, liquidity preferences and supply of money. This view is the combination of previous theories. It expressed both monetary and non-monetary factors. In his opines, the marginal efficiency of capital to the rate of interest and investment is equal to the desired volume of saving. Thus the Total Investment = Total Saving, i.e. I= S

Keynes had argued that interest stems directly from the supply of and demand for money itself rather than the use of money. Liquidity is the unique characteristics and calls the demand for money to hold liquidity preferences. It requires the payment of interest. The marginal efficiency of capital determines the degree of liquidity preferences and the rate of investment and interest rates there on.

2.2.2 Review of Research Paper and Articles:

In the articles "Resource Mobilization and Financial Development in Nepal" Maxwell J. Fry has mentioned that the interest rate, which is the price for saving, helps the general public to mobilize savings under imperfect market situation like that of Nepal. It has strong impact on selection of the assets in which savings are embodied. A high interest rate diverts the sources from unproductive tangible assets into financial claims. This substitution increased savings and free resources for productive sectors investments. But this assumption may not necessarily be applied in Nepalese context. Interest rate, as an important device, allows investors to incest into better of the investments opportunities and this helps to allocating scarce resources between alternative investments. Interest rate acts as a market clearing

device. The cheap, unavailable and inadequate credit has no meaning to the small borrowers. Because, they are bound to take loan from village- moneylenders at a very high rate of interest. But the reasonable of the interest rate should positive to help financial institutions to attract more savings. These should be no intervention of authorities in timing interest rate because this causes adverse effects on income distribution. The interest rate is beneficial especially for the small savers, because large savers have alternative opportunities rather than the savings.

According to Thapa (2005, pp. 417-428), interest rates are indeed very important economic variables. There are many uses of interest rate date. First, they indicate the conditions in financial markets. Hence, they are used to assess the financial conditions in the economy. Second, they are indicators of expectations about inflation. If the long term interest rates are lower than that of short term, they can be inferred that the market participants have lower inflation expectations. This aspect is crucial for the conduct of monetary policy. Third, interest rates are indicators of the result of monetary policy actions. Therefore, interest rate data can be used to analyse the ex-post monetary policy stance. Fourth, interest rates can be used as monetary policy targets. Fifth, interest rate data can be used to analyse exchange rate movements. The last but not the least, the interest rate data can be used to macroeconomics analysis of consumption, saving and investment.

P.K. Shrestha (2058), concluded in his articles entitled "Economic Implications of Interest Rate with Nepalese Perspectives' that interest rate, a cost of financial capital, is a very important and watchful variable as well as tool in the economy to influence different economic decisions. There is lack of unanimous view on its determination. It, however, influences and is influenced by many monetary and real sectors components. In practice, there is a wide range of interest rates available varying with the type of financial assets.

Interest rate as elsewhere has been playing crucial role in the Nepalese context as well. For a long period since 1965 to 1989, the monetary authority directly regulated the interest rate in Nepal in the formal sector. In 1989, a policy of interest rate determination was introduced and as a result commercial banks and financial institutions become free to decide their interest rate themselves. Despite this, the

authority is more or less still using the interest rate as one of the important economic tool to achieve objective of economic growth and thereby poverty alleviation. Even after a decade of financial sector liberalization and rapid expansion of financial institutions, a majority of people still has to resort to informal lending due to mainly lack of easy access to the formal sector. In informal market, interest rate is exuberantly high compared to formal sector and also such a rate is less flexible. The high interest rate in informal sector, which is essentially needful for the rural people no doubt, has been aggravating the poverty of the rural people by increasing indebtness. Because of low coverage of formal financial sector, interest rate has not been able to play significant role in the Nepalese economy. Various structural rigidities, such as lack of infrastructure, insufficient market access, shortage of entrepreneurs and skilled manpower, etc. are hindering the smooth growth of the economy.

Raghav Dev Pant in his articles "Capital Flight and Interest Rate" has showed how rate of interest can determine the people's wish to deposit where he gets higher interest return. In his words, "Recently the interest rate structure followed by the banking systems of Nepal and India shows clear divergences. In particular, the interest rate offered by the commercial banks of Nepal has shown a declining trend so much so that real interest rate, that is nominal interest rate provided by the banks adjusted for inflation is negative. This means, in fact, the public are losing money by investing in fixed and saving deposits of the commercial banks. The interest rate in India is relatively high and according to press report, there is a possibility of its going up in the coming months. It is perhaps more profitable for the Nepalese labour to invest in India than in Nepal. Thus, it is not surprisingly that the remittances from India are declining while those from other countries are following the past trend.

Fraser et. al. (2002, pp. 351-368), have carried out an empirical research study on "Source of bank interest rate risk." This study has investigated bank stocks' sensitivity to changes in interest rates and the factors affecting this sensitivity. They suggest that bank equity returns are sensitive to interest rate changes. Indeed, the research finds a significantly negative relation between bank stock returns and unanticipated changes in interest rates over a period of relatively unstable interest

rates (1991-1996). They also find that bank interest rate risk is invariant to bank size classification.

Individual bank interest rate risk is closely related to characteristics that can be drawn form basic assets, liability and income statement measures. Bank that have more equity capital have less interest rate risk, as do bank that have more loans and finance a larger portion of their assets with demand deposits. In contrast, banks that generate more of their revenue through non-interest income have greater interest rate risk, because a substantial portion of the non-interest income reflects securities-related activities.

The study concludes that the bank stock returns are positively related to the bank's equity/assets ratios, and negatively related to the ratio of net interest income/total revenue. Although the ratio of loans/assets is insignificant in the regression, the ratio of demand deposit/total revenue is positively related to bank stock return. The study finds a significantly negative relation between bank stock returns and changes in interest rates over the period.

According to Resta Jha (2009, p. 96) has carried out the articles titled "Nepali interest rate - where is it heading?" "For a market to become perfect, there are three important components, first is 'market determination of interest rate', second is 'market determination of interest rate', and third is 'market determination of interest rate." With so much stress on free-flowing interest rates, it was clearly evident that the speaker was a strong advocate of a market driven interest rate system. There is no second opinion regarding the above statement and it is a fact that market conditions viz demand and supply of funds must drive the interest rates.

According to Giri (2065, pp. 451-456) in articles "Liquidity crisis in Nepalese financial system and its impact on economy", has opines that liquidity crisis in financial sector refers non-availability of funds for lending purpose. It so happens when deposit becomes unexpected low and easy credit is on booming stage. Crisis of liquidity arises when banks face a worst ease scenario. The banking sector has begun to face some shortfall in liquidity since mid December 2007 and more liquidity shortage from the beginning of January 2008.

The following events show the Nepalese financial sector is suffering from liquidity crisis:

- In the first week of Falgun 2064, an unprecedented beckon plunged into the banking industry of the country. NBL accepted 2000 million rupees on 8% interest rate. Then it started marketing to sell its available funds 4000 million rupees through interbank transaction. Amazingly, the cost of this fund was only 2% interest rate.
- A joint venture bank requested its depositor to allow it for 2 day for the deposit withdrawal amounted to Rs 900 million.
- Some 'B' category banks widely advertised to the public that they have increased the interest rates of deposit.
- A highly reputed person having institutional deposit of Rs 400 million is visiting various commercial banks for the bargaining of high interest rate.
- Nepal Bankers Association has put forward the six-point solutions to NRB following the problems raised from liquidity crisis.

In the past, Nepalese Bank and financial institution showed a bargain attitude in accepting deposits following their confusing remarks in favour of excess liquidity. The bankers are advocating that the current liquidity shortage is a short run financial phenomenon. However, many bankers have rolled out the turning of present position into long-run crisis which could sternly harm on financial strength of the system. In this regard, NRB has advised the banks and financial institutions times and again to correcting their tending behaviour and adjustment in interest rates.

It is liquidity crisis, which drew attention of commercial banks toward several deposit schemes. For Nepal's case, it arose from the consequences of capital flight. Stakeholders seen agree on the crucial facts that capital flight is seen widely because of high interest rates on deposit in India. Because of open border system and having easy socio-economic-cultural relations, people from Nepal do not have any difficulties in depositing their earnings in India. According to him, there are other several reasons behinds accelerating the liquidity shortage.

- In the FY 2007/08, government has issued Treasury Bills worth Rs 6 billion compared to Rs 3.5 billion last year. Moreover, development bonds worth Rs 2.4 billion has also been issued in FY 2007/08 so far compared to Rs 1.2

billion in the previous year. In addition, citizen saving bond of Rs 800 million has also been issued.

- The six months of FY 2007/08 witnessed a substantial growth of private sector credit. In the review period, margin lending, trust receipt, and credit to tourism, real estate and residential construction have increased.
- Compared to Rs 13.4 billion decrease in previous year, balance held abroad of the commercial banks has increased by 6.2 billion in the first 6 months of 2007/08.
- The currency held by public had increased by Rs 2.7 billion in the first seven months, while such a currency held by public increased by 6.7 billion as on Magh 11,2064. A very low interest rate in the banking system might have encouraged people to hold more cash because of low opportunity cost.
- Due to the share issue by ADB/N, the amount has been locked up in the rural branches of ADB/N, which also contributed to lower liquidity in the banking system.
- Similarly, the sell of NTC share has affected the liquidity situation of the banking system. Moreover, Employee Provident Fund is going to invest in Upper Tamakoshi Hydropower Project. There are also other IPOs in the pipeline. These all will affect the liquidity position in coming days also.

The better path for commercial banks is that they should be cautious in lending cheap consumer credits. Extending cheap credits may cause several arbitrages such as taking credit from commercial banks and depositing in India for higher yield. This will lead the balance of payment at risk. In this regard, commercial banks need to be more cautious in managing liquidity. They need to run their financial transaction in as low spread as possible. In short, increasing deposit rates, compressing easy credit to consumer lending, margin credit, trust receipts and lowering the credit-deposit ratio will bring back the financial soundness in track with having adequate level of liquid funds.

2.2.3 Review of Related Dissertation:

Prior to this thesis, several studies have been conducted by different researchers. Some of these as are supposed to be relevant for the justification of need and importance of this study is presented below:

Khati (2003) has made a study on "Impacts of interest rates on deposit mobilization of commercial banks of Nepal." The study had the following objectives.

- To see the impact of interest rates of deposit on collected by the commercial banks.
- To see the impact of interest rates of loan on the credit extends by the commercial banks.
- To see the deposit-credit margin ratio throughout the changed incurred in interest rate by which one can see that how far the deposits have efficiently utilized.

With the above mentioned objectives, he opines that the overall performance of commercial banks is satisfactory and NRB has to play more active role to enhance the operation. Further he writes, the liquidity position of commercial banks have satisfactory. The coefficient of correlation of deposit and lending and investment of commercial banks have better position. However, the coefficient of interest rates and deposits (saving and fixed) of sampled commercial banks do not have better position. In case of trend analysis, the trend value of deposit loan and advances and investment of commercial banks is in better position.

In the anlaysis, it is observed that the increment in the loan and advances supplied by the bank in percentage term within study period is less and while in the collection of deposits the percentage has increased too much. It is because of the facts that the commercial banks have not able to motivate and facilitate to their client's except to change in the rate of interest. He concluded in his study that the interest rate has played important role in deposit mobilization of the bank. So the structure of interest rate should be changed according to the need of the nation.

Pokherel (2004) has conducted a study entitled "Determinants of interest rates in Nepalese financial market." The objectives in this study was to show the relationship between the liquidity position and interest rate on deposit and lending; to identify the effect of inflation on interest rate charge and offered by various Nepalese financial institutions; to identify the difference methods used by Nepalese financial institutions to calculate interest on lending; how interest rate offered on deposit

affected by maturity period and other economic factors; and to identify the other major qualitative factors determining the interest rate charged and provided them.

His anlaysis concludes that the correlation coefficient between interest rate on deposit and amounts of deposit collection of all sample organizations is highly negative. Theoretically, there must be positive correlation, meaning that higher interest rate on deposit attracts more deposits. But the study found that interest rate as depended, which is determined by supply of fund (deposit). Thus, negative correlation shows that when supply increases prices (interest rates) decreases. Similarly, the correlation coefficient between amount loaned and interest rate on lending of the sampled organizations is negative, means that more amounts is demanded at lower interest which means that when demand increases, price (interest rates on lending) also increases. The relationship between interest rates on deposit and inflation rate is positive, and it is same in the case of correlation between interest rate on lending and inflation rate i.e. positive. Further he concludes that the specific factors influencing interest rates on lending are performance of the borrowing company, collateral base, size of business, volume of loan, bargaining power, etc. Besides, interest in Nepalese financial market is also affected by long term economic factors like economic and business growth rate, reduction in lending opportunity due to terrorism, conflicts, insecurity, etc.

Shah (2004) has undertaken her study in the topic "Impact of interest rate structure on investment portfolio of commercial banks in Nepal" with the following objectives:

- To present the concrete picture of the interest rates structure before and after liberalization.
- To study the relationship between interest rates and other economic variables like deposit, loan and advances, total investment and credit flow of commercial banks.
- To evaluate the trends of deposit, loan & advances, and investment and credit position of commercial banks.
- To analyse loans and advances in different sectors of investment portfolio of commercial banks.
- To study the current impact of deregulation on interest rate and its effects on related fields.

With the above mentioned objectives she has pull out the following conclusions.
The interest rte has greater influence over resource mobilization and utilization in the productive sector. It is the main determinants factor of firm's profit. The interest has greater affect on deposit, flow of credit, and investments. After liberalization period NRB has allowed commercial banks to fix the interest rates on their wish. The changes has enables the financial sector to determine the rate of interest on deposit as well as credit. She has analysed that the interest rate on deposit has decreased and the lending rates has been increasing after liberalization. The interest rates on saving deposit are less or more constant in sample period before liberalization but it started to decline after liberalization. Similarly, it was the same case on fixed deposit. The lending rates on purpose-wise loan i.e. industrial sector, agriculture sector has increased in average after liberalization but decreased in commercial sectors. The amount of deposit has increased but the growth rate in average comparison to before liberalization period increased only by 0.44%. Thus, the deposit had not increased more even after the existence of the liberalization due to declining deposit rate. Similarly in the case of credit/loan and advances, they also influenced by the lending rates. Increment in lending rates has decreases the growth percentage of credit flow.

The correlation coefficient between the interest rates and amount on the saving and fixed deposit is found to be less correlated before liberalization and negative correlated after the liberalization. The correlation between deposit and investment is highly positive correlation before but it is found to be negative after the liberalization. She has further concludes that there is no significant relationship between the amount of deposit and interest rates before and after the liberalization. Similarly, there is no significant relationship between the deposit and investment before and after the liberalization period. But there is significant relationship between the purpose-wise loan and lending rates before and after the liberalization period.

Aryal (2004) has conducted research on "Market interest rate and commercial bank profitability." The major objectives of the study are to anlayse the interest rate structure of commercial banks; to find out the determinants that regulates the spread rate; and to assess the overall impact of interest rate fluctuate in bank's profitability.

She has mentioned in her thesis that interest is the price of capital investment of commercial banks. So it certaintly influences their profitability. The spread of interest earning and interest expenses determines the actual profits because income from interest is considered as 80% of the total earnings. Higher interest rate on loans increases the interest earining and interest spread, which results in the better profitability of commercial banks. Further she has concluded that there is a negative relationship between the interest rate and the net profit in the sample companies.
The interest income of large banks group is larger than the small banks group. Another important conclusion about the study is the way interest rates affect the net profit of commercial bank, and how sometimes the affect can be negative. Form the empirical analysis, it was further noted that the interest rate plays a determinant role in the procurement of the profit in commercial banks.

Shrestha (2005) has conducted a research work on "Impact of interest rates on deposit mobilization of commercial banks of Nepal." The main objective of the study were to study the impact of interest rates on mobilization of deposit; to study the interest spread and its impact in the profitability on bank; and to study the dominance of interest income to total earning of the bank.
According to him, interest rate is the dominating factor for collection and mobilization of deposits. The interest rate is high and low, whatever may be, is determined by the market forces and standing of the bank in the market. Big banks in the present market situation are giving lower interest rate in deposit and expect lower interest in return. On the contrary to this, small and new banks are offering comparatively higher interest rates on deposits and disburses loan at interest rate similar to well established banks. This has comparatively decreased interest spread of smaller banks. Similarly, the study also reveals that the top banks have comparatively lower dependency on interest income for profit position than smaller banks. Thus, the smaller banks are prone to face higher impact of interest rate on the mobilization of its fund. Thus, they need to increase the interest rate and decrease the lending rate to minimize the expected negative impact of interest rate. Impact of interest rates has been seen positive since, profit of all banks is increasing. Though interest income and expenses of bigger banks are at decreasing trend it still is much higher than smaller banks, which are growing rapidly. This shows that it is not just

interest rate but there are factors other than interest rates determines the position of bank. He further concludes that the wider spread of interest rate help the commercial banks to manage the higher liquidity position and good profitability.

According to Shrestha (2008) view, the interest rates on both deposit and lending of all sampled banks are found to be in increasing trend. The saving deposit amount and saving interest have inverse relationship of all sample banks. Similarly, the fixed deposit shows negative correlation except NABIL and NBBL. This negative correlation coefficient shows that people deposit more money even if the bank offer the lower yield rate on fixed deposit. In the study, it is found that all sample banks have negative correlation between lending rate and lending amount. The correlation coefficient between deposit rate and lending rate have strong positive correlation i.e. range of 0.78 to 0.97. She has further concludes that the relationship between interest rates on deposit and inflation rate is negative. Nepalese financial market is affected by inflation on lending interest rates to some extent, though the theory says that there exists a positive relationship. It is also found that the real rate of return is negative in some years. This indicates that depositor, instead of earning money, they loose their money in real sense, if they deposit in the bank. This is due to deposit interest rate lower that inflation rate. Lastly, she has concluded that the lending interest rate of the productive sector loan was decreased lesser in magnitude in comparison to the non-productive sector loan.

Poudel (2008), undertake his study in the topic "Factors influencing interest rates on Nepalese commercial banks" with the following objectives:

- To find out factor affecting interest rates.
- To identify the effect of inflation on interest rate charged and offered by various Nepalese commercial banks.
- To show the relationship between the liquidity position and interest rate on deposit and lending.

The conclusions drawn by Poudel are as follows:

- The amount of loan is the factor affecting interest rate on lending. The correlation between amount of loan and interest rate on lending of selected

banks are found highly negative. The relationship between the interest rate on deposit and lending for all sample banks are highly positive.

