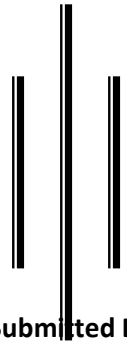
ASSESSMENT OF INTEREST RATE ON NEPALESE COMMERCIAL BANKS & ITS IMPACT ON DEPOSIT & LENDING

(A CASE STUDY OF NIBL & EBL)

A THESIS



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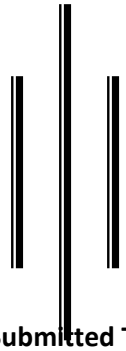

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CHAPTER – ONE

INTRODUCTION

1.1 Background of the Study

The rate of interest is the price a borrower must pay to secure scarce loanable funds from a lender for an agreed-upon time period. It is the price of credit. The rate of interest is the ratio of two quantities: the money cost of borrowing divided by the amount of money actually borrowed, usually expressed on an annual percentage basis. The cost of borrowing money, measured in rupee per year per rupee borrowed, is the interest rate (Samuelson, 1993: p469). Interest rate sends price signals to borrowers, lenders, savers and investors. For example, higher interest rates generally bring for a greater volume of saving and stimulate the lending of funds. Lower rate of interest, on the other hand, tend to dampen the flow of saving and reduce lending activity. Higher interest rates tend to reduce the volume of borrowing and capital investment, and lower interest rates stimulate borrowing and investment spending (Rose, 1997: p13).

In the early mid 1980's the country has adapted liberal economic policy. Number of finance companies and commercial banks began to develop and government made the liberal policy in maintaining the interest rate structure. Liberalization in determining market interest rate was encouraged for commercial banks, established under joint venture in association with foreign banks in private sectors. There are full discretions to NRB in determining interest rate structure of banks & financial institutions taking from the period 1960 to 1975. Still NRB is empowered in the fixation of interest rate which commercial banks & financial institutions have to follow although they can provide higher rates after fulfilling the minimum interest rates set by NRB.

On 16 November 1984 government had provided autonomy in offering the interest rate on saving and time deposit to the extent of 1.5 percent and 1 percent points respectively above the prevailing rates. In 1986, financial institutions got freedom in fixing their interest rates in deposits & loans. In addition, there was also, limitation on the interest rate

amounts the different loans on provided for the productive & priority and full deprived sector.

On August 22, 1992, NRB issued some directives to commercial banks and financial institutions to clearly spell out the interest rate on deposits. NRB also instructed the bank & their interest rate spread on deposit and credit at 6% within the mid – December 1993. A further instruction to banks & financial institutions was issued in 2002, and now the interest rate spread required to be maintained by commercial banks & financial institutions has also been removed.

The interest rate regime in Nepalese perspective change from 1960 – 1980 to out that of ultimate deregulation of interest rate and removal of spread from 1986 to 2002. At present there is complete freedom to have competitive interest rate with hope of maintaining, efficiency is financial system an important part of government's financial liberalization policy. However, NRB with change in monetary policy has given directives to the commercial banks and financial institutions to maintain balance in determination of interest rate on deposit and loan. The enactment of the umbrella act, putting all financial institution under the same directives has directed banks and financial institutions to minimize the spread between interest rate on deposit and loan. The sensitivity of the interest rate is considered vital in today's financial market operating in the country. (Shrestha & Bhandari, 2007: p128-130).

1.2 Profile of Nepal Investment Bank Limited

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, had acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd. The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

Table: 1.1

Present Share Capital of NIBL

Share Capital	Amount in NRS.
Authorized Capital	4,00,00,00,000
Issued Capital	2,40,90,97,700
Paid up Capital	2,40,90,97,700
Proposed Bonus Share	60,22,74,425

Source: Annual Report of NIBL 2067/068

Table: 1.2

Detail of Share Ownership of NIBL

Owners	Amount in %
General Publics	20
'A' class licensed institutions	15
Rastriya Bima Sasthan	15
Others Institutions	50
Total	100

Source: Annual Report of NIBL 2067/68

To be the leading Nepali bank, delivering world class service through the blending of state-of-the-art technology and visionary management in partnership with competent and committed staff sound financial health with sustainable value addition to all our stakeholders. We are committed to do this mission while ensuring the highest levels of ethical standards, professional integrity, corporate governance and regulatory compliance. NIBL bank received as "Bank of the Year: 2003", "Bank of the Year: 2005", "Bank of the Year: 2008" and "Bank of the Year: 2010". This bank has 41 branches and its head office is located at Durbar Marg, Kathmandu.

1.3 Profile of Everest Bank Limited

Everest Bank Limited was registered on November 17, 1992 and come into operation on October 18, 1994 with an objective of extending professionalized and efficient banking

services to various segments of the society. The bank had an initial paid up capital of Rs. 3 Core. Today the bank has grown to become one of the leading banks in Nepal.