- The relationship between the interest rate on deposit and inflation is negative except NABIL. Theoretically, there should be positive correlation between these two variables. This shows that the Fisher's effect is not perfectly functioning in Nepalese financial market. Even increase in inflationary rate individual is willing to save more and more fund causing the lower in market interest rate.
- He also opines that the correlation coefficient between the interest rates on lending and inflation rate for all sample banks is negative except NABIL. Nepalese financial market is affected by inflation to some extent. It may be due to the higher liquidity position.
- The deposit amount of all sample banks is in increasing order though the interest rate on deposit is in decreasing trend. This shows that there is over liquidity with commercial banks which shown by increasing trend of deposit.
- The relationship between interest rate and lending with risk free rate is highly positive for all sample banks.
- Finally, the period of loan seems not important factor to affect interest rate on lending but interest rate on deposit is affected by the maturity period.

2.2.4. Review of Policy:

The following are NRB's directives relating to interest rates issued for the commercial banks effective from February 14, 2001.

i. Written information clearly specifying the interest rates for all kinds of deposits accepted by the bank and interest rates charged on all kinds of loans by type and purpose shall be submitted to NRB on regular as well as compulsory basis immediately after changes are being made and on quarterly basis where there are no changes and that the same shall also be publicized through communication media for the information of general public.

ii. The commercial banks could offer interest rate more than published interest rate by 50 basis points on the basis of negotiation with the customers for the deposits of 200 million and 100 basis points for the deposits more than 200 million.

iii. Over the published lending rates for all types of loan, the bank could make the adjustment upto 50 basis points on the basis of negotiation with the customer.

iv. While publishing any deposits rates or any lending rates except the provision on above (ii) and (iii), the commercial banks were not allowed to mention the term "could be determine on the basis of negotiation." If interest rates are determined against this directive, penalty equivalent to an amount arising such increased or lowered rate of interest should be imposed.

Provision on Interest Income (Shrestha, 2004)

The interest accrual on loans and advances is recognized on cash basis and exhibited under this head. The amount of interest accrued but not received is debited to "Accrued Suspense Account" in the assets side and credited to "Interest Suspense Account" in liability side of balance sheet. However, if the accrued interest on loan is realized in cash within one month from the date of closure of the fiscal year. In this respect, the following procedure shall be adhered to:

- Interest accruals during the related period shall be debited to "Accrued Interest Account" credit to "Interest Suspense Account."
- The balance is such "Accrued Interest Account" shall be recognized into income only if cash is realized from the customer or by debiting the customer's current account, if the balance is sufficient of falls within the overdraft limit.
- Only the amount realized by way of debiting the customers current account within one month from the closure of the fiscal year may be recognized into interest income in the earlier fiscal 1 year by debiting "Interest Suspense Account."
- In respect of interest realization by way of capitalization the same may be done only for interest covering the period specified as per the repayment schedule in the loan agreement.

In respect of the outstanding loan and advances, till the loans are realized or written off, banks shall continue to account for the interest accrual under "Accrued Interest Account" and "Interest Suspense Account" in the assets side and liabilities side of the balance sheet.

CHAPTER III

RESEARCH METHODOLOGY

3.1 INTRODUCTION:

Research methodology is the process of arriving at the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figures. The basic objective of this study is to unearth how interest rate is playing an important role in the performance of the bank. It is basically all about finding pros and cons of the bank, also finds what are its competitive edge that are based interest earnings and interest expenses in the present and also visualize the future prospects. For this study several processes and methodologies are followed and tools are used in systematic form to bring about thorough result and ideas in the progressive form.

3.2 Research Design

According to Kothari (1989), research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy procedure. It is the plan structure and strategy of investigation conceived so as to obtain answers to research question and to control variance. In simply, research design is the arrangement of conditions for collection and analysis of data to achieve the objective. To achieve the objectives of this study, descriptive and analytical research design have been used. Also some statistical and accounting tools have been applied to evaluate the impact of interest rates on the performance of the bank.

3.3 Population and Sample

It is not possible to study all the data related with all commercial banks of Nepal. There are 25 commercial banks in the country upto mid July 2008 and must of their

stocks are traded in the stock market. Out of 25 commercial banks, 6 joint venture banks are operating their services. In this study, 4 joint venture banks are randomly selected. The following are the sample commercial banks that are randomly chosen.

Sample

1. **Nabil Bank Limited**
2. **Standard Chartered Bank Nepal Ltd**
3. **Himalayan Bank Ltd.**
4. **Everest Bank Ltd.**

(Population and introduction of sample banks is in appendix-4)

3.4 Sources of Data:

The research work is based mainly on secondary data. The secondary data is used in higher extent due to time constraint and other important unreachable factor. Secondary data such as annual report of Nabil Bank Limited, Standard Chartered Bank Nepal Limited, Himalayan Bank Limited, Everest Bank Limited and many other necessary reports from Nepal Rastra Bank.

According to the need and objectives, all the secondary data are compiled, processed and tabulated in time series. Formal and informal talks to the concern member of department of the bank have been used to obtain additional information of the related problem. Similarly various data and information are collected from the periodicals, economic bulletins, journals, magazines and other published and unpublished reports and document from various sources are also been used.

3.5 Methods of Analysis

To achieve the objectives of the study various financial statistical and accounting tools have been used in this study. The analysis of data has been done according to the pattern of data available. Data collected has been brought under statistical scrutiny after the raw data is edited, coded and tabulated. Data has been analysed in descriptive form interpreting each part systematically so that each and every person is able to understand as per their need.

The data covered from different sources will go through two different approaches.

i). Financial Tools

ii). Statistical Tools

i). Financial Tools:

Under financial tools, simple growth patterns and some sophisticated tools like ratio analysis has been used. Out of various financial tools the analysis of the following ratios has been used to evaluating the performance of the banks.

1. Loan and Advances to Total Deposit Ratio
2. Total Investment to Total Deposit Ratio
3. Return on Total Deposit Ratio
4. Interest Earned to Total Assets Ratio
5. Interest Coverage Ratio
6. Net Interest Margin
7. Analysis of Net Interest Income
8. Analysis of Effective Interest Income Rate
9. Analysis of Effective Interest Cost Rate
10. Analysis of Interest Spread Rate
11. Risk Ratio
12. Growth Ratio
13. Analysis of Market Interest Rate
14. Comparative Interest Rate of Commercial Banks.
15. Deposit Ratio

Statistical Tools used:

Coefficient of correlation analysis (r):

Correlation is the statistical tool which is use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degree of relationship between two set of figure. Among the various method of finding out coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always between +1 to -1, when r = +1, it means there is perfect relationship between two variables and vice versa. When r = 0, it means there is no relationship between two variables.

The correlation will be determined for following group variables.

1. Coefficient of correlation between Average Deposit Interest Rate and Total Deposit.
2. Coefficient of correlation between Average Lending Interest Rate and Total Credit.
3. Coefficient of correlation between Total Deposit and Total Lending.
4. Coefficient of correlation between Interest Spread and Net Profit.

Regression Analysis:

Regression is a mathematical measure of the average relationship between two or more variables in terms of original units of data. Correlation coefficient measures the degree of relationship between two variables where as the regression analysis is used to estimate the likely value of one variable from the known value of the other variables. The main objective of regression analysis is to predict or estimate the value of dependent variable corresponding to a given value of independent variables. In this study, regression analysis of the following dependent and independent variables has been done.

1. Between Deposit Collection (Dependent Variables) and Deposit Interest Rate (Independent Variable) of banking industry.
2. Between Lending (Dependent Variables) and Lending Interest Rate (Independent Variable) of banking industry.

Regression equation of Y on X is given by

Y = a + bx ……. (i)

where,

Y = Dependent Variables

X = Independent Variables

a = Intercept of the line

b = Slope of the line (it measures the average change in the value of Y as a result of one unit change in value of X). It is also called regression coefficient of Y on X. It measures the rate of relationship.

The value of the constant a and b determined by solving following two normal equations (applying principle of method of least squares).

Y X**na** Γ **b** **X** …… **(ii)**

XY X**a** **X** Γ **b** **X**^{2} …….. **(iii)**

Now, substituting the value of a and b in equation (i), we get required estimated regression equation of Y on X.

t-test:

To test the validity of the assumption, if sample size is less than 30, t-test is used. For applying t-test in the context of small sample, the 't' value is calculated first and compared with the table of 't' at a certain level of significance for value of 't' exceeds the table value (say 0.05), the result concludes that the difference is significant at 5% level. But if 't' is less than the concerning table value of the 't' the difference is not treated as significant.

The test of following null hypothesis will be examined to draw the conclusion

1. Deposit interest rate does not play a significant role in deposit collection.
2. Lending interest rate does not play a significant role in loan disbursement.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter is the core of the study which includes detailed presentation, analysis and their interpretation of data from which concrete result of Nepalese financial market can be obtained. In this section, the filtered data are presented and analyzed. To make the study effective and precise as well as easily understandable, this chapter is categorized into three parts; presentation, analysis and interpretation. The analysis is fully based on secondary data. Firstly, data are presented in terms of table, graph charts of figures according to the need. The presented data are then analyzed using various statistical tools as mentioned in chapter three according to the requirement of the study and at last interpretation is made as per properties of presented data and calculated value.

4.1 Ratio Analysis:

The Ratio Analysis is used to compare a firm's financial performance status to that of firms or to itself over time. From the help of ratio analysis, qualitative judgment can be done regarding financial performance of a firm.

4.1.1 Loan and Advances to Total Deposit ratio:

This ratio can be calculated by dividing loan and advances by total deposits i.e.

$$\text{Loan and Advances to Total Deposit Ratio} = \frac{\text{Loans \& Advances}}{\text{Total Deposits}}$$

The following table represents total loan to total deposit of sampled joint venture banks.

Table no. 4.1 Loans & Advances to Total Deposit **(**Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	14119	14586.6	19347.4	23342.3	31915
Loan & Advances	8190	10586.2	12922.5	15546	21365
Loan & Advances/Deposits	**58.00%**	**72.57%**	**66.79%**	**66.60%**	**66.94%**
Growth Rate		**25.12%**	**-7.96%**	**-0.28%**	**0.51%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	21161.4	19363.5	23061	24647	29744
Loan & Advances	6410.24	8143.21	8935.42	10502.6	13718.6
Loan & Advances/Deposits	**30.29%**	**42.05%**	**38.75%**	**42.61%**	**46.12%**
Growth Rate		**38.82%**	**-7.85%**	**9.96%**	**8.24%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	22010.3	24814	26490.9	30048.4	31939.87
Loan & Advances	12919.6	13451.2	15762	17793.7	20179.6
Loan & Advances/Deposits	**58.70%**	**54.21%**	**59.50%**	**59.22%**	**63.18%**
Growth Rate (%)		**-7.65%**	**9.76%**	**-0.47%**	**6.69%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	8063.9	10097.7	13802.4	18186.2	23976.3
Loan & Advances	6095.8	7900	10136.2	14082.7	18814.29
Loan & Advances/Deposits	**75.59%**	**78.24%**	**73.44%**	**77.44%**	**78.47%**
Growth Rate (%)		**3.49%**	**-6.13%**	**5.45%**	**1.33%**

Source: Annual Reports of respective banks

Table no.4.1 shows the total loan to total deposit of sampled commercial banks. The ratio of NABIL and EBL shows they have comparatively invested high portion of their deposit funds into lending than SCBNL and HBL. NABIL lent as high as 60% in the last 4 years of study. SCBNL has been very much conservative in lending because its ratio never went higher than 50%. HBL has lent more than 55% in the study period whereas EBL has seems aggressive lending policy by lending above 73%.

4.1.2 Total Investment to Total Deposit Ratio:

This ratio can be calculated by dividing total investment by total deposit.

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investments}}{\text{Total Deposits}}$$

Total investment consists of investment on government securities, investment on debentures and bonds, shares in subsidiary companies, shares in other companies etc.

Table no. 4.2 Total Investment to Total Deposit (Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	14119	14586.6	19347.4	23342.3	31915
Investments	5836	4275.5	6178.5	8945.3	9939.7
Investments/Deposits	**41.33%**	**29.31%**	**31.93%**	**38.32%**	**31.14%**
Growth Rate		**-29.08%**	**8.94%**	**20.01%**	**-18.74%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	21161.4	19363.5	23061	24647	29744
Investments	11360.3	9702.6	12838.5	13553.2	13902.8
Investments/Deposits	**53.68%**	**50.11%**	**55.67%**	**54.99%**	**46.74%**
Growth Rate		**-6.65%**	**11.1%**	**-1.24%**	**-15%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	22010.3	24814	26490.9	30048.4	31939.87
Investments	9292.1	11692.34	10889	11823	12752
Investments/Deposits	**42.22%**	**47.12%**	**41.10%**	**39.35%**	**39.93%**
Growth Rate		**11.61%**	**-12.78%**	**-4.26%**	**1.47%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	8063.9	10097.7	13802.4	18186.2	23976.3
Investments	2535.7	2128.9	4200.5	4984.3	6452.83
Investments/Deposits	**31.45%**	**21.08%**	**30.43%**	**27.41%**	**26.91%**
Growth Rate		**-32.97%**	**44.35%**	**-9.92%**	**-1.82%**

Source: Annual Reports of respective banks

Table no.4.2 shows investments to total deposit of sample commercial banks. NABIL has investment of around 41% at the most in the year 2003/04 and it has decreasing trends in the following years. SCBNL has invested around 56% at the most in the year 2005/06, however it decrease down to 54.99% in 2006/07 and 46.74% in 2007/08. HBL invested around 47% as high in 2004/05, however in the following years showed decreasing trend i.e. 47.12%, 41.10%, 39.35% and 39.93% respectively. Similarly, EBL seems lack behind other banks in investment. It invested around 31% at the most in the year 2003/04 and the decreasing down to 26.91% in the last year. This shows that SCBNL has been forward to investment of its funds i.e. more than 45% than other banks.

4.1.3 Return on Total Deposit Ratio:

This ratio measures the degree of NPAT by using total deposit. In other words, it reveals the relationship between NPAT and total deposits with an explanation of the ability of management in efficient utilization of deposits. This ratio is a mirror of bank's overall financial performance as well its success in profit generation. Return on total deposit ratio can be computed by using following formula.

$$\text{Return on Total Deposit Ratio} = \frac{\text{NPAT}}{\text{Total Deposits}}$$

Table no.4.3 reveals the return on total deposit of the concerned banks. In the beginning NABIL has 3.22% and increased to 3.56% in 2004/05 and then onwards it has decreasing trends. Similarly, SCBNL has 2.54% in the year 2003/04 and increased to 2.77% in 2004/05 and then onwards it has also decreasing trends. HBL and EBL showed zigzag curve. HBL has recorded 2.05% as highest in the year 2007/08 and EBL has recorded 2.05% highest in the same year 2007/08.

Table no. 4.3 Return on Total Deposit (Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	14119	14586.6	19347.4	23342.3	31915
NPAT	455.31	518.64	635.26	674	746.47
NPAT/Deposits	**3.22%**	**3.56%**	**3.28%**	**2.89%**	**2.34%**
Growth Rate		**10.56%**	**-7.87%**	**11.9%**	**-19.03%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	21161.4	19363.5	23061	24647	29744
NPAT	537.8	536.25	658.76	691.67	818.92
NPAT/Deposits	**2.54%**	**2.77%**	**2.86%**	**2.81%**	**2.75%**
Growth Rate		**9.06%**	**3.25%**	**-1.75%**	**-2.14%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	22010.3	24814	26490.9	30048.4	31939.87
NPAT	263.05	308.28	457.46	491.82	654.39
NPAT/Deposits	**1.20%**	**1.24%**	**1.73%**	**1.64%**	**2.05%**
Growth Rate		**3.33%**	**39.52%**	**-5.2%**	**25%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	8063.9	10097.7	13802.4	18186.2	23976.3
NPAT	143.5	170.8	237.2	296.4	491.5
NPAT/Deposits	**1.78%**	**1.69%**	**1.72%**	**1.63%**	**2.05%**
Growth Rate		**-4.95%**	**1.60%**	**-5.16%**	**25.78%**

Source: Annual Reports of respective banks

4.1.4 Interest Earned to Total Assets:

This ratio reveals how much interest mobilizing the assets in the banks has generated. Interest occupies significant place in income for the banks. Generally, banks earn interest through the provision of loans and advances, overdraft and investments in securities. Higher ratio indicates higher efficiency in the mobilization of resources and ability of interest earning and vice-versa. This ratio can be found by using:

$$\text{Interest Earned to Total Assets Ratio} = \frac{\text{Interest Earned}}{\text{Total Assets}}$$

where, Interest Earned represents the total interest earned in Income Statement of the bank.

Table no. 4.4 Interest Earned to Total Asset (Rs in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1002	1069	1310	1588	1979
Total Assets (TA)	16745.19	17064.08	22330	27253.4	37133
Interest Earned/TA	**5.98%**	**6.26%**	**5.87%**	**5.83%**	**5.33%**
Growth Rate		**4.48%**	**-6.23%**	**-0.68%**	**-8.58%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1042.18	1058.68	1190	1412	1591.2
Total Assets (TA)	23642.06	21781.68	25767.65	28596.69	33335.79
Interest Earned/TA	**4.41%**	**4.86%**	**4.62%**	**4.94%**	**4.77%**
Growth Rate		**10.20%**	**-4.94%**	**6.94%**	**-3.44%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1245.9	1446.47	1626.47	1775.58	1978.29
Total Assets (TA)	25729.79	28871.34	30579.81	34314.87	37648.34
Interest Earned/TA	**4.84%**	**5.01%**	**5.32%**	**5.17%**	**5.25%**
Growth Rate		**3.51%**	**6.19%**	**-2.82%**	**1.54%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	660.2	719.3	903.41	1144.41	1548.7
Total Assets (TA)	9967.2	11732.52	15959.28	21432.57	28565.9
Interest Earned/TA	**6.62%**	**6.13%**	**5.66%**	**5.34%**	**5.42%**
Growth Rate		**-7.4%**	**7.67%**	**-5.65%**	**1.5%**

Source: Annual Reports of respective banks

Table no. 4.4 represents the ratio of interest earned to total assets. NABIL has earned 6.26% as high in 2004/05 and then has decreasing trend to 5.87%, 5.83% and 5.33% respectively. The ratio of SCBNL is at the decreasing trend but has maintained

higher rate at 4.62% at the least in the 2005/06. Others are 4.41% in 2003/04, 4.86% in 2004/05, 4.94% in 2006/07 and 4.77% in 2007/08. As HBL has recorded 5.32% as high in year 2005/06 and then decreased to 5.17% and 5.25% in last two consecutive years. Similarly for EBL, the ratio is 6.62% in 2003/04; decreased to 6.13% in 2004/05; 5.66% in 2004/05; 5.34% in 2006/07 and increased to 5.42% in 2007/08.

4.1.5 Interest Coverage Ratio:

The ratio measures the firm's debt serving capacity or ability to make interest on long term debt. The higher the ratio, the better will be the capacity of the firm to fulfill its interest obligation. This ratio is calculated as follows:

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

where, EBIT = Earning Before Interest and Taxes.

EBIT is calculated as: NP + Provision for income tax + Interest Expenses

Table no. 4.5 Interest Coverage Ratio (Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
EBIT	940.02	1001.33	1255.16	1550.76	1847.43
Interest Expenses	282.95	243.54	357.16	555.71	758.44
ICR	**3.32**	**4.11**	**3.51**	**2.79**	**2.44**
Growth Rate		**23.80%**	**-14.60%**	**-20.51%**	**12.54%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
EBIT	1049.4	1052.27	1242.58	1429.16	1665.1
Interest Expenses	275.81	254.13	303.2	413.06	471.73
ICR	**3.80**	**4.14**	**4.10**	**3.46**	**3.53**
Growth Rate		**8.95%**	**-0.97%**	**-15.61%**	**2.02%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
EBIT	912.11	1084.51	1321.24	1484.83	1779.07
Interest Expenses	491.54	561.96	648.84	767.41	823.76
ICR	**1.86**	**1.93**	**2.04**	**1.93**	**2.16**
Growth Rate		**-3.63%**	**5.70%**	**-5.39%**	**11.92%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
EBIT	587.7	552.28	747	971.88	1355.4
Interest Expenses	316.4	299.6	401.4	517.2	632.6
ICR	**1.86**	**1.84**	**1.86**	**1.88**	**2.14**
Growth Rate		**-1.05%**	**1.09%**	**1.08%**	**13.83%**

Source: Annual Reports of respective banks

Table 4.5 shows that SCBNL has maintained comparatively higher interest coverage ratio than other 3 banks. The figure of NABIL has higher than 2 times in the study period. As it has 4.11 times as highest in the year 2004/05 and then decreased to 2.44 in the 2007/08. SCBNL has enjoyed better ICR. In 2004/05, it has highest 4.14 times and then decreased to 4.10 and 3.46 times in 2005/06 and 2006/07 respectively and increased to 3.53 in last years. The figures of HBL went lower than 2 times in 2003/04 and 2004/05 which is totally undesirable figure. In 2005/06 it has 2.04 times; 1.93 in 2006/07 and success to maintain 2.16 in 2007/08. EBL has maintained the ratio between 1.84-1.88 till 2006/07 and increased to 2.14 in 2007/08.

4.1.6 Net Interest Margin (NIM):

It is the difference between interests charged on loan & advances and investment and interest paid on the deposit of the bank. It shows the profit earning potential of the bank. NIM = $\frac{\text{Interest Income - Interest Expenses}}{\text{Loan and advances } \Gamma \text{ Investment on Securities}}$

Table no. 4.6 Net Interest Margin (Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Income	1002	1069	1310	1588	1979
Interest Expenses	282.95	243.54	357.16	555.71	758.44
Loan & Advances + Investment	14026	14861.7	19101	24491.3	31304.7
Net Interest Margin (NIM)	**5.13%**	**5.55%**	**4.99%**	**4.21%**	**3.90%**
Growth Rate		**8.18%**	**-10.09%**	**-15.6%**	**-7.36%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Income	1042.18	1058.68	1190	1412	1591.2
Interest Expenses	275.81	254.13	303.2	413.06	471.73
Loan & Advances + Investment	17770.54	17845.81	21773.92	24055.8	27621.4
Net Interest Margin (NIM)	**4.31%**	**4.51%**	**4.07%**	**4.15%**	**4.05%**
Growth Rate		**4.64%**	**-9.76%**	**1.97%**	**-2.41%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Income	1245.9	1446.47	1626.47	1775.58	1978.29
Interest Expenses	491.54	561.96	648.84	767.41	823.76
Loan & Advances + Investment	22211.7	25143.54	26651	29616.7	32931.6
Net Interest Margin (NIM)	**3.40%**	**3.52%**	**3.67%**	**3.40%**	**3.51%**
Growth Rate		**3.53%**	**4.26%**	**-7.36%**	**3.24%**
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Income	660.2	719.3	903.41	1144.41	1548.7
Interest Expenses	316.4	299.6	401.4	517.2	632.6
Loan & Advances + Investment	8631.5	10028.9	14336.7	19067	25267.12
Net Interest Margin (NIM)	**3.98%**	**4.18%**	**3.50%**	**3.29%**	**3.63%**
Growth Rate		**5.03%**	**-16.27%**	**-6.00%**	**10.33%**

The table no. 4.6 reveals the net interest margin. For Nabil, 5.55% is highest in the year 2004/05 and then onwards it is in decreasing trends i.e. 4.99%, 4.21%, 3.9% in the year 2005/06, 2006/07 & 2007/08 respectively. Same is happens with SCBNL. NIM is highest in year 2004/05 i.e. 4.51% and then onwards also in decreasing trends. In the case of HBL, NIM is increasing from 3.4% to 3.67% from 2003/04 till 2005/06 and then decrease in 2006/07 by -7.36% and in 2007/08 it is 3.51% as increased by 3.24%. For EBL, 4.18% is highest in year 2004/05, then decreased to 3.5% and 3.29% in 2005/06 and 2006/07 respectively and increased to 3.63% in 2007/08.

4.1.7 Analysis of Net Interest Income:

Net interest income is the difference between the interest earned and interest paid. Higher the spread between interest income and interest expenses shows the effective and efficient mobilization of deposits.

Table no. 4.7 Net Interest Income (Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1002	1069	1310	1588	1979
Interest Expenses	282.95	243.54	357.16	555.71	758.44
Net Interest Income	**719.05**	**825.46**	**952.84**	**1032.29**	**1220.56**
Growth Rate		**14.80%**	**15.43%**	**8.34%**	**18.24%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1042.18	1058.68	1190	1412	1591.2
Interest Expenses	275.81	254.13	303.2	413.06	471.73
Net Interest Income	**766.37**	**804.55**	**886.80**	**998.94**	**1119.47**
Growth Rate		**4.98%**	**10.22%**	**12.65%**	**12.07%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1245.9	1446.47	1626.47	1775.58	1978.29
Interest Expenses	491.54	561.96	648.84	767.41	823.76
Net Interest Income	**754.36**	**884.51**	**977.63**	**1008.17**	**1154.53**
Growth Rate		**17.25%**	**10.53%**	**3.12%**	**14.52%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	660.2	719.3	903.41	1144.41	1548.7
Interest Expenses	316.4	299.6	401.4	517.2	632.6
Net Interest Income	**343.8**	**419.70**	**502.01**	**627.21**	**916.1**
Growth Rate		**22.08%**	**19.61%**	**24.94%**	**46.06%**

Source: Annual Reports of respective banks

According to the table no. 4.7, the entire bank except EBL has maintained net interest income above Rs. 700 million till 2007/08. But in 2007/08 EBL has able to

maintain NII as Rs. 916.1 million. However all the bank has able to maintain their net interest income in increasing trends and their growth rate are also performing better.

4.1.8 Analysis of Effective Interest Income Rate:

Effective interest rate is the percentage of interest earned over interest earning assets. This indicates the earning capacity of earning assets. In this study, earning assets of commercial banks is taken as loans and advances; and investment in shares and debentures. This can be calculated by;

$$\text{Effective Interest Income Rate (EIIR)} = \frac{\text{Interest Earned}}{\text{Interest Earning Assets}} \times 100$$

Table no. 4.8 Effective Interest Income Rate (Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1002	1069	1310	1588	1979
Interest Earning Assets	14026	14861.7	19101	24491.3	31304.7
EIIR	**7.14%**	**7.19%**	**6.86%**	**6.48%**	**6.32%**
Growth Rate		**0.70%**	**-4.59%**	**-5.54%**	**-2.47%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1042.18	1058.68	1190	1412	1591.2
Interest Earning Assets	17770.54	17845.81	21773.92	24055.8	27621.4
EIIR	**5.86%**	**5.93%**	**5.47%**	**5.87%**	**5.76%**
Growth Rate		**1.19%**	**-7.76%**	**7.31%**	**-1.87%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	1245.9	1446.47	1626.47	1775.58	1978.29
Interest Earning Assets	22211.7	25143.54	26651	29616.7	32931.6
EIIR	**5.61%**	**5.75%**	**6.10%**	**6.00%**	**6.01%**
Growth Rate		**2.50%**	**6.09%**	**-1.64%**	**0.17%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Earned	660.2	719.3	903.41	1144.41	1548.7
Interest Earning Assets	8631.5	10028.9	14336.7	19067	25267.12
EIIR	**7.65%**	**7.17%**	**6.30%**	**6.00%**	**6.13%**
Growth Rate		**-6.27%**	**-12.13%**	**-4.76%**	**2.17%**

Source: Annual Reports of respective banks

The table no. 4.8 shows effective interest income rate of sample bank. The interest income rates of all of them have above 5%. In F.Y. 2003/04, Nabil has 7.14%,

increased to 7.19% in 2004/05 and decreased till 2007/08 to 6.32%. In F.Y. 2003/04, SCBNL has 5.86%; increased to 5.93% in 2004/05; decreased to 5.47% in 2005/06; increased to 5.87% in 2006/07 and again decreased to 5.76% in 2007/08. For HBL, it is 5.61% in 2003/04; 5.75% in 2004/05; 6.10% in 2005/06; 6% in 2006/07 and 6.01% in 2007/08. Similarly for EBL, it is 7.65% in 2003/04; 7.17% in 2004/05; 6.30% in 2005/06; 6% in 2006/07 and 6.13% in 2007/08.

4.1.9 Analysis of Effective Interest Cost Rate:

Effective Interest Cost rate gives the information about how costly are the interest earning assets. If the cost of acquiring fund for investment is high, it earns less income and ultimately decreases profit of the bank. Therefore, lower the interest cost rate better will be the profit of the bank. It can be calculated as;

$$\text{Effective Interest Cost Rate (EICR)} = \frac{\text{Interest Cost}}{\text{Interest Paying Liabilities}} \times 100$$

where, Interest Paying Liabilities = Deposit + Short Term Loan

Short Term Loan = "Borrowing" items of Balance Sheet

Table no. 4.9 reveals the interest cost rate of sample commercial banks. The entire sample bank has success to maintain the ratio between 1.3%-3.78% in an overall figure. In F.Y. 2003/04, Nabil has 1.97%, SCBNL has 1.3%, HBL has 2.17%, and EBL has 3.78%. In F.Y. 2004/05, Nabil has 1.67%, SCBNL has 1.31%, HBL has 2.22%, and EBL has 2.88%. In F.Y. 2005/06, Nabil has 1.83%, SCBNL has 1.31%, HBL has 2.40%, and EBL has 2.85%. In F.Y. 2006/07, Nabil has 2.29%, SCBNL has 1.65%, HBL has 2.5%, and EBL has 2.80%. Similarly in F.Y. 2007/08, Nabil has 2.26%, SCBNL has 1.59%, HBL has 2.51% and EBL has 2.61%.

Table no. 4.9 Effective Interest Cost Rate (Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Expenses	282.95	243.54	357.16	555.71	758.44
Interest Paying Liabilities	14348.7	14604.1	19520.6	24224.87	33515
EICR	**1.97%**	**1.67%**	**1.83%**	**2.29%**	**2.26%**
Growth Rate		**-15.23%**	**9.58%**	**25.14%**	**-1.31%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Expenses	275.81	254.13	303.2	413.06	471.73
Interest Paying Liabilities	21239.7	19391.1	23061	25047	29744
EICR	**1.30%**	**1.31%**	**1.31%**	**1.65%**	**1.59%**
Growth Rate		**0.77%**	**0.00%**	**25.95%**	**-3.64%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Expenses	491.54	561.96	648.84	767.41	823.76
Interest Paying Liabilities	22669.3	25320.05	26995.5	30644.4	32809.9
EICR	**2.17%**	**2.22%**	**2.40%**	**2.50%**	**2.51%**
Growth Rate		**2.30%**	**8.11%**	**4.17%**	**0.40%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Interest Expenses	316.4	299.6	401.4	517.2	632.6
Interest Paying Liabilities	8363.9	10397.7	14102.7	18486.2	24276
EICR	**3.78%**	**2.88%**	**2.85%**	**2.80%**	**2.61%**
Growth Rate		**-23.81%**	**-1.04%**	**-1.75%**	**-6.79%**

4.1.10 Analysis of Interest Spread Rate:

Interest rate spread is difference in rate at which bank earn through investments and rate offered in attracting deposits and borrowings. Higher the spread in rate higher will be the income of the bank.

Table no. 4.10 Interest Spread Rate of Banks (in % p.a.)

Year	Nabil	SCBNL	HBL	EBL
2003/04	4.46	3.76	3.25	4.00
2004/05	5.01	3.70	3.19	4.10
2005/06	4.90	4.10	3.80	4.00
2006/07	4.15	3.95	3.57	3.90
2007/08	3.94	4.01	3.85	4.05
Average	**4.49**	**3.90**	**3.53**	**4.01**

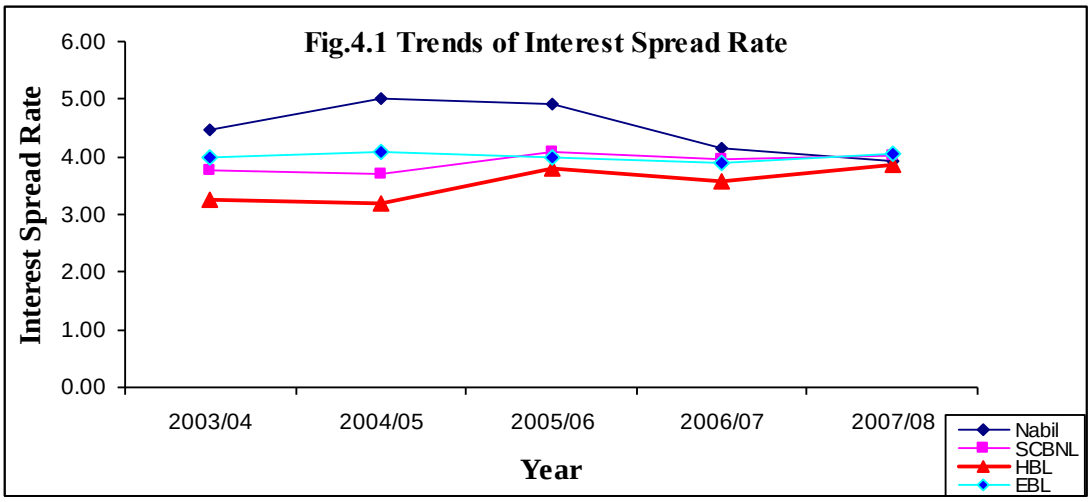
Source: Annual Bank Supervision Report 2008

Table 4.10 shows the interest spread rate of sample commercial banks. In 2003/04, Nabil has highest spread rate i.e. 4.46% whereas, SCBNL has 3.76%, HBL has

3.25% and EBL has 4%. In 2004/05, Nabil and EBL have increased their spread rate i.e. 5.01% and 4.1% respectively, while SCBNL and HBL have decreased to 3.70% and 3.19% respectively. In 2005/06, Nabil and EBL have decreased their spread rate to 4.90% and 4.0% while SCBNL and HBL has increased and reached to 4.1% and 3.8% respectively. In 2006/07, all the mention banks has decreased their spread rate i.e. Nabil has 4.15%, SCBNL has 3.95%, HBL has 3.57% and EBL has 3.9%. Similarly in 2007/08, Nabil has still decreased to 3.94%, SCBNL has increased to 4.01%, HBL has increased to 3.85% and EBL has also increased to 4.05%.

Graphic Representation of movement of Interest Rate Spread:

The following graph represents the interest rate spread of Nabil, SCBNL, HBL and EBL of last 5 years period.



According to fig.4.1, the trend line of Nabil has showed slope line up in 2004/05 and decreasing trend then onwards. The trend line of SCBNL has showed firstly decreased in 2004/05 and then increased in 2005/06 and decreased in 2006/07 and again increased in 2007/08. The trend line of HBL has showed fluctuating, firstly decreased in 2004/05, increased in 2005/06, again decreased in 2006/07 and again increased in 2007/08. Similarly, the trend line of EBL has seemed to be slightly increased and decreased slope line. The trend line has increased in 2004/05, decreased in 2005/06, again decreased in 2006/07, and increased in 2007/08.

4.1.11 Risk Ratio:

Every business is exposed to various risks, which are quite unforeseen. The possibility of risk makes investment a challenging task. Investor has to take risk to

get return on its investment. The risk taken is compensated by the increase in profit. So, the banks opting for high profit have to accept the risk and manage it efficiently. There are many types of risks such as liquidity risk, exchange rate risk, legal risk, security risk, capital risk, operating risk, management risk, etc. that a banking business is exposed to in the course of its business. The brief description of risk ratios relevant to subject matter of the study are discussed below.

a) Liquidity Risk Ratio:

When there is a huge mismatch between cash receipts and cash payments, liquidity risk arises. The liquidity risk of bank defines its liquidity need for deposits. The cash and bank balance are the most liquid assets and they are considered a bank's liquidity sources and deposits as the liquidity needs. The ratio of cash and bank balance to total deposit is an indicator of liquidity needs.

The risk is low if funds are kept idle or as cash and bank balance. But this affects in profitability, when bank disburses loan, its profit increases and also the risk. Thus higher liquidity ratio indicates less risks and less profitable bank and vice-versa.

$$\text{Liquidity Risk Ratio} = \frac{\text{Total Cash and Bank Balance}}{\text{Total Deposit}}$$

where, Total cash and bank balance (CB) = Cash balance + Balance with other banks + money at call & short notice.