Panjab National Bank (PNB) joined hands with EBL as a Joint Venture in 1997 and turned it around to a highly profitable bank. There has been no looking back since then. PNB provides top management support under the Technical Service Agreement. PNB joint venture partner of EBL one of the largest nationalized bank in India having 114 years of banking history, holds 20% equity.

Everest Bank has recognized the value of offerings a complete range of services and has pioneered in extending various customer friendly products such as home loan, education loan, EBL flexi loan, EBL property plus (future lease rental), Home equity loan, vehicles loan, Loan against share, loan against life insurance policy and loan for professional. The bank is providing customer friendly services through a network of 22 branches.
Everest Bank Limited was the first bank to introduce Any Branch Banking System (ABBS) in Nepal. All the branches of the bank are connected with ABBS which enables the customers to do all their transactions from any branches other than where they have their account. Everest Bank has introduced the Mobile Vehicle Banking System to see the segment deprives of proper banking facilities through Birtamod branch, which is the first of its kind.

The bank has committed to provide excellent professional services & improve its position as a leader in the field of financial related services, use latest technology aimed at customer satisfaction & act as an effective catalyst for socio-economic developments. The bank was bestowed with the "NICCI Excellence award "twice in 1999 and 2003 by Nepal India chamber of commerce for its spectacular performance under finance sector and the bank has been conferred with "Bank of the Year 2006, Nepal" by the banker, a publication of financial times, London.

Table: 1.3

Present Share Capital of EBL

Share Capital	**Amount in NRS.**
Authorized Capital	2,00,00,00,000
Issued Capital	1,28,14,06,500

Paid up Capital	1,27,96,09,490
Proposed Bonus Share	11,19,60,949

Source: Annual Report of EBl 2067/068

Table: 1.4

Detail of Share Ownership of EBL

Owners	**Amount in %**
General Publics	68
Panjab National Bank	20
Others Institutions	12
Total	100

Source: Annual Report of EBL 2067/68

1.4 Statement of the Problem

Majority of people are in need of money to invest in productive sector and more capital is needed even to use modern technology which can be possible only through the banks. The village money lenders are providing credit on excessively high interest rate and even collecting deposits in low interest rate. If financial intermediaries like bank and financial institution do not play important role in channeling saving to productive sectors in such situation it will not be possible for capital to formulate and to compete in the international market. The general policy and practices followed by Nepal with respect to interest rate charged and offered by banks and financial institutions is a subject of great debate, especially in recent years. When credit becomes more costly and less available, total spending for goods and services falls, businesses cut back production and reduce their inventories. As a result, unemployment economic growth slows down. An interest rate is the cost of borrowing and the interest rate is the rate expressed as a percentage of the total sum borrowed, for a stated period of time. It is normally expressed as a percentage over the period of one year. It is also a vital tool of monetary policy and is used to control variables like investment, inflation, and unemployment. Interest rates are very closely watched indicators of a financial market. 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 in enhancing deposits from savers and lending to those

potential investors/borrowers which require financing from the banks by providing interest to the depositors and charging interest to the borrowers. Generally, when interest provided in deposits is very less, people keep their surplus fund idle. In the same way when interest charge on lending is very high the possible investors will also be unable to borrow funds for investment. However, interest on deposits must be able to increase the amount of deposits by encouraging people to save their income and on the other hand, lending rate of interest must be attractive to the investors so that they will be able to enjoy the benefit by utilizing borrowed funds. This can be possible only when the fund seeking people will be able to earn more than what they pay as interest on borrowing funds. But whether the financial system of Nepal is able to attain such situations or not is a matter of concern for us. The problems of this study are as follows.

- What is the Impact of liquidity position of organization on interest rate charged and offered by commercial banks?
- What are the other major qualitative factors that shape the interest rate of commercial banking sectors of Nepal?
- What are the various methods that commercial banks in Nepal use to calculate the interest rate they charged to borrowers?

1.5 Objectives of the Study

The main aim of this study is to identify the influencing factors of interest rate charged and offered by Nepalese banks through examination of the relationship between influencing factors and interest rate. The other specific objectives are as follows.

- To explore the interest rate structure on deposits and lending of sample commercial banks.
- To analyze the relationship of interest rate on the volume of deposits of sample commercial banks.
- To examine the relationship of interest rate structure on the volume of lending of sample commercial Bank.
- To explore the problems and to suggest for further improvements on the basis of findings of the study.