Table no. 4.11.a shows that all the sample banks have fluctuating trends of holding cash and bank balance to deposits. Nabil has maintained liquidity risk ratio below 14% for all year, 13.38% in 2003/04, 9.79% in 2004/05, 12.22% in 2005/06, 8.41% in 2006/07 and 14.49% in 2007/08. For SCBNL it decrease down from 20.04% in 2003/04 to 14.11% in 2005/06 and increased to 15.35% in 2006/07 and again decreased to 14.28% in 2007/08. For HBL, risk ratio is 10.77% in 2003/04, 9.9% in 2004/05, 10.28% in 2005/06, increased to 11.54% 2006/07 and decreased to 7.84% in 2007/08. Lastly for EBL, it is 10.16% in 2003/04, 16.045 in 2004/05, 11.74% in 2005/06, 13.15% in 2006/07 and 13.34% in 2007/08.

Table no. 4.11.a. Liquidity Risk Ratio **(**Rs. in Million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	14119	14586.6	19347.4	23342.3	31915
Cash and Bank Balance	1889.2	1427.81	2365.14	1963.36	4623.5
CB/Total Deposit	**13.38%**	**9.79%**	**12.22%**	**8.41%**	**14.49%**
Growth Rate		**-26.83%**	**24.82%**	**-31.19%**	**72.29%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	21161.4	19363.5	23061	24647	29744
Cash and Bank Balance	4241.8	3370.8	3253.5	3782.2	4247.8
CB/Total Deposit	**20.04%**	**17.41%**	**14.11%**	**15.35%**	**14.28%**
Growth Rate		**-13.12%**	**-18.95%**	**8.79%**	**-6.97%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	22010.3	24814	26490.9	30048.4	31939.87
Cash and Bank Balance	2370.08	2455.55	2722.63	3467.37	2503.45
CB/Total Deposit	**10.77%**	**9.90%**	**10.28%**	**11.54%**	**7.84%**
Growth Rate		**-8.08%**	**3.84%**	**12.26%**	**-32.06%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	8063.9	10097.7	13802.4	18186.2	23976.3
Cash and Bank Balance	819.2	1620	1619.9	2391.4	3198.43
CB/Total Deposit	**10.16%**	**16.04%**	**11.74%**	**13.15%**	**13.34%**
Growth Rate		**57.87%**	**-26.81%**	**12.01%**	**1.14%**

Source: Annual Reports of respective banks

b. Interest Rate Risk Ratio:

Interest rate charged by bank is major source of income and expenditure. Depending upon the interest rates, the bank can make investment to maximize their income. The profitability of bank is highly depends upon the interest charged by it. The possibility of loss due to change in interest rate is known as interest rate risk.

Higher the interest rate risk, suggest the banks to increase the interest rates on deposits and loans & advances to increase net interest income and vice-versa. This can be calculated as:

$$\text{Interest Rate Risk Ratio} = \frac{\text{Interest Sensitive Liabilities}}{\text{Interest Sensitive Assets}}$$

where, Interest Sensitive Assets (ISA) = Interest Earning Assets (as on table 4.8)

Interest Sensitive Liabilities (ISL) = Interest Paying Liabilities (as on table 4.9)

Table no. 4.11.b. Interest Rate Risk Ratio: (Rs. in million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
ISA	14026	14861.7	19101	24491.3	31304.7
ISL	14348.7	14604.1	19520.6	24224.87	33515
Interest Rate Risk Ratio	**97.75%**	**101.76%**	**97.85%**	**101.10%**	**93.41%**
Growth Rate		**4.11%**	**-3.85%**	**3.32%**	**-7.61%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
ISA	17770.54	17845.81	21773.92	24055.8	27621.4
ISL	21239.7	19391.1	23061	25047	29744
Interest Rate Risk Ratio	**83.67%**	**92.03%**	**94.42%**	**96.04%**	**92.86%**
Growth Rate		**10.00%**	**2.59%**	**1.72%**	**-3.31%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
ISA	22211.7	25143.54	26651	29616.7	32931.6
ISL	22669.3	25320.05	26995.5	30644.4	32809.9
Interest Rate Risk Ratio	**97.98%**	**99.30%**	**98.72%**	**96.65%**	**100.37%**
Growth Rate		**1.35%**	**-0.58%**	**-2.10%**	**3.85%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
ISA	8631.5	10028.9	14336.7	19067	25267.12
ISL	8363.9	10397.7	14102.7	18486.2	24276
Interest Rate Risk Ratio	**103.20%**	**96.45%**	**101.66%**	**103.14%**	**104.08%**
Growth Rate		**-6.54%**	**5.40%**	**1.46%**	**0.91%**

Source: Annual Reports of respective banks

According to the table no. 4.11.b, the ratio of Nabil is increased from 97.75% to 101.76% in 2003/04 to 2004/05. It decreased to 97.85% in 2005/06 and increased to 101.1% in 2006/07 and again decreased to 93.41% in 2007/08. The ratio for SCBNL increased from year 2003/04 to 2006/07 i.e. from 83.67% to 96.04% then decreased down to 92.86% in 2007/08. The ratio of HBL increased from 97.98% to 99.3% in 2003/04 to 2004/05 and then decreased down to 96.65% in 2006/07 and increased to 100.37% in 2007/08. While EBL, firstly it decreased from 103.2% to 96.45% in 2003/04 to 2004/05 and then onwards increasing trends i.e. 101.66%, 103.14% and 104.08% in the year 2005/06, 2006/07 and 2007/08 respectively.

These ratio shows that all these banks are highly dependent on interest income.

4.1.12 Growth Ratio:

Growth ratios are directly related to the deposit mobilization and investment of a commercial bank. Growth ratio represents how well the commercial bank is

maintaining its performance. Higher the ratios better the performance of the bank and vice-versa.

Table no. 4.12 Growth Ratio

Particulars	Nabil	SCBNL	HBL	EBL
Deposits	22.62%	8.9%	9.76%	31.28%
Loan and Advances	27.09%	20.95%	11.76%	32.55%
Investments	14.24%	5.18%	8.23%	26.30%
Interest Income	18.55%	11.16%	12.25%	23.81%
Interest Expenses	27.95%	14.36%	13.78%	18.91%
Profit	13.16%	11.08%	25.59%	36.04%

[detail calculation is in appendix-1]

Table 4.12 shows the growth ratio of sample banks on different heads. SCBNL and HBL having huge deposit based showed 8.9% and 9.70% growth rate on total deposit. While comparing the growth rate, EBL and Nabil has highest growth rate i.e. 31.28% and 22.62% respectively. In the case of loan and advances, EBL has highest i.e. 32.55% whereas Nabil has 27.09% , SCBNL has 20.95% and HBL has 11.76%. Similarly the growth rate of investment of Nabil is 14.24%, SCBNL is 5.18%, HBL is 8.23% and EBL is 26.30%. In the case of interest income, the growth rate of interest income is highest for EBL i.e. 23.81%, Nabil has 18.55%, HBL has 12.25% and SCBNL has 11.16%. Same as interest income, growth rate of interest expenses is also highest for EBL i.e. 36.04%, HBL has 25.59%, Nabil has 13.16% and then SCBNL has 11.08%.

4.1.13 Analysis of Market Interest Rate

The market interest rate has direct and indirect impact on deposit mobilization of the bank. It is necessary to have regular scrutiny on the movement of market interest rate to have effective utilization of deposits. The tabular structure of interest rate presented below will show lowest and highest market interest rate offered by the banks operating in Nepal.

Structure of Market Interest Rate:

The following table shows the structure of market interest rate for the period 2003/04 to 2007/08. The range shown in the table is the minimum and maximum interest rate offered by various commercial banks. Deposits rates are divided into

saving deposit and time deposit. Time deposit is further divided into 1 month, 3 months, 6 months, 1 year and 2 years and above. While lending rates are divided into industry, agriculture, export bills, commercial loans and overdraft facilities.

Table no. 4.13. Structure of Market Interest Rate (% per annum)

	As on Mid July				
Deposit Rates	**2004**	**2005**	**2006**	**2007**	**2008**
Saving Deposit	2.00-5.0	1.75-5.00	2.00-5.00	2.00-5.00	2.00-6.5
Time Deposit					
1 month	2.00-3.5	1.75-3.50	1.5-3.5	1.50-3.50	1.50-3.75
3 months	2.00-4.00	1.5-4.00	1.5-4.00	1.5-4.00	1.5-4.25
6 months	2.00-4.50	2.50-4.50	1.75-4.5	1.75-4.5	1.75-4.5
1 year	2.75-5.75	2.25-5.00	2.25-5.00	2.25-5.00	2.5-6.00
2 years & above	3.00-6.00	2.5-6.05	2.5-6.4	2.5-5.5	2.75-6.5
Lending Rates					
Industry	8.5-13.5	8.25-13.5	8.0-13.5	8.0-13.5	7.0-13.5
Agriculture	10.5-13	10.0-13.0	9.5-13.0	9.5-13.0	9.5-13.0
Export Bills	4.0-11.5	4.0-12.0	5.0-11.5	5.0-11.5	4.0-11.5
Commercial Loan	9.0-14.5	8.0-14.0	8.0-14.0	8.0-14.0	8.0-14.0
Overdraft	10.0-16.0	5.0-14.5	6.5-14.5	6.0-14.5	6.0-14.5

Source: Monetary Policy of F.Y. 2007/08

According to table 4.13, saving deposit rates have been slightly increased over the period. The lower limit, offered by commercial banks have been come down from 2% to 1.75% in mid July 2004 to 2005 and it increased to 2% in 2006 and then remains constant till 2008. While on the higher side, it was 5% till 2004 to 2007 and increased to 6.5% in 2008.

For time deposit, 1 month interest rate was 2%-3.5% in 2004, 1.75%-3.5% in 2005; remain constant at 1.5%-3.5% in 2006 & 2007 and 1.5%-3.5% in 2008. The 3 months time deposit rates lie between 2%-4% in 2004; became constant at 1.5%-4.0% till 2007; and 1.5%-4.25%. On 6 months time deposit, it was 2.0%-4.5% in 2004; 2.50%-4.50% in 2005; and became constant at 1.75%-4.5% till 2008. Likewise on 1 year deposit rate, 2.75%-5.75% in 2004; constant at 2.25%-5% till 2007 and increased to 2.5%-6% in 2008. On 2 years and above, the lower limit decreased to 2.5% from 3% till 2007 and increased to 2.75% in 2008. While on upper limit increased from 6.0% to 6.05% in 2005; decreased to 6.4% in 2006; 5.5% in 2007 and increased to 6.5% in 2008.

Similarly, the upper limit lending rates for industry remains constant over the period at 13.5%; while the lower limit was 8.5% in 2004; decreased to 8.25% in 2005; 8.0% in 2006 and 2007; and 7.0% in 2008. The agriculture lending rates was 10.5%-13% in 2004; 10%-13% in 2005; and remains constant at 9.5%-13% till 2008. The export bills lending rate showed rates between 4%-12% throughout the period. On commercial loan, it was 9%-14.5% in 2004; became constant at 8%-14% till 2008. While on overdraft, it was fluctuating i.e. 10%-16% in 2004; slip down to 5%-14.5% in 2005; became 6.5%-14.5% in 2006; and remain constant at 6%-14.5% till 2008.

4.1.14 Interest Rates offered by Sample Banks on different section:

Interest rate is the main driving force of every bank. It has higher impact on the mobilization of the fund. Higher interest rates on deposit and lower rate loan policy has always attracted potential customer towards the bank. However, customers in these days are service conscious and they do see both interest rate and services offered by the bank. Therefore every bank has offered different interest rate as per their ability and standing in the market.

In this section, the interest rates offered by sample bank on both deposit and lending are analyzed and the trend on these both variables also examined.

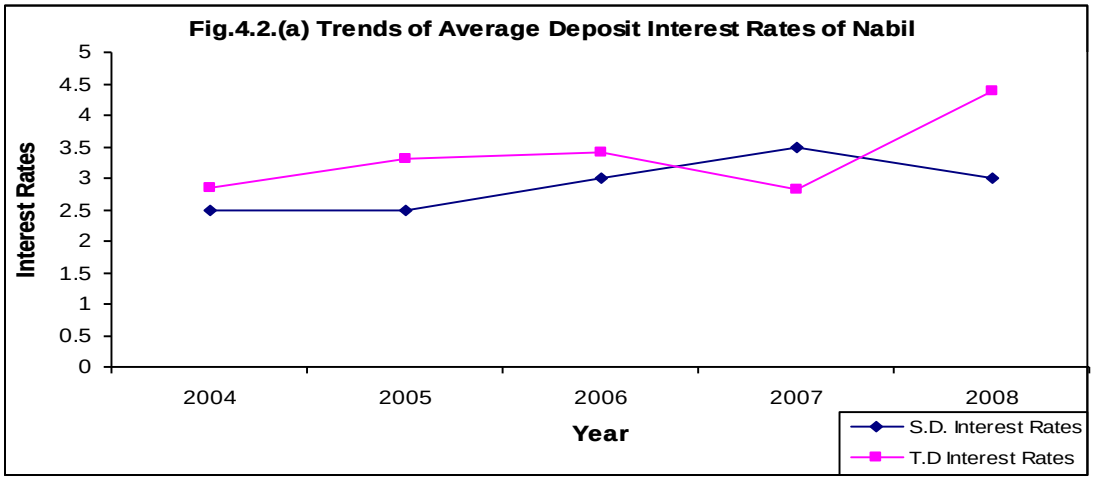
4.1.14.1 Deposit Rate of Sample Banks.

Table no. 4.14.1.a. Deposit Rates of Nabil (as on mid July & % p.a.)

Nabil					
Deposits	2004	2005	2006	2007	2008
Saving	2.5	2−3	2−4	3−4	2−4
Time Deposit					
14 days	1.75	2.5	2.5	1.75	3
1 months	2.25	3	3	2	3.5
2 months	–	–	–	–	–
3 months	2.75	3.25	3.25	2.75	4.25
6 months	3	3.5	3.5	3	4.75
1 year	3.5	4	4	3.5	5
2 years & above	3.75-4	3.25-4	4-4.25	3.75-4.25	5.75
Saving Mean	**2.5**	**2.5**	**3**	**3.5**	**3**
T.D. Mean	**2.85**	**3.31**	**3.4**	**2.83**	**4.38**
Whole Mean	2.8	3.2	3.34	2.93	4.18

Source: Annual Reports of Nabil

As the table shows that the upper limit of interest rates on saving deposit of Nabil lies on 4%. While lower limit on was 2.5% in 2004; 2% in 2005 and 2006; increased to 3% in 2007 and decreased to 2% in 2008. Whereas time deposit rate lies in the range of between 1.75%-4% in 2004; 3%-4% in 2005; 3%-4.25% in 2006; 2%-4.25% in 2007; 3%-5.75% in 2008 on different time period.



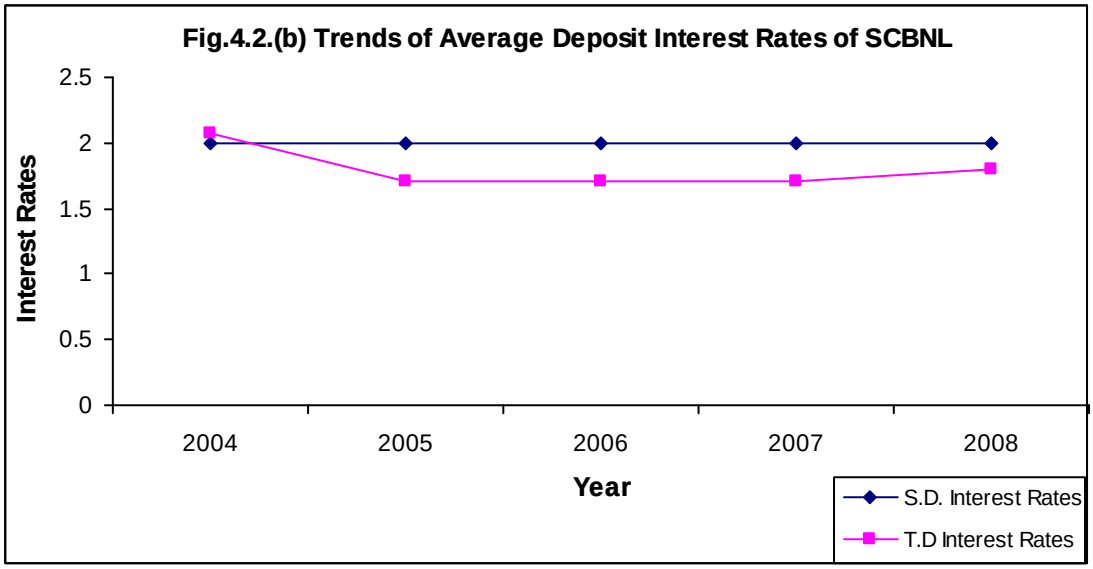
The fig.4.2.(a) shows the trends of average interest rates on fixed/time deposit and saving deposit of Nabil for 5 year period. In the year 2004, TD interest rate is 2.85% whereas it increase in the year 2005 & 2006 and decrease to 2.85% in 2007 and increase to 4.38% in 2008. While SD interest rates remain constant at 2.5% in 2004 & 2005. In 2006 it increase to 3% and in 2007 it was 3.5% and in 2008 it again reached at 3%.

Table no.4.14.1.b.Deposit Rates of SCBNL (as on mid July & % p.a.)

SCBNL					
Deposits	2004	2005	2006	2007	2008
Saving	2	2	2	2	2
Time Deposit					
14 days	1	1	1	1	1
1 months	2	1.5	1.5	1.5	1.5
2 months	2	1.5	1.5	1.5	1.5
3 months	2	1.5	1.5	1.5	1.5
6 months	2.5	1.75	1.75	1.75	1.75
1 year	2.5	2.25	2.25	2.25	2.5
2 years & above	2.5	2.5	2.5	2.5	2.75-3
Saving Mean	**2**	**2**	**2**	**2**	**2**
T.D. Mean	**2.07**	**1.71**	**1.71**	**1.71**	**1.8**
Whole Mean	2.06	1.75	1.75	1.75	1.83

Source: Annual Reports of SCBNL.

The saving deposit rate of SCBNL was constant over the study period at 2%. On time deposit, the rate was 1%-2.5% in 2004; whereas the deposit rate on different time period remains equally constant from 2005 to 2008.



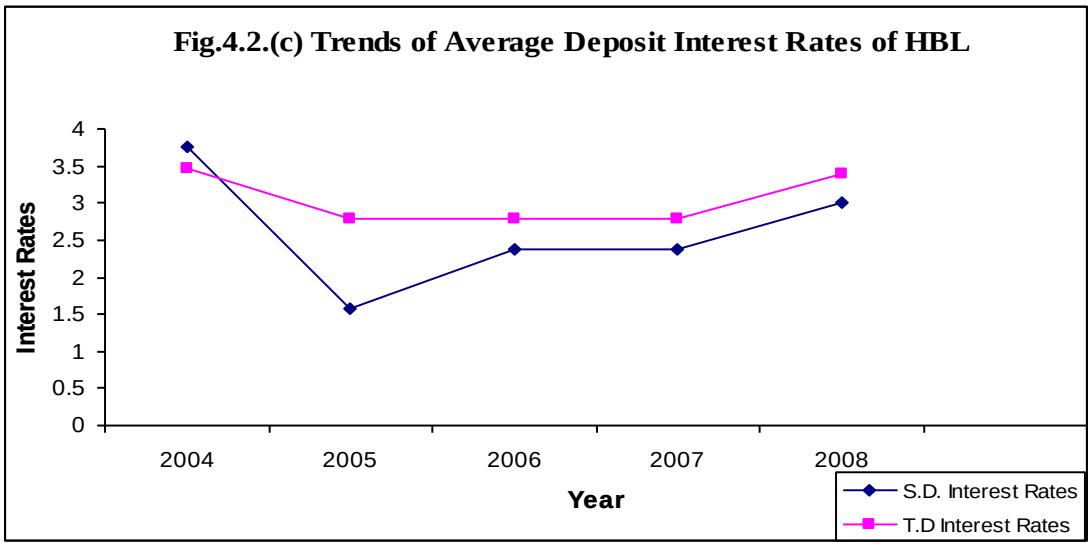
According to the fig.4.2.(b), SCBNL has lowest average interest rates on time deposit than on saving. In 2004, average TD interest rate was 2.07% while it decreases to 1.71% in 2005 and remains constant till 2007 and in 2008 it increased to 1.8%. While on average SD interest rate was remains constant at 2% throughout the study period.

Table no. 4.14.1.c. Deposit Rates of HBL (as on mid July & % p.a.)

	HBL				
Deposits	2004	2005	2006	2007	2008
Saving	3.75	.4-2.75	2-2.75	2-2.75	2−4
Time Deposit					
14 days	2.3	1.75	1.75	1.75	2
1 months	3	2	2	2	2.25
2 months	–	–	–	–	–
3 months	3.25	2.5	2.5	2.5	2.5
6 months	3.75	3	3	3	3.25
1 year	4	3.75	3.75	3.75	4.5-5.5
2 years & above	4.5	3.75	3.75	3.75	5.25-5.5
Saving Mean	**3.75**	**1.58**	**2.38**	**2.38**	**3**
T.D. Mean	**3.47**	**2.8**	**2.8**	**2.8**	**3.4**
Whole Mean	3.51	2.62	2.73	2.73	3.34

Source: Annual Reports of HBL.

The saving deposit rate seems to be fluctuating. In 2004, it was 3.75%; 0.4%-2.75% in 2005; 2%-2.75% in 2006 and 2007; and 2%-4% in 2008. While on time deposit, interest rate lies between 2.3%-4.5% in 2004; the limit decrease to 1.75%-3.75% in 2005; remains same as in 2006 and 2007; and increased as 2%-5.5% in 2008.



The fig.4.2.(c) shows the average interest rate of HBL on time and saving deposit. The SD of HBL has highly fluctuated. In 2004 it was 3.75% and it sharply decreased to 1.58% in 2005, in 2006 and 2007 it remains at 2.38% and increased to 3% in 2008. While in TD interest rates, in 2004 it was 3.47% and decreased to 2.8% in 2005 and remains at same till 2007 and further increased to 3% in 2008.

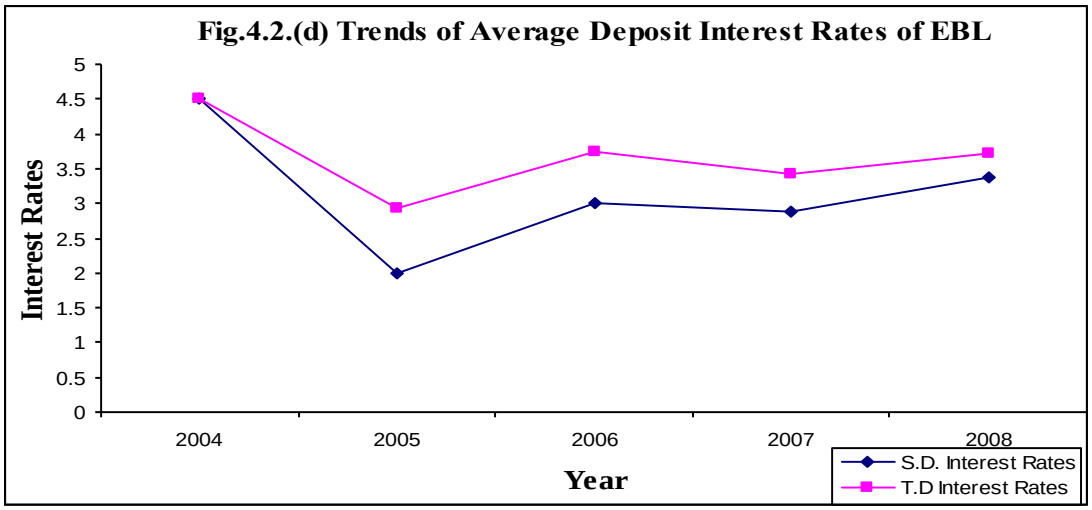
Table no. 4.14.1.d. Deposit Rates of EBL (as on mid July & % p.a.)

EBL					
Deposits	2004	2005	2006	2007	2008
Saving	4–5	.75-3.25	2.75-3.25	2.75-3	2.75-4
Time Deposit					
14 days	3	2.25	–	–	–
1 months	3.5	2.25	–	2.75	2.75
2 months	–	–	–	2.75	2.75
3 months	4	2.5	3	3	3
6 months	5	3	3.5	3.5	3.5
1 year	5.5	3.5	4	4	5
2 years & above	6	4	4.5	4.5	5.25-5.5
Saving Mean	**4.5**	**2**	**3**	**2.88**	**3.38**
T.D. Mean	**4.5**	**2.92**	**3.75**	**3.42**	**3.73**
Whole Mean	4.5	2.8	3.6	3.34	3.68

Source: Annual Reports of EBL.

The saving deposit rate of EBL was 4%-5% in 2004; 0.75%-3.25% in 2005; 2.75%-3.25% in 2006; 2.75%-3% in 2007; and 2.75%-4% in 2008. Similarly, the time

deposit interest rate was ranges between 3%-6% in 2004; 2.25%-4% in 2005; 3%-4.5% in 2006; 2.75%-4.5% in 2007; and 2.75%-5.5% in 2008.



The fig.4.2.(d) shows the average TD and SD interest rates of EBL for the five year period. Same as the other three banks, EBL has also decreased its SD and TD interest rates from 2004 to 2005. In 2004, TD and FD interest rates of EBL were 4.5% and decrease to 2.92% and 2% respectively in 2005. In 2006, TD rate increased to 3.75% whereas SD rate increased to 3%. In 2007, TD rate decreased to 3.4% whereas SD rates also decreased and remains at 2.88%. In 2008, both interest rates were increased i.e. TD rate reached at 3.7% and SD rates at 3.38%.

4.1.14.2 Lending Rate of Sample Banks on different sectors:

Table no.4.14.2.a Lending Rate of Nabil. **(**as on mid July & % p.a.)

Sectors/Years	**2004**	**2005**	**2006**	**2007**	**2008**
Overdraft	–	–	–	–	–
Export Credit	4−11	4−11	9−11	7−10.5	7−10.5
Import L/C	8.5-11	8.5-11	8.5-11	7-10.5	7-10.5
Against HMG Bond	6.5-7.5	7-7.5	7.5	7-7.5	7-7.5
gainst BG/CG	9	9	9	9	9
Against Other Guarantee	10	10	10	8.5	8.5
Industrial Loan	–	–	–	–	–
Commercial Loan	–	–	–	–	–
Priority Sector	12−13	11−12	11−12	9.5-11	9.5-11
Deprived Sector	7−9	6−9	6−9	4.5-9	5−9
Term Loan	11−13	11−13	11−13	9−12	9−12
Working Capital Loan	10−12	10−12	10−12	8-11.5	8-11.5
Hire Purchase Loan	10.5-12.5	7-12.5	7−12	6.5-12	7.5-12
Others	7−13	7−13	7−13	6.5-12	7−12
Average Lending Rate	**9.84**	**9.57**	**9.82**	**8.77**	**8.86**

Source: Annual Reports of Nabil.

In above table, the interest rate on lending on different sectors of Nabil remains between 4.5%-13% throughout the period. The export credit interest rates was 4-11% in 2004 and same on 2005, became 9-11% in 2006 and decrease to 7%-10.5% in 2007 and 2008. The import L/C rate was 8.5%-11% till 2006 and decreased to 7%-10.5% in 2007 and 2008. Interest rates on government bond was 6.5%-7.5% in 2004 and remains at 7%-7.5% till 2008. On BG/CG loan it remains between 7.5%-9% and on other guarantee loan, remain between 8.5%-10%. Similarly, on priority sectors and deprived sector, it was between 5%-13%. Term loan interest rate was 11-13% till 2006 and then became 9%-12% till 2008. The working capital interest rate was 10%-12% till 2006 and became 8%-11.5% till 2008. The HP loan rate remains between 6.5%-12%. The average lending rate of Nabil shows "W" shape throughout the period.

Table no. 4.14.2.b. Lending Rate of SCBNL. (as on mid July & % p.a.)

Sectors/Years	**2004**	**2005**	**2006**	**2007**	**2008**
Overdraft	–	6.5	6.5	6.5	6.5
Export Credit	6.5−12	6.5−12	6.5−11.5	6.5−11.5	6.5−11.5
Import L/C	8.5-11	8.5-11	7.5-9	7.5-9	7.5-9
Against HMG Bond	7.5-9.5	7.5-9.5	6.5-8	6.5-8	6.5-8
Against BG/CG	9-10.5	9-10.5	8.5-9.5	8.5-9.5	8.5-9.5
Against Other Guarantee	11.5-13	11.5-13	10−11	10−11	10−11
Industrial Loan	8.5-13.5	8.5-13.5	10-11.5	10-11.5	10-11.5
Commercial Loan	9−14	9−14	11-11.5	11-11.5	11-11.5
Priority Sector	–	–	–	–	–
Deprived Sector	10	10	7.5	7.5	7.5
Term Loan	11.5-14	11.5-14	10-11.5	10-11.5	10-11.5
Working Capital Loan	11.5-13	11.5-13	9−10	9−10	9−10
Hire Purchase Loan	11.5-13	9	7-9.5	7-9.5	7-9.5
Others	8.5-15.75	6.5-14.5	6.5-13	6.5-13	6.5-13
Average Lending Rate	**10.95**	**10.23**	**9.1**	**9.1**	**9.1**

Source: Annual Reports of SCBNL.

According to the table, in 2004 and 2005, the interest rates on different sectors remain constant except on overdraft and other loans. In 2006, the lending rate of

SCBNL was lightly decrease in all sectors and remains constant on 2007 and 2008. The average lending rate of SCBNL was 10.95% in 2004, decrease to 10.23% in 2005, became 9.10% in 2006 and remains constant till 2008 which can be say as "L" shape.

Table no. 4.14.2.c. Lending Rate of HBL. **(**as on mid July & % p.a.)

Sectors/Years	**2004**	**2005**	**2006**	**2007**	**2008**
Overdraft	10.5-13.25	9−12	9−12	8−10	8−10
Export Credit	9-9.5	8.25-8.75	8.25-8.75	6-8.75	7-9.5
Import L/C	9.25-12.25	7.4-11.75	7.4-11.75	6-9.5	7-9.5
Against HMG Bond	8	5−6	5−6	6.5	7
Against BG/CG	9.5-10.5	8.5-9.25	8.5-9.25	6.5-8	7.8
Against Other Guarantee	10.5	10.5	10.5	−	−
Industrial Loan	9−13	8.25-12.75	8.25-12.75	−	−
Commercial Loan	9-13.25	8.25-12.5	8.25-12.5	−	−
Priority Sector	12−13	11-12.25	11-12.25	10	−
Deprived Sector	8.5	4.5-8.25	4.5-8.25	4.5-8.25	5-8.75
Term Loan	12−13	9.5-11.75	9.5-11.75	8-10.5	8.5-10.5
Working Capital Loan	10.5-13	10.5-13	10.5-13	−	−
Hire Purchase Loan	11.5-13	9-11.5	9-11.5	8−9	7.5-9.5
Others	8.5-15.75	6-13.5	6-13.5	6−12	5-10.5
Average Lending Rate	**10.87**	**9.61**	**9.61**	**8.1**	**8.08**

Source: Annual Reports of HBL.

The lending rate of HBL was remains highest in 2004 in every sector and that decrease year by year. As on overdraft it was 10.5%-13.25% in 2004, become 9%-12% in 2005 & 2006, 8%-10% till 2008. On export credit it was 9%-9.5% in 2004; 8.25%-8.75% till 2006; 6%-8.75% in 2007 & 7%-9.5% in 2008. On government bond, it remains between 5%-8% throughout the period. Interest rate on term loan was 12%-13% on 2004; 9.5%-11.75% in 2005 & 2006; and 8%-10.5% till 2008. On working capital loan interest rate remains between 10.5%-13%. Interest rate on HP loan was 11.5%-13% in 2004; 9%-11.5% in 2005 & 2006; 8%-9% in 2007; and 7.5%-9.5% in 2008. Similarly for other loan, interest rate remains between 5%-10.5% in 2008. The trend of average lending rate of HBL has decreasing trend.

Table no. 4.14.2.d. Lending Rate of EBL (as on mid July & % p.a.)

Sectors/Years	**2004**	**2005**	**2006**	**2007**	**2008**
Overdraft	10.25-12.5	9-11.5	8−11	8−11	8.5-11
Export Credit	9−10	7.5-8.5	7−8	7−8	7.5-10
Import L/C	9-11.75	7.5-10	6.75-10	6.75-10	7−10
Against HMG Bond	7.5-8	5.5-6.5	5−6	5−6	7−8
Against BG/CG	9.5-10.5	7.5-8.5	7.5-8.5	7.5-8.5	7.5-8.5
Against Other Guarantee	–	–	–	–	–
Industrial Loan	9−13	8.5-12	8−11	8−11	8−11
Commercial Loan	9-12.5	8.5-11.5	8−11	8−11	8−11
Priority Sector	12−13	11−12	11−12	–	–
Deprived Sector	10−11	10−11	4.5-10	4.5-10	5−10
Term Loan	11-13.5	10−12	8−11	8−11	8.5-11
Working Capital Loan	9-12.5	7.5-10.5	8−11	8−11	8.5-11
Hire Purchase Loan	11.5-13	10.5-12	6−7	6−7	9-10.5
Others	7.5-13.5	4−12	4.5-11	4.5-11	5−11
Average Lending Rate	**10.73**	**9.42**	**8.45**	**8.45**	**8.85**

Source: Annual Reports of EBL.

For EBL, interest rate on overdraft was 10.25%-12.5% in 2004; 9-11.5% in 2005; 8%-11% in 2006 and 2007; and 8.5%-11% in 2008. On export credit it was 9%-10% in 2004; 7.5%-8.5% in 2005; 7%-8% in 2006 & 2007; and 7.5%-10% in 2008. On government bond, it remains between 5%-8% throughout the period. Interest rate on industrial loan was 9%-13% in 2004, 8.5%-12% in 2005 and 8%-11% till 2008. Similarly, on commercial loan, interest rate was 9%-12.5% in 2004, 8.5%-11.5% in 2005 and remains between 8%-11% till 2008. On deprived sector, it remains between 4.5%-11%. Term loan interest rate was 11%-13.5% in 2004; 10%-12% in 2005; and remains constant on 8%-11% from 2006 to 2008. On working capital loan, interest rate was 9%-12.5% in 2004; 7.5%-10.5% in 2005; 8%-11% on 2006 and 2007; and 8.5%-11% on 2008. Interest rate on HP loan was 11.5%-13% in 2004; 10.5%-12% in 2005; 6%-7% in 2006 & 2007; and 9%-10.5% in 2008. Similarly on other loan, it was 7.5%-13.5% in 2004; 4%-12% in 2005; 4.5%-11% in 2006 and remains constant on 2007 and 5%-11% in 2008. The average lending rate shows 'U' shape.