1.6 Significance of the Study

Nepalese interest rate varies time to time, region and sector to sector. The function in interest rate is a regular phenomenon in developing countries. Therefore, it is quite necessary to develop some ideas about the impact of interest rate to the economy. Furthermore, it is important to know the policies of financial institutions regarding rate of interest and its impact on various financial institutions. This study will try to help 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 being an important aspect for the economic development of the country has not much been emphasized that means very few number of research work has been found in this topic. 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. Similarly, it can be fruitful resource for teachers, students, researchers, academicians, general individuals and others in abstracting some useful information about interest rate, deposits and lending.

1.7 Limitations of the Study

As we know that every activity has limitations due to time and resources, this thesis also pass through some boundaries. The main limitation likely to be faced for this study could be as given below;

- The sample are taken only from commercial banks, other financial intermediaries are not included in the study.
- The deposit amount and lending amount of the commercial banks are influenced by several factors.However, this study mainly focuses on the interest rate.
- This study covers only five fiscal years from 2063/046 to 2067/068.

- Although there are many other commercial banks, samples cover only two because of the unavailability of sufficient and accurate data along with other constraints.

1.8 Organizations of the Study

The study has been divided into five chapters to make study more systematic

Chapter - One: Introduction

The first chapter includes background, profile of sample bank, statement of the problems, objectives and organization of the study, significance of the study, limitation of the study and organization of tee study.

Chapter - Two: Review of Literature

This chapter mainly deals with the literature review in which articles; journals and abstract of the previous researches done on the related topic are situate.

Chapter - Three: Research Methodology

This chapter deals with research methodology used to carry out the research. It includes research design, sources of the data, population and sample, sources and technique of data collection, statistical and financial tools used to analyze the data.

Chapter - Four: Presentation and Analysis of Data

It contains Presentation and Analysis of relevant Data and information using various analytical tools and the concept of remittance. This chapter is one of the main chapters of the study. It includes almost data and graphs are interpreted in such a way so that the objectives of the study can be achieved.

Chapter - Five: Summary, Conclusion and Recommendation

The fifth and final chapter consist summary of findings, conclusion and recommendation and various suggestions for the improvement of future performance of the company.

Similarly, at the front part of the study table of contents, recommendation sheet, viva voice sheet, acknowledgement, list of table and figure and abbreviation are presented and bibliography and appendices are presented at the end of the study.

CHAPTER – TWO

REVIEW OF LITERATURE

This chapter is going to show the problems posed by different researchers and writers and the solutions and strategies they exerted. The main motto of this chapter is to show how far and how much our present study is associated with different past researches. So, different journals, articles, books and in this chapter, attempts have been made to review the literature related to interest rate structure and its impact on lending and deposit of commercial banks in Nepal. Both the theoretical aspect as well as findings of the previous studies has been included here so as to identify the broaded aspects of interest rates structure and its impact on lending and deposit of commercial banks in Nepal. Research works were reviewed.

A critical review of the literature helps the researcher to develop a thorough understanding and insight into previous research works that relates to the present study. It is also a way to avoid investigation problems that have already been definitely answered. Thus a literature review is the process of locating, obtaining, reading and evaluating the research literature in the area of the student's interest (Wolf & Pant, 2008:p39). The purpose of literature review is to find out what research studies have been conducted in one's chosen field of study and what remains to do. The primary purpose of literature review is to learn not to accumulate.

2.1 Conceptual Review

2.1.1 Meaning of Bank

In simple language, bank can be defined as a place where the transaction of money takes place. In other words, bank is such an institution that collects scattered deposits advances and loans. A bank collets deposit from different individuals and institutions, these collected deposits are mobilized by giving loans to different individuals, industries, commercial enterprises and so on. A bank does not only perform the activity of receiving deposit and advancing loan but at the same time, it performs payment or remittance and other credit activities as well. Therefore, a bank plays a significant role in the economic development of country. Bank fills the gap between the searcher and provider of fund. It also provides sufficient back support for the growth and expansion of trade and industry of the country, which eventually aids to the economic condition.

Banks are concerned mainly with functions of banking i.e. receiving, collecting, transferring, buying lending, investing, dealing, exchanging and servicing (safe deposit, custodianship, agency, trusteeship) money and claims to money both domestically and internationally. The principal activities of a bank are operating current accounts, receiving deposits, taking in, paying out notes and coins, and making loans.

Bank is a financial institute where the money is deposited and supplied to the needy person for their different transaction who comes in the bank to fulfill their requirement of cash. So, we can say the main game of the play is to play with money and through it generates profit. Actually, the bank collects money from public by attracting them with sound interest rate in their deposit. Through the money they have collected from the public, they provide loans to the business house, industry and needy people etc. Now a day Bank also provides education and property loans. The bank charges the different interest rate, highly for loan and low for depositors. So, the difference gives actual profit. Just by collecting cash from saver and providing loans to the investor, we can say that actually the bank acts as an agent between the saver and the investor.