4.1.14.3 Trends of lending interest rates of sample banks.

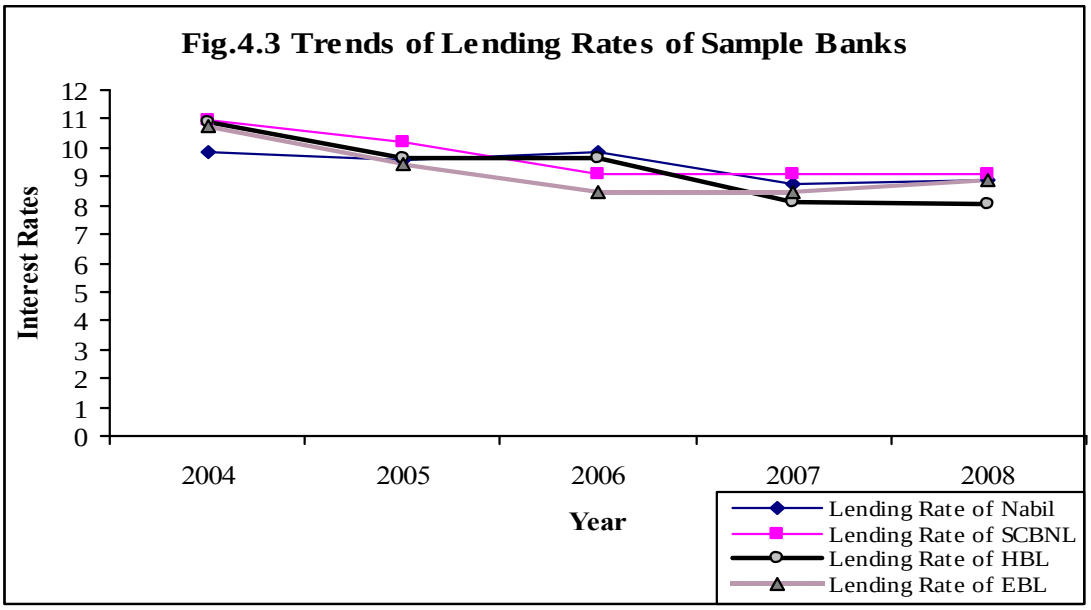


Fig.4.3 shows the average lending rate of sample banks for the period mid July 2004 to 2008. According to the figure, the average lending rate remains between 8%-11% in all sectors for the whole bank, also shows the decreasing trends of lending interest rate. The highest point of average lending rate was in 2004 i.e. 10.95% of SCBNL, 10.87% of HBL, 10.73% of EBL and 9.84% of Nabil. The lowest point of average lending rate on an average was on 2007 i.e. 8.77% of Nabil, 8.10% of HBL, 8.45% of EBL and 9.10% of SCBNL. In 2008, the average lending interest rate of Nabil was increase to 8.86% whereas remains constant at 9.10% for SCBNL, decrease to 8.08% of HBL and EBL has increased to 8.85%.

4.1.15 Deposit Ratio:

The deposit ratio shows the deposit mix of the total deposit of the bank. This ratio can be calculated as follows:

4.1.15.1. Fixed Deposit to Total Deposit:

The fixed deposit is always high cost fund available for banks. Generally it stays 1 to 2% higher than non-fixed deposit accounts which decrease the interest spread to higher extent. The share of fixed deposit out of total deposit is determined by:

$$\text{Fixed Deposit to Total Deposit} = \frac{\text{Fixed Deposit}}{\text{Total Deposit}}$$

Table no. 4.15.1 Fixed Deposits to Total Deposit: (Rs. in million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	14119	14586.6	19347.4	23342.3	31915
Fixed Deposit (FD)	2310.57	2078.54	3449.09	5435.2	8464.09
FD/Total Deposit	**16.36%**	**14.25%**	**17.83%**	**23.28%**	**26.52%**
Growth Rate		**-12.90%**	**25.12%**	**30.57%**	**12.33%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	21161.4	19363.5	23061	24647	29744
Fixed Deposit (FD)	1428.5	1416.38	2136.31	3196.49	3301.01
FD/Total Deposit	**6.75%**	**7.31%**	**9.26%**	**12.97%**	**11.10%**
Growth Rate		**8.30%**	**26.68%**	**40.06%**	**-14.42%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	22010.3	24814	26490.9	30048.4	31939.87
Fixed Deposit (FD)	4710.18	6107.43	6350.2	8201.13	6423.9
FD/Total Deposit	**21.4%**	**24.61%**	**23.97%**	**27.29%**	**20.11%**
Growth Rate		**15%**	**-2.6%**	**13.89%**	**-26.34%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	8063.9	10097.7	13802.4	18186.2	23976.3
Fixed Deposit (FD)	2962.3	3403.9	4242.35	5626.66	6598.01
FD/Total Deposit	**36.74%**	**33.71%**	**30.74%**	**30.94%**	**27.52%**
Growth Rate		**-8.99%**	**-8.81%**	**0.65%**	**-11.05%**

Source: Annual Reports respective bank

In the table 4.15.1, SCBNL and Nabil has lower share of fixed deposit. For Nabil, FD to total deposit ratio was 16.36% in 2003/04, decreased to 14.25% in 2004/05 and continuously increased and reached to 26.52% from 2005/06 to 2007/08. The FD of SCBNL occupies a lower share out of total deposit. It was 6.75% in 2003/04 and then increased to 7.31%; 9.26% and 12.97% in 2004/05; 2005/06 and 2006/07 respectively. In 2007/08, it was 11.10%. Similarly, HBL has 21.4% FD ratio in 2003/04; 24.61% in 2004/05; 23.97% in 2005/06; 27.29% in 2006/07 and 20.11% in 2007/08. The FD ratio of EBL has occupies highest share as comparing to other bank. It has 36.74% in 2003/04; 33.71 in 2004/05; 30.74% in 2005/06; 30.94% in 2006/07 and 27.52% in 2007/08.

4.1.15.2 Interest Bearing Deposit to Total Deposit:

Interest is the cost of fund used. Higher the interest higher is cost of fund. It is generally preferred have low or no interest bearing deposit to lead bank to high profitability. Therefore it is always targeted to have lower share of interest bearing deposit in the bank. This can be calculated by:

$$\text{Interest Bearing Deposit to Total Deposit} = \frac{\text{Interest Bearing Deposit (IBD)}}{\text{Total Deposit}}$$

where,

IBD includes all interest payable deposit like saving deposit, fixed deposit, call deposit and certificate of deposit.

Table no.4.15.2 Interest Bearing Deposits to Total Deposit: (Rs. in million)

NABIL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	14119	14586.6	19347.4	23342.3	31915
IBD	11106.1	11446.2	16071	19584.2	26187.5
IBD/Total Deposit	**78.66**	**78.47**	**83.07**	**83.90**	**82.05**
Growth Rate		**-0.25%**	**5.86%**	**1.00%**	**-2.20%**
SCBNL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	21161.4	19363.5	23061	24647	29744
IBD	15141.3	14758.3	17869.7	19366.4	23095.4
IBD/Total Deposit	**71.55**	**76.22**	**77.49**	**78.58**	**77.65**
Growth Rate		**6.50%**	**1.67%**	**1.41%**	**-1.18%**
HBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	22010.3	24814	26490.9	30048.4	31939.87
IBD	17440	19182.81	20974.7	24083.8	25004
IBD/Total Deposit	**79.24**	**77.31**	**79.18**	**80.15**	**78.28**
Growth Rate		**-2.44%**	**2.44%**	**1.20%**	**-2.33%**
EBL					
Year	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
Deposits	8063.9	10097.7	13802.4	18186.2	23976.3
IBD	7678.4	8915.2	12464.9	16229.4	21483.8
IBD/Total Deposit	**95.22**	**88.29**	**90.31**	**89.24**	**89.60**
Growth Rate		**-7.27%**	**2.29%**	**-1.18%**	**0.40%**

Source: Annual Reports respective bank

According to table 4.15.2, all the sample banks have maintained the ratio between 70%-90%. Nabil has 78.66% in 2003/04; 78.47% in 2004/05; 83.07% in 2005/06; 83.9% in 2006/07 and 82.05% in 2007/08. SCBNL has maintained the ratio between 70%-80%. For HBL, IBD to total deposit is 79.24% in 2003/04, decreased to 77.3% in 2004/05; 79.2% in 2005/06; 80.15% in 2006/07 and 78.28% in 2007/08. For EBL, IBD is highest while comparing to other banks. It has highest as 95.22% in 2003/04 and range between 88%-90% till 2007/08.

4.2 Statistical Analysis:

4.2.1 Coefficient of Correlation Analysis:

In this analysis, Karl Pearson's coefficient of correlation has been used to find out the relationship between variables. Correlation analysis describes the relationship between variables is positive or negative. It helps to determine whether

- a positive or negative relationship exists
- the relationship is significant or insignificant and
- establish cause and effect relation if any

For the purpose of decision making

i) when r = 1, there is perfect positive correlation.

ii) when r = -1, there is perfect negative correlation.

iii) when r = 0, there is no correlation.

iv) when 'r' lies between 0.7 to 0.999 (or -0.7 to -0.999), there is a high degree of positive (or negative) correlation.

v) when 'r' lies between 0.5 to 0.6999 there is moderate degree of correlation.

vi) when 'r' is less than 0.5, there is low degree of correlation.

Probable Error (PE):

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

$$P.E. = 0.6745 \mid \frac{1 Z r^2}{\sqrt{n}}$$

where,

r = the calculated value of correlation coefficient.

n = number of pairs of observations.

P.E. is used in interpretation whether calculated value of r is significant or not.

i) If r<P.E., it is insignificant. So, perhaps there is no evidence of correlation.

ii) If r>6 P.E., it is significant.

In other cases nothing can be concluded.

4.2.1.1 Coefficient of Correlation between Average Deposit Interest Rate and Total Deposit

Table 4.16.1 shows the deposit interest rate and total deposit of sample bank for the period of 2003/04 to 2007/08. To measure and evaluate the correlation between these variables, deposit interest rate is independent variable (X) and total deposit is dependent variable (Y).

Table no. 4.16.1 Total Deposit and Average Deposit I.R. of Sample Bank

	Nabil		SCBNL		HBL		EBL	
Year	I.R. (%)	Deposit	I.R. (%)	Deposit	I.R. (%)	Deposit	I.R. (%)	Deposit
2003/04	2.8	14119	2.06	21161.4	3.51	22010.3	4.5	8063.9
2004/05	3.2	14586.6	1.75	19363.5	2.62	24814	2.8	10097.7
2005/06	3.34	19347.4	1.75	23061	2.73	26490.9	3.6	13802.4
2006/07	2.93	23342.3	1.75	24647	2.73	30048.4	3.34	18186.2
2007/08	4.18	31915	1.83	29744	3.34	31939.87	3.68	23976.3

Source: Annual Reports of respective banks

The following table describes the relationship between deposit interest rate and total deposit. The objective of computing 'r' between these two variables is to justify whether interest rates are significantly correlated with total deposit or not.

[detail in appendix-2]

Table no. 4.16.2

Correlation Coefficient between Average Deposit Interest Rates and Total Deposit

Evaluation Criterions				
Banks	**r**	**r^2**	**P.E.(r)**	**6 P.E.(r)**
Nabil	0.80	0.64	0.108	0.65
SCBNL	-0.12	0.015	0.298	1.79
HBL	-0.11	0.0121	0.3	1.8
EBL	-0.15	0.024	0.294	1.77

From the table 4.16.2, it has been found that the coefficient of correlation between deposit interest rate (independent) and total deposit (dependent) of Nabil, SCBNL, HBL and EBL. Except Nabil other three banks i.e. SCBNL, HBL and EBL showed negative correlation between these two variables. The correlation coefficient(r) of Nabil is 0.80 and coefficient of determination (r^2) is 0.64, which means 64% of total variation or change in the value of total deposit is due to the effect of deposit interest rate and remaining (100-64 =)36% is due to the effect of other factor. Similarly the correlation coefficient of SCBNL, HBL & EBL is -0.12, -0.11 & -0.15 respectively. Considering the value of coefficient of determination (r^2) is 0.015; 0.012 and 0.024 respectively, which indicates that 1.5%; 1.21% and 2.4% has been explained by independent variables. Value of P.E(r) is 1.79; 1.8 and 1.77 respectively. It shows that the value of correlation coefficient of all of them is lower than P.E(r) i.e. r< P.E.(r) which means 'r' value is insignificant. So, perhaps there is no evidence of correlation between deposit interest rate and total deposit of SCBNL, HBL and EBL.

4.2.1.2 Coefficient of correlation between Average Lending Rate and Total Credit.

The following table shows the lending interest rate and total credit of sample banks for the period of 2003/04 to 2007/08. To measure and evaluate the correlation between these two variables, lending interest rate is independent variable (X) and total credit is dependent (Y) variable.

Table no. 4.17.1 Total Deposit and Average Lending I.R. of Sample Bank

Year	Nabil		SCBNL		HBL		EBL	
	I.R (%)	Lending	I.R (%)	Lending	I.R (%)	Lending	I.R (%)	Lending
2003/04	9.84	8190	10.95	6410.24	10.87	12919.6	10.73	6095.8
2004/05	9.57	10586.2	10.23	8143.21	9.61	13451.2	9.42	7900
2005/06	9.82	12922.5	9.1	8935.42	9.61	15762	8.45	10136.2
2006/07	8.77	15546	9.1	10502.6	8.10	17793.7	8.45	14082.7
2007/08	8.86	21365	9.1	13718.6	8.08	20179.6	8.85	18814.29

Source: Annual Reports of respective banks

Table 4.17.1 describes the relationship between lending interest rate and total credit. The objective of calculating 'r' between these two variables is to justify whether lending interest rates are significantly correlated with total credit or not.
[detail in appendix-2]

Table no. 4.17.2

Correlation Coefficient between Average Lending Interest Rates and Total Credit

	Evaluation Criterions			
Banks	**r**	**r^2**	**P.E.(r)**	**6 P.E.(r)**
Nabil	-0.81	0.66	0.102	0.61
SCBNL	-0.78	0.61	0.118	0.71
HBL	-0.90	0.82	0.055	0.33
EBL	-0.64	0.42	0.176	1.06

From the table 4.17.2, it is found that coefficient of correlation between lending interest rate and total lending of Nabil is -0.8; SCBNL is -0.78; HBL is -0.91; EBL is -0.65. It reveals that the movement lending rate and total lending is found in opposite direction. If the interest rate of loan and advance increase then the loan and advance decrease and vice-versa. Moreover when we consider the value of coefficient of determination (r^2) for Nabil is 0.66, means that 66% of total variation or change in the value of loan and advance is due to the effect of interest of lending and remaining (100-66%)=34% is due to the effect of other factor. Similarly, coefficient of determination of SCBNL is 0.61; HBL is 0.83 and EBL is 0.42 respectively. Nabil, SCBNL and HBL has higher correlation coefficient 'r' value than P.E(r) and 6 P.E(r) i.e. for Nabil 0.81>0.61; for SCBNL 0.78>0.71; and for HBL 0.90>0.33, which means value of 'r' is significant and reveals that the lending will move in significantly in opposite direction in case of increase or decrease of lending rate. But in the case of EBL, correlation coefficient 'r' is higher than P.E(r) but lower than 6 P.E(r) i.e. 0.64>0.176<1.06, means value is insignificant and the relationship between the two variables cannot be justified by the value or nothing can be concluded.

4.2.1.3 Coefficient of correlation between Total Deposit and Total Lending.

Table 4.18.1 shows the total deposit and total lending of given banks. To measure and evaluate the correlation between these two variables, total deposit is independent variables (X) and total lending is dependent variables (Y).

Table no. 4.18.1 Total Deposit and Total Lending of Sample Banks

Year	Nabil		SCBNL		HBL		EBL	
	Deposit (X)	Lending (Y)	Deposit (X)	Lending (Y)	Deposit (X)	Lending (Y)	Deposit (X)	Lending (Y)
2003/04	14119	8190	21161.4	6410.24	22010.3	12919.6	8063.9	6095.8
2004/05	14586.6	10586.2	19363.5	8143.21	24814	13451.2	10097.7	7900
2005/06	19347.4	12922.5	23061	8935.42	26490.9	15762	13802.4	10136.2
2006/07	23342.3	15546	24647	10502.6	30048.4	17793.7	18186.2	14082.7
2007/08	31915	21365	29744	13718.6	31939.87	20179.6	23976.3	18814.29

Source: Annual Reports of respective banks

Table 4.18.2 describes the relationship between the total deposit and total lending. The objective of calculating 'r' between these two variables is to justify whether total deposit is significantly correlated with total lending or not. [detail in appendix-2]

Table no. 4.18.2 Correlation coefficient between Total Deposit and Total Lending

Evaluation Criterions				
Banks	**r**	**r^2**	**P.E.(r)**	**6 P.E.(r)**
Nabil	0.99	0.98	0.006	0.04
SCBNL	0.93	0.86	0.044	0.26
HBL	0.98	0.95	0.014	0.09
EBL	1	1	0.0009	0.005

In table 4.18.2, it has been found that the coefficient of correlation between total deposit (independent) and total lending (dependent) of given banks. All banks have highly positive correlation i.e. 0.99 for Nabil; 0.93 for SCBNL; 0.98 for HBL and 1 for EBL. It reveals that the movement of deposit and lending is found in similar direction. If deposit increases, lending also increase and vice-versa. Coefficients of determination were 0.98, 0.86, 0.95 and 1 for Nabil, SCBNL, HBL and EBL respectively. This means that 98%. 85.6%, 95% and 100% of the total variation in the value of dependent variable has been explained by the independent variable for

each respective bank. Similarly the correlation coefficient of all the banks have greater than 6P.E.(r) i.e. for Nabil 0.99>0.04, for SCBNL 0.99>0.26; for HBL 0.98>0.09; and for EBL 1>0.005. It means 'r' value is significant and can conclude that lending will move in the same direction where deposit will move.

4.2.1.4 Coefficient of correlation between Interest Spread and Net Profit

Table 4.19.1 shows the interest spread and net profit of Nabil, SCBNL, HBL and EBL for the period of 2003/04 to 2007/08. To measure and evaluate the correlation between these variables, interest spread (IS) is independent variables (X) and net profit (NP) is dependent variables (Y).

Table no. 4.19.1 Net Profit and Interest Spread Rate of Sample Banks

	Nabil		SCBNL		HBL		EBL	
Year	**I.S.(%)**	**NP**	**I.S.(%)**	**NP**	**I.S.(%)**	**NP**	**I.S.(%)**	**NP**
2003/04	4.46	455.31	3.76	537.8	3.25	263.05	4.0	143.5
2004/05	5.01	518.64	3.7	536.25	3.19	308.28	4.1	170.8
2005/06	4.9	635.26	4.1	658.76	3.8	457.46	4.0	237.2
2006/07	4.15	674.00	3.95	691.67	3.57	491.82	3.9	296.4
2007/08	3.94	746.47	4.01	818.92	3.85	654.39	4.05	491.5

Source: Annual Reports of respective banks

Table 4.19.2 describes the relationship between interest spread and net profit. The objective of calculating 'r' between these two variables is to justify whether interest spread is significantly correlated with net profit or not.

(detail in appendix-2)

Table no.4.19.2 Correlation Coefficient between Interest Spread and Net Profit

	Evaluation Criterions			
Banks	**r**	**r^2**	**P.E.(r)**	**6 P.E.(r)**
Nabil	-0.59	0.35	0.196	0.17
SCBNL	0.76	0.58	0.126	0.76
HBL	0.89	0.80	.061	.368
EBL	-0.034	0.001	0.301	1.81

From the table, it has been found that the coefficient of correlation between interest spread and net profit of Nabil and EBL were negatively correlated i.e. -0.59 and -0.034 respectively while for SCBNL and HBL were positively correlated i.e. 0.76 and .89 respectively. The coefficient of determination of Nabil, SCBNL, HBL and EBL were 0.35, 0.58, 0.80 and 0.001 respectively which means 35%, 58%, 80% and 1% of the variation in depended variable is explained by independent variable for the respective banks. SCBNL and HBL both had 'r' value higher than P.E. and 6 P.E(r) which means the values are significant and reveals that net profit of these banks moves in same direction as the interest spread is moving. For Nabil and EBL, 'r' value is lower than P.E., therefore values are insignificant and denotes that nothing can be concluded.

4.2.2 Industry Analysis:

4.2.2.1 Impact of Deposit Interest Rate on Total Deposit of Banking Industry:

The importance of deposit interest rate for collection of deposit has always depended upon the standing and networking of the bank. As comparing between the commercial banks, old commercial banks give lesser interest rate than new ones. This is because old banks has network and confidence of the customer towards the bank while new banks wants to generate confidence and trust of customer upon them through high interest rates with extra services. This has created difference level of services and prices for occupying higher amount of market share.

The analysis of impact of deposit interest rate on total deposit of the banking industry i.e. combination of all commercial banks gives the aggregate picture of the immediate effect of change in interest rate to deposit holding of the banks. First of all statistical tools i.e. regression analysis is used to develop an equation that helps to estimate the deposit holding of banking industry fro every change in deposit interest rate. The regression equation of total deposit (Y) on deposit interest rate (X) is given by:

Y = 161459.29+ 48510X (detail in appendix-3)

The t-test for significance of the regression coefficient revealed the following fact.

Set of Hypothesis:

Null Hypothesis: H_0: b = 0 i.e. value of regression coefficient is insignificant

(Deposit interest rate does not play a significant role in deposit collection)

Alternative Hypothesis H_1: b ≠ 0 i.e. value of regression coefficient is significant (Deposit interest rate plays a significant role in deposit collection)

Since the no. of observation is less than 30, we use t-test to know the significance of the regression coefficient.

Decision: At 5% level of significance for 3 degree of freedom, interest rate is very important factor for collection of deposit in the banking industry. For every increase in interest rate Rs. 48510 million more deposit will be collected. This shows that interest rate is still dominating factor to generate deposit collection in the industry. Therefore, every commercial bank must estimate the impact of change in interest rate before increasing or decreasing the rate.

(detail calculation is in appendix-3)

4.2.2.2 Impact of Lending Interest Rate on Total Lending of Banking Industry:

The lending interest rates of commercial banks have seen decreasing trend resulting huge loan disbursal. The lending rate of the bank depends much on the rate at which it accepts deposit. As the deposit interest rate is decreasing, the lending interest rate is obvious to decrease as well and vice-versa.

The analysis of impact of lending interest rate on total lending of the banking industry i.e. combination of all commercial banks shows whether interest rate is an important factors for loan disbursement.

First of all statistical tools i.e. regression analysis is used to develop an equation that helps to estimate the lending of banking industry for every change in interest rate. The regression equation of total lending (Y) on lending interest rate (X) is given by:

Y = 798983.41 – 59850.91 X

(detail calculation is in appendix-3)

The t-test for significance of the regression coefficient revealed the following fact.

Null Hypothesis: H_0: b = 0 i.e. value of regression coefficient is insignificant.

(Lending interest rate does not play a significant role in loan disbursement)

Alternative Hypothesis H_1: b ≠ 0 i.e. value of regression coefficient is significant.

(Lending interest rate plays a significant role in loan disbursement).

Decision: At 5% level of significance for 3 degree of freedom, the test of hypothesis reveals lending of loan directly depends upon the rate of interest. Lower the interest

rate higher is the loan disbursement and vice-versa. For every decrease in lending interest rate Rs. 59850.91 million more loan will be disburse.

4.3 Dominance of the Interest Income in the Total Earning of Commercial Banks.

Interest income is still an important source of income for commercial banks. Though the function and area of commercial bank is vague and versatile, commercial banks in Nepal have been not able to explore intensely into other sources of income. There are different sources of income for commercial banks which are categorized into following heads.

a) Interest income
b) Commission and Discount
c) Exchange Earning
d) Non Operating Income
e) Other Operating Income

The following presentation and analysis of the income of the sample banks will give us clearer picture of the current scenario of dominance of interest income.

4.3.1 Composition of Total Income of Nabil

Table no. 4.20.1 Total Income Composition of Nabil

Income/Year	2003/04	2004/05	2005/06	2006/07	2007/08	Average
1. Interest Income	1002	1069	1310	1588	1979	1389.6
2. Commission & Discount	135.96	128.38	138.29	150.61	156.23	141.894
3. Exchange Gain	157.32	184.88	184.88	209.93	196.49	186.7
4. Non Operating Income	92.78	-	0.74	5.28	24.08	30.72
5. Other Operating Income	38.75	56.44	82.9	87.57	97.44	72.62
Total Income	**1426.81**	**1438.7**	**1716.81**	**2041.39**	**2453.24**	**1815.39**

Source: Annual Reports of Nabil

The table 4.20.1 shows the total income composition of Nabil bank. From the above table it can be conclude that the interest income is still a dominating factor of

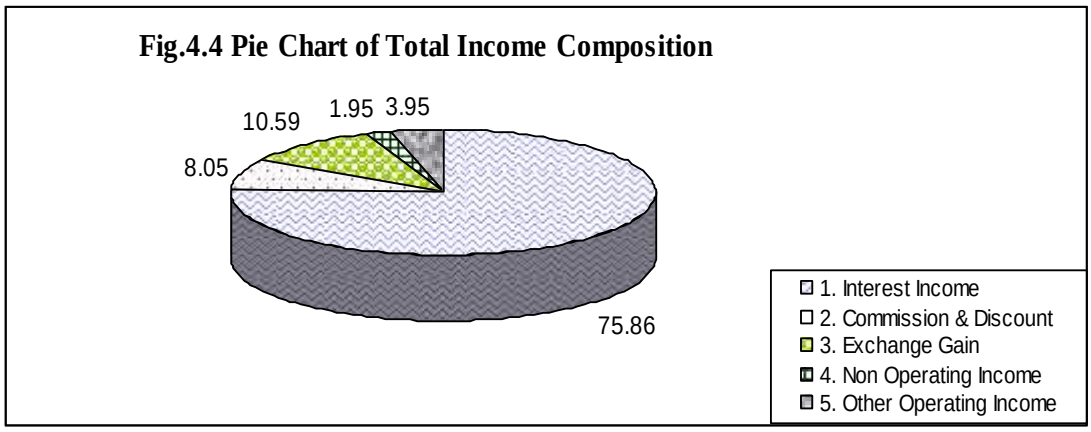
earning of the bank over the period. To make the study simple, in the following table income headings are converted into percentage.

Table no.4.20.2 Percentage of Total Income Composition of Nabil

Income/Year	2003/04	2004/05	2005/06	2006/07	2007/08	Comp.
1. Interest Income	70.23	74.30	76.30	77.79	80.67	75.86
2. Commission & Discount	9.53	8.92	8.06	7.38	6.37	8.05
3. Exchange Gain	11.03	12.85	10.77	10.28	8.01	10.59
4. Non Operating Income	6.50	-	0.04	0.26	0.98	1.95
5. Other Operating Income	2.72	3.92	4.83	4.29	3.97	3.95
Total Income	100.00	100.00	100.00	100.00	100.00	100.00

In the table 4.20.2, the dependency on interest income of Nabil was recorded above 70% over the 5 years period. In 2007/08, it increased highest as 80.67%. While in other income heads, exchange gain comes after interest income. It remains below 13% throughout the period. Commission and Discount has comes 8.05% in an average and non operating income and other operating income contributed negligible share in total income that lie below 1.95% and 3.95% respectively.

Fig.4.4 Pie Chart of Total Income Composition



The above chart represents the average income composition of Nabil bank. More than ¾ of pie is occupied by interest income i.e 75.86% and other income followed by 10.59% in exchange gain, 8.05% by commission and discount, 3.95% by other operating income and 1.95% by non operating income.

4.3.2 Composition of Total Income of SCBNL:

Table no. 4.21.1 Total Income Composition of SCBNL

Income/Year	2003/04	2004/05	2005/06	2006/07	2007/08	Average
1. Interest Income	1042.18	1058.68	1190.00	1412.00	1591.20	1258.81
2. Commission & Discount	198.95	178.65	222.93	221.21	276.43	219.63
3. Exchange Gain	273.05	273.04	283.47	309.09	345.65	296.86
4. Non Operating Income	0.00	2.96	1.43	9.49	1.68	3.11
5. Other Operating Income	26.53	29.29	25.44	28.78	32.59	28.53
Total Income	**1540.71**	**1542.62**	**1723.27**	**1980.57**	**2247.55**	**1806.94**

Source: Annual Reports of SCBNL

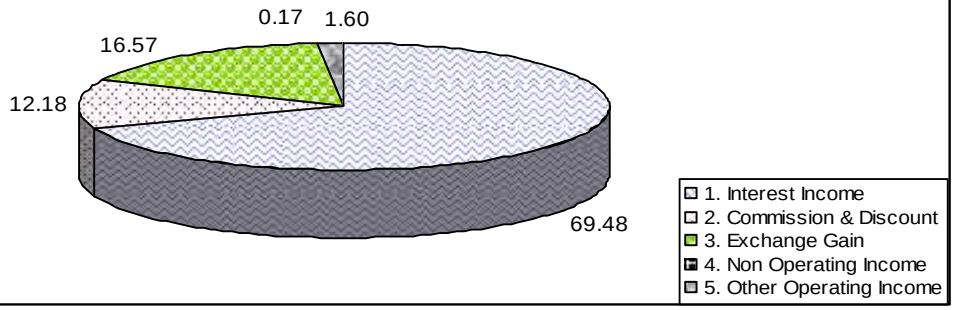
Table 4.21.1 shows the total income composition of SCBNL and it is converted in the following table in the percentage form.

Table no. 4.21.2 Percentage of Total Income Composition of SCBNL

Income/Year	2003/04	2004/05	2005/06	2006/07	2007/08	Comp.
1. Interest Income	67.64	68.63	69.05	71.29	70.80	69.48
2. Commission & Discount	12.91	11.58	12.94	11.17	12.30	12.18
3. Exchange Gain	17.72	17.70	16.45	15.61	15.38	16.57
4. Non Operating Income	0.00	0.19	0.08	0.48	0.07	0.17
5. Other Operating Income	1.72	1.90	1.48	1.45	1.45	1.60
Total Income	100.00	100.00	100.00	100.00	100.00	100.00

According to the table 4.21.2, interest income covers 69.48% in an average composition of income earn. While for other income heads, 16.57% by exchange gain, 12.18% by commission and discount, 1.6% by other operating income and 0.17% by non operating income.

Fig.4.5 Pie Chart of Total Income Composition



From fig.4.5, it is clearly seen that SCBNL has highest portion of income is covered by interest whereas exchange gain, commission and discount come thereafter. And non- operating income and other operating income covers a negligible portion.

4.3.3 Composition of Total Income of HBL:

Table no. 4.22.1 Total Income Composition of HBL

Income/Year	2003/04	2004/05	2005/06	2006/07	2007/08	Average
1. Interest Income	1245.90	1446.47	1626.47	1775.58	1978.29	1614.54
2. Commission & Discount	123.93	132.82	165.45	193.22	184.33	159.95
3. Exchange Gain	112.42	137.30	198.13	151.64	192.98	158.49
4. Non Operating Income	3.30	2.80	1.90	3.49	9.70	4.24
5. Other Operating Income	34.08	41.30	52.33	40.33	85.90	50.79
Total Income	**1519.63**	**1760.69**	**2044.28**	**2164.26**	**2451.20**	**1988.01**

Source: Annual Reports of HBL

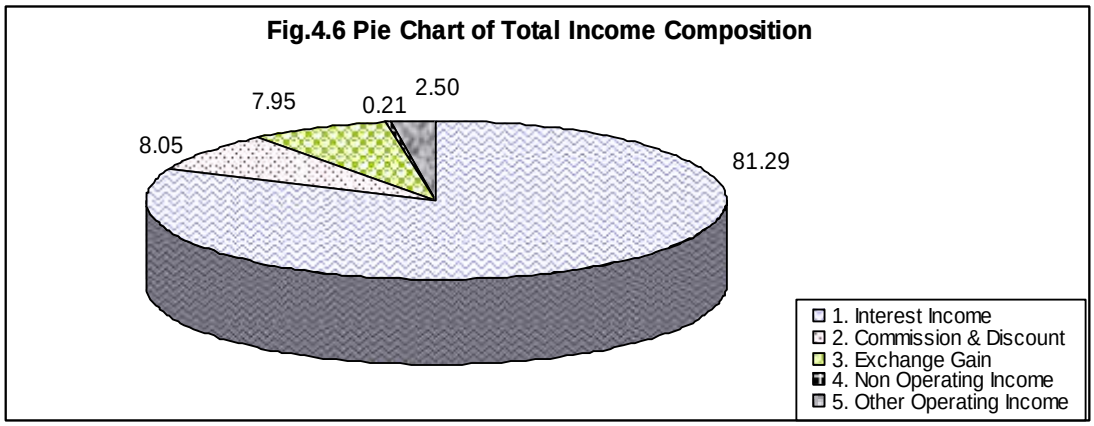
In table 4.22.1, same as other banks HBL has also highest portion of interest income among the different income heads. As the interest income is in increasing trends, commission and discount has decreased in 2007/08; exchange gain is in increasing trends; non operating income and other operating income is in fluctuating trends.

Table no. 4.22.2 Percentage of Total Income Composition of HBL

Income/Year	2003/04	2004/05	2005/06	2006/07	2007/08	Comp.
1. Interest Income	81.99	82.15	79.56	82.04	80.71	81.29
2. Commission & Discount	8.16	7.54	8.09	8.93	7.52	8.05
3. Exchange Gain	7.40	7.80	9.69	7.01	7.87	7.95
4. Non Operating Income	0.22	0.16	0.09	0.16	0.40	0.21
5. Other Operating Income	2.24	2.35	2.56	1.86	3.50	2.50
Total Income	100.00	100.00	100.00	100.00	100.00	100.00

In the table, the dependency on interest income of HBL has recorded above 79% over the 5 years period. In 2004/05, it increased highest as 82.15%. While in other income heads, exchange gain and commission & discount come after interest income. It remains below 7% throughout the period. Similarly other operating lie

below 2.50% and non operating income lie below 0.21% which contributed negligible share in total income.



From the pie chart, it is clearly known that out of total income composition interest income is in dominating position. It occupied 81.29% of pie, whereas 8.05% is by commission and discount, 7.95% is by exchange gain, 2.5% by other operating income and 0.21% by non operating income.

4.3.4. Composition of Total Income of EBL

Table no. 4.23.1 Total Income Composition of EBL

Income/Year	2003/04	2004/05	2005/06	2006/07	2007/08	Average
1. Interest Income	660.20	719.30	903.41	1144.41	1548.70	**995.20**
2. Commission & Discount	83.50	78.13	88.16	117.72	137.00	**100.90**
3. Exchange Gain	33.80	27.08	23.07	28.40	64.50	**35.37**
4. Non Operating Income	0.00	2.97	2.96	1.32	4.50	**2.35**
5. Other Operating Income	10.00	31.48	48.90	67.97	92.40	**50.15**
Total Income	**787.50**	**858.96**	**1066.50**	**1359.82**	**1847.10**	**1183.98**

Source: Annual Reports of EBL

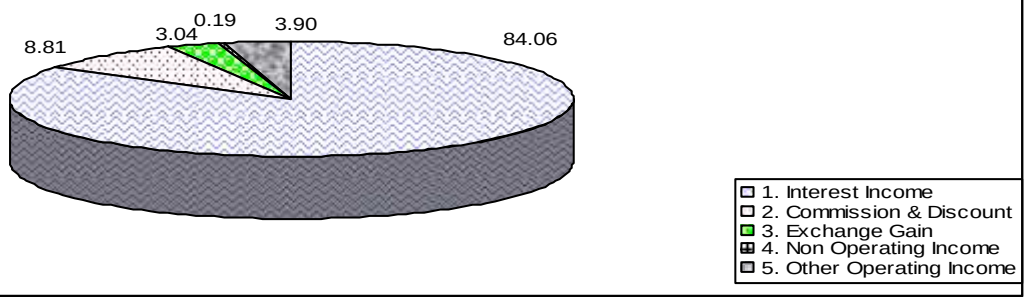
As the income interest covers the highest portion of total income, this is also applied to the EBL. Same as other banks, EBL has also highest income portion is covered by interest income and it is in increasing trends. Similarly commission and discount comes then after the interest income. But other income heads has covered a negligible portion.

Table no. 4.23.2 Percentage of Total Income Composition of EBL

Income/Year	2003/04	2004/05	2005/06	2006/07	2007/08	Comp.
1. Interest Income	83.83	83.74	84.71	84.16	83.84	84.06
2. Commission & Discount	10.60	9.10	8.27	8.66	7.42	8.81
3. Exchange Gain	4.29	3.15	2.16	2.09	3.49	3.04
4. Non Operating Income	0.00	0.35	0.28	0.10	0.24	0.19
5. Other Operating Income	1.27	3.66	4.59	5.00	5.00	3.90
Total Income	100.00	100.00	100.00	100.00	100.00	100.00

As the table 4.23.2 shows interest income of EBL covers the highest income over the earning. It occupies 83%-85% throughout the year and 84% in an average. The commission and discount is 10.6% in 2003/04; 9.10% in 2004/05; 8.27% in 2005/06; 8.66% in 2006/07; and 7.42% in 2007/08 which has covered 8.81% in an average. Whereas other income heads i.e. exchange gain, non operating income and other operating income cover the negligible part over the total income.

Fig.4.7 Pie Chart of Total Income Composition



From the fig.4.7, it is clearly known that out of total income composition interest income is in dominating position. It occupied 84.06% of pie, whereas 8.81% is by commission and discount, 3.9% is by other operating income, 3.04% by exchange gain 0.19% by non operating income.

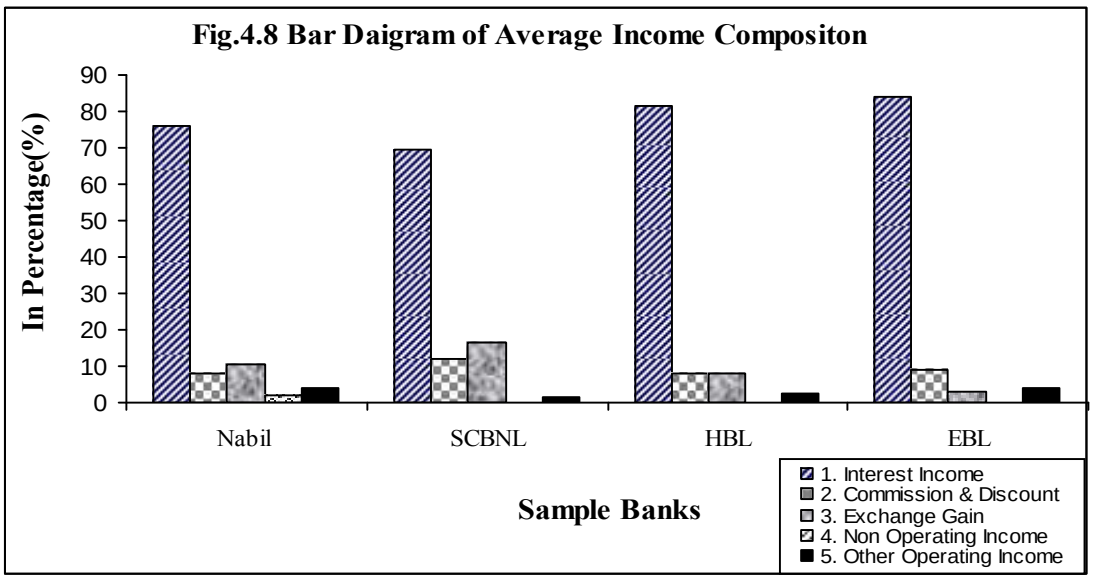
Comparative Study of dominance of interest income on total income of the commercial banks:

Table 4.24 shows the average income composition of commercial banks i.e. Nabil, SCBNL, HBL and EBL.

Table no. 4.24 Average Income Composition of Sample Bank

Income	Nabil	SCBNL	HBL	EBL
1. Interest Income	75.86	69.48	81.29	84.06
2. Commission & Discount	8.05	12.18	8.05	8.81
3. Exchange Gain	10.59	16.57	7.95	3.04
4. Non Operating Income	1.95	0.17	0.21	0.19
5. Other Operating Income	3.95	1.6	2.5	3.90
Total Income	100	100	100	100.00

From the table 4.24, it is clearly known that interest income is in dominating position in banking industry. All the sample banks are depending upon the income on total income composition.



The fig.4.8 reveals the average income composition of the sample banks. As already explained above, all the sample banks have dominating interest income. EBL has comparatively highest average interest income than other banks. Similarly, after interest income exchange gain covers the second portion of income heads for all commercial banks. SCBNL has highest average exchange gain income. After that, other operating income takes place. According to the above figure, Nabil has the highest other operating income. Finally, non operating income covers the negligible part over the total income. Here, Nabil has highest average non operating income, whereas other has less than 1% which seems to be nil in the figure.

4.4 Major Findings of the Study:

After presentation and analysis of relevant data of sample banks under study using various analytical tools, some major findings of this study are summarized below:

1. According to the theory, deposit rate and deposit amount should have positive relationship. But this theory does not exist for all sample banks. It may be due to the increase in liquidity position of people as well as commercial banks. As people have less investment opportunity, they put their money in banks and other financial institutions rather than to hold. Similarly due to other various reasons, awareness of people towards banking sectors and service factors of bank may also causes to attract the deposit holder's despites of decrease in interest rates.
2. Lending interest rates and lending amount should have inverse relationship as per the theory. From this study, it is found that all sample banks except EBL have inverse relationship between lending rate and lending amount. In the case of Nabil, SCBNL and HBL, the increment in demand of loanable fund is due to the decline in lending rate because this relationship is proved statistically significant. While for EBL, the decreasing in lending amount is not due to the decreasing in lending rate but may be due to the other factors.
3. It is found that total deposit and total lending of sample banks are moved towards same direction. There is high degree of positive correlation between total deposit and total lending which indicates that the change in one variables causes to changes in other variables in the same direction. This means lending will move in same direction where deposit will move.
4. There should be positive relationship between the interest spread and profitability of the commercial banks. This has been applied in the case of SCBNL and HBL. The increment in profitability of these banks is due to the increment in interest spread because this relationship is proved statistically significant. But for Nabil and EBL, this can not be concluded that interest spread and profitability has relationship.
5. While analyzing the aggregate picture of banking industry, it is found that interest rate is still a dominating factor to generate deposit collection

in the industry. It means that deposit interest rate plays a significant role in deposit collection.

6. Similarly, by analyzing the total lending from the aggregate picture of banking industry, it is found that lending of loan is directly depends upon the rate of interest. Lower the interest rate higher is the loan disbursement and vice-versa. This means lending interest rates plays a significant role in loan disbursement.
7. Interest income still plays a dominating role in the total income position of the commercial banks. It covers more than 70% portion of total income over the total earning of the banks. All of the sample banks are depended mainly on interest income while other income heads plays a negligible role.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary:

This study has focused in the impact of interest rates on fund mobilization of commercial bank. Commercial bank is the financial intermediation that plays two fold roles in economic development i.e. it helps to mobilize private savings and it channels these savings to productive uses. The interest rate is or should be the major policy instruments for performing the two major functions. So, this study tries to highlights interest rates importance and its impact on various variables.

This chapter mainly consists of three parts: Summary, conclusion and recommendation. In summary parts, revision of all four chapters is made. In conclusion parts, the result from the research is summed up and in last, recommendation is made based on the result or study which is made for improving the present situation to the concerned sector as well as for further research.

In a situation when the existing financial institutions, especially government's commercial banks were unable to mobilize the capital, the government adopted the liberalization policy. Economic liberalization policy has encouraged the establishments and growth of financial intermediaries in the country within the short period of time. As a result up to mid July 2008, 25 commercial banks, 58 development banks, 12 micro credit development banks, 78 finance companies, 16 saving and cooperatives and 46 financial NGOs are established within the financial system of Nepal which is hoped to contribute for economic development by playing important role in the financial system of the country and living standard of people.
Financial institutions mobilize the fund by collecting the scattered resources from the savers and provide the collected funds to the users. Deposit is the main sources

of commercial banks for lending to needy people. Higher the deposit higher the bank has ability to disburse loan. Every financial institution system sustain by lending the fund on higher interest rate and paying the deposit holder a little interest rate. Its means that such organization survive by making profit through an interest spread on deposit and lending. The proper decision made to charge and provide interest on lending and deposit affects the profit position of the organization.

Usually interest rates have greater impact on mobilization of the deposit. The higher interest rates attract more deposits and lower interest rates on loan and vice-versa. However, in Nepal, due to existence of some uncommon practices, the interest rates do not seem to have such impacts on deposits and credits. Both deposit and lending rates are decreasing over the years decreasing the interest spread. Though it is quite obvious for increasing demand for loan but deposits too are increasing. This has proved that customers in Nepal do not care much about when one is depositing but lower lending rate attract more customers to take loan.

After the liberalization policy, NRB slowly loosen the rigidness to fix the interest rate that financial intermediaries charge and offer. These institutions get freedom to quote the interest rate on deposit and lending which creates the competition in the Nepalese economy. But NRB used to issue directives regarding overall performance of the financial institution. Here an attempt is made to analyze the impact of interest rates on fund mobilization of commercial banks of Nepal. For this purpose, brief introduction about Nepalese economy, interest rate, statement of problem, objectives and significance of the study, research hypothesis and so on are made in the first chapter of this dissertation.

In second chapter, theoretical review as well as review of previous research has been made. The relation of interest rates to different variables, functions of interest rates, theories of interest rates, factors affecting the interest rates, NRB policy regarding interest rates and so on are reviewed in second chapter.

Research design used is mainly analytical. Out of the total commercial banks, mainly joint venture banks are chosen for sample purpose. This study is mainly based on secondary data which is used for the analysis. This all are made on third

chapter. Secondary data are collected from NRB's economic report, websites and annual reports of related banks.

In fourth chapter, collected data are presented in tabular and graphic form and analyzed using various financial and statistical tools like ratio analysis, correlation, coefficient of determination, probable error and t-statistics. From the ratio analysis, the ratio of loan and advances to total deposit of Nabil was 58%-72%; SCBNL was 30%-46%; HBL was 54%-63%; and EBL was 73%-78%. Similarly, the ratio of investment to total deposit of Nabil was 29%-41%; SCBNL was 46%-56%; HBL was 39%-47%; and EBL was 21%-31%. This shows that Nabil, HBL and EBL invest high portion of their deposit on loan and advance than investment sector and SCBNL invest high portion on investment sector. The ratio of interest earned to total assets of Nabil has range between 5%-6%; SCBNL between 4%-5%; for HBL between 4%-5% and for EBL, it was 5%-7%. The ICR of Nabil and SCBNL seem better than HBL and EBL because of higher ratio. The NIM of sample banks seem almost same i.e. range between 3.3%-5.5%. The effective interest rate of sample banks has range between 5.4%-7.65%, which is always higher than effective interest cost rate. The interest spread rate of these banks was lie between 3%-5% in the study period. The ratio of fixed deposit to total deposit is higher for EBL and HBL than Nabil and SCBNL. The portion of interest bearing deposit is highest for EBL i.e. almost 95% whereas for Nabil, SCBNL, and HBL, it was ranges between 70%-84%.

The correlation coefficient between average deposit interest rate and total deposit is negative for SCBNL, HBL and EBL i.e. r<P.E.(r), which means that there is no evidence of correlation between deposit interest rate and total deposit, whereas Nabil has positive correlation. Similarly, the correlation coefficient between average lending rate and total lending for Nabil, SCBNL and HBL showed negative relationship i.e. lending will move in opposite direction in case of increase or decrease of lending rate. Whereas, in spite of having negative correlation, r<6.P.E.(r), thus, EBL's result can not be concluded. Similarly, the coefficient of correlation between total deposit and total credit show positive relation and the 'r' value of all sample banks has almost equal to '1', thus it shows that lending will move in same direction where deposit move. Likewise, the coefficient of correlation

between interest spread and net profit of SCBNL and HBL showed positive and for Nabil and EBL, it was negative.

From the industry analysis, the result shows that for every increase in interest rate Rs. 48510 million more deposit will be collected and for every decrease in lending rate Rs. 59850.91 million more loan will be disburse. Lastly, the study shows that the interest income for these sample banks is still dominating out of the total income of the bank.

Finally, conclusion has been drawn which are presented in following section.

5.2 Conclusion:

From the analysis of data following conclusion has been drawn.

1. EBL and Nabil have aggressive lending policy which stayed above 60%. HBL has moderate lending policy which stayed between 55% and 63% whereas SCBNL has conservative lending policy which stayed below 50%.
2. In the investment policy, SCBNL has better ratio. It has ratio above 50% whereas other banks have ratio between 25% and 47%.
3. The figures of interest earned to total assets showed the similar pattern of all banks which lie between 4% and 6.5%.
4. The ICR revealed that Nabil and SCBNL enjoyed better ICR than HBL and EBL.
5. The net interest income of three banks lies above 700 million except EBL. However the growth ratio of EBL is more than 20% in each year. The trend of net interest income is increasing over the years.
6. The sample banks have effective interest income rate between 5.61%-7.65%. All of them have similar pattern of effective interest income rate. Whereas, effective interest cost rate lie between 1.3% and 3.78% revealed that there has been huge difference between effective interest income rate and cost rate which causes of high profitability of commercial banks through interest income.
7. The interest spread rate of sample banks seem in similar figure. Nabil has maintained the rate above 4% till 2006/07 and decreased 3.94% in

2007/08. SCBNL has maintained the rate between 3.7% and 4.10% throughout the period. HBL has maintained the spread rate between 3.19% and 3.85% whereas EBL has maintained nearly 4% in last 5 years period.

8. As there is no bench mark that the bank should hold cash to fulfill the needs of depositors, the liquidity risk ratio of sample bank has lies between 10%-20%.
9. The interest rate risk ratio of these banks lies above 80% which shows that they all are highly dependent on interest income.
10. EBL and Nabil have high growth ratio i.e. 31.18% and 21.62% that HBL and SCBNL i.e. 9.76% and 8.9%. On loan and advances, EBL and Nabil have 32.55% and 27.09% respectively and SCBNL & HBL have 20.95% and 11.76% respectively. The growth ratio of investment of EBL is 26.3%, Nabil is 14.24%, HBL is 8.23% and SCBNL is 5.18%. The growth ratio of interest income is also highest for EBL i.e. 23.81%, Nabil is 18.55%, HBL is 12.25% and SCBNL is 11.16%. On interest expenses, Nabil has 27.95%, EBL has 18.91%, SCBNL has 14.36% and HBL has 13.78%. Similarly, the growth ratio of EBL on net profit is 36.04%, HBL is 25.59%, Nabil is 13.16% and SCBNL is 11.08%.
11. The average market interest rates on deposit decreased in the mid July 2005 and slightly increased over last 3 years. Similarly the average lending rate seems to be decreased throughout the period. It shows that the deposit interest rate is increasing while lending rate is decreasing year by year.
12. The fixed deposit ratio of Nabil lies between 14%-27%; SCBNL lies below 13%; HBL lies below 25%; and EBL lies between 27%-37%. The bank having low ratio has to maintain the high liquidity to fulfill the demand of non-fixed deposit holder but low ratio decrease the interest burden of the bank.
13. Similarly IBD of the sample bank covered about 70%-95% out of total deposit.
14. The coefficient of correlation between average deposit interest rate and total deposit except Nabil other three banks i.e. SCBNL, HBL and EBL has negative correlation. This means that the 'r' values of these three

banks were insignificant i.e. no evidence of correlation between average deposit interest rate and total deposit. This means that deposit interest rate does not play significant role on collection of deposit. Whereas Nabil has positive correlation and highly significant.

15. The coefficient of correlation between average lending interest rate and total lending for banks were negatively correlated but showed mixture of reaction. The value of 'r' is significant for Nabil, SCBNL, and HBL which means lending will move in significantly in opposite direction in case of increase or decrease of lending interest rate. But in the case of EBL, correlation coefficient 'r' is insignificant and relationship cannot be justified.
16. The correlation coefficient of total deposit and total credit for all banks have seen highly significant and revealed that lending will move in same direction where deposit will move.
17. Similarly, the coefficient of correlation between interest spread and net profit showed mixture of result. Among the sample banks, SCBNL and HBL have positive correlation. It means that net profit of these banks move in same direction as the interest spread is moving. But in the case of Nabil and EBL, the value of 'r' is insignificant and nothing can be concluded.
18. In the banking industry analysis, the impact of deposit interest rates on collection of deposit revealed interest rate plays a significant role in deposit collection. The regression analysis and t-test proved that for every increase in interest rate Rs. 48510 million more deposit will be collected. This shows that interest rate is still a dominating factor to generate deposit in the industry.
19. In the case of lending, the impact of lending interest rate on total lending revealed that lending interest rate plays an important role in loan disbursement. The regression analysis and t-test proved that for every decrease in lending rate Rs. 59850.91 million more loan will be disburse.
20. Interest income is still dominating income over total income composition of these banks over the period. Interest income covered more than 70% portion out of total income composition of commercial banks while other

income like commission and discount, exchange gain, non operating income and other operating income covered negligible portion.

21. This shows that interest rate is that factor which attracts the customer to deposit the fund, to offer the customer through loan and advances, to earn interest margin and to increase profitability.
22. A high interest rate in deposit and low in lending is important to attract customer to the bank but facilities offered by the banks also plays an important role for the success of banks as these sample banks do.

5.3 Recommendation:

On the basis of analysis, findings and conclusion, certain recommendation can be implemented to overcome present weakness and position of commercial banks. The recommendations derived from the study are as follows:

- The financial institutions are suggested to quote higher interest rate on deposit which will generate more capital for the development of the country so that it helps to generate more deposits which are needed to be collected by the financial institutions for the development of the economy.
- NRB is suggested to provide clear-cut policies and directives related to deposit interest rates and lending rates to maintain the balance between deposit and loan rates. If it is made, it will develop a healthy competition among the banks.
- While fixing the lending rate, high rates should be charged in unproductive sectors and lower rates should be charged in productive sectors and small scale industries. Commercial banks should emphasize on the repayment of loans and should provide different incentives to borrowers such as facilities, fee waivers, discount etc. to encourage to pay loan and also to compete with unorganized sector. Good repayment of loan ensures the strength of the commercial banks.
- Commercial banks are mainly depend upon the interest income. The higher dependence in interest income should be gradually decreased as it bears higher risk on bank's part. Banks should explore more avenues to increase commission based income by increasing different service facilities and larger network.

- Banks should increase its deposit in non interest bearing deposit than increasing deposit in higher interest bearing account. Higher deposit in non-cost account expresses positive and ever lasting image of the bank in the market.
- Commercial banks provide different deposits and loan product by offering different incentives but add hidden cost (service charge, fines, commitment fees etc.) in it. Such cost must be told to customer before entering into contract.
- Nowadays large numbers of depositors are attracted by unorganized hands. Commercial banks should try to attract such deposit by developing innovating deposit account offering attracting interest rates and facilities. If commercial banks succeed in attracting such scattered saving, it will contribute to increase their resources then to the national development.
- Generally, it has been tendency of well established commercial banks to have higher interest spread. These banks should not be allowed to have such higher margin due to their market standings. NRB should intervene in such cases and make its liberal policy open to take control over such policy of the banks.
- Mostly the joint venture banks have focused their banking services especially to big clients such as multinational companies, real estate companies, large scale industries, manufactures or exporter. The minimum level of bank balance and the amount needed to open an account in these banks are very high amount. So, small depositors are very far from enjoying such banking facilities of joint venture bank. So, all joint venture banks should open its door to the small depositors and entrepreneurs for promoting and mobilizing small investor's fund.
- The government and NRB should not force the commercial banks to invest more in government and other low-yielding securities. Such forced adversely effect on investment to deprive, private and productive sector from necessary credit facilities. However, when commercial bank have high amount of idle fund it should be invest them in government securities.