Without bank, it would be quite impossible for the industrial list and entrepreneurs to go directly to public for getting they're saving for investment. So, the simplest definition is that, bank takes the saving of the public by providing them with certain rate of interest & loans it to needy customers charging them certain rate of interest and earns some profit by doing this inter-mediation. This is the broadest from of banking but in this age banking is such a vague term. It does a lot more than deposits and credits. Remitting of money,

issues of the money, guarantee, letter of credit, controlling monetary activities of country etc., are also major function of the bank. Bank as an institution originated from Italy. The bank of Venice, establish in 1157 AD, was the first bank in the world. Therefore, the word bank also from Italian word 'bank' where means accumulative of money or stock. The second bank was Bank of Barcelona of Spain established in 1844 AD.

The history of modern banking business in Nepal is very short, less than half century. If we try to see the history of banking transaction in depth, evidence of money lending function are found in practice before 8th century. In 732 AD, Gunakama Dev the ruler of Kathmandu contracted Kathmandu town by collecting fund from people. Towards the ends of 14th century "Tankadhari" the moneylender, was the owner of the monetary transaction. Due to the lots of convenience brought by money lender, during the period of Prime Minister Random (1877-1885) established "Tezarath Adda" a financial institute that supply credit at 5% rate of interest against security of gold, silver and ornaments. The main objective of this institution was to free the people from moneylender exploration Nepal in developing country. In the history of Nepal to solve this problem, for the first time commercial bank was established in 1983 AD. Nepal Rastra Bank came into existence as a central bank. Rastriya Banijya Bank was established in July 23rd 1966 A.D as a commercial bank. The purpose of this bank is also to provide facilities for the economic welfare of the general public.

In our country, apart from local commercial banks, a board of joint venture bank entered with the view to accelerate the pace of development of nation. At present there are many joint venture banks, which are running successfully in a competitive environment. Nepal Government deliberate policy of allowing foreign joint venture banks to operate in Nepal targeted to encourage local tradition ruin commercially bank to entrance their capacity through competition efficiency, mechanization and modernization is of computerization and promote customer services. At present, there are 32 commercial banks in Nepal.

2.1.2 Commercial Banks in Nepal

Commercial banks are those financial institutions mainly dealing with activities of the trade, commerce, industry and agriculture that seek regular financial and other helps from them (banks) for growing and flourishing. The main objective of commercial banks is to

mobilize idle resources in particular productive uses after collecting them from scattered sources. Thus, commercial banks as a financial institution, transfers monitory sources from savers to users. Commercial banks contribute significantly in the formulation and mobilization of internal capital and development efforts; they furnish necessary capital required for trade and commerce in mobilizing the dispersed saving of the individuals and

institution. Commercial banks are being the means of enlistment of society. The function of commercial banks are in many ways such as accepting deposits, provide interest in the formulation of capital, granting loan which helps to remove the deficiency of capital performing agency functions which make the life easier and they also play an important role in credit creation.

"Commercial bank is a corporation which accepts demand deposits subject to cheque and makes short-term loans to business enterprises regardless of the scope of its other services." *(Bhattrai: 2056, P.3)*

A commercial bank is a dealer in money and in substitutes for money, such as cherub or bill of exchange. It also provides a variety of financial services. In Nepalese context, "Commercial bank as one, which exchange money, deposits money, accepts deposits, grants loans and performs commercial banking function*."(Commercial Bank Act 2063 B.S)*

Commercial banks are very important for the development of national economy. They accept public saving as deposits and advance them as loans to the persons, business organizations and government when they required. The development of commercial banks is in increasing trend after the restoration of democracy in 1990A.D. The first commercial bank is Nepal Bank Limited that was established in 30 Kartik 1994 B.S (1937 A.D.). And the second is RBB established in 10/10/2022 B.S.

After a long period of establishment of these two banks, NABIL Bank is the first commercial bank from the private sector. This is the first joint venture bank of Nepal also. There after many other joint venture and non joint venture banks were set up under the Commercial Bank Act, 2031and Company Act, 2053.

Now, Thirty-Two Commercial banks are operating in the country. The door is opened now for the establishment of commercial banks with newpolicy relating to commercial bank issued by Nepal Rastra Bank considering that banking of entrance is not favorable in the liberal and market oriented economic environment and to create the competitive environment. Thus, it is expected that the numbers of commercial banks will be increased in future. According to new policy issued by NRB, the paid up capital of new opening commercial bank at national level must be Rs. 2000 million.

If the newly opened bank is joint venture with foreign bank or financial institution, it is permitted to open new commercial banks with head office at Kathmandu valley contracting three years management with 67% investment of foreign such institution, the ratio of ownership of share will be 7:3 between founder and public respectively. *(NRB Directives, 2067/068)*

There are many functions of commercial banks and the principal functions are as follows.

- To accept deposit
- To provide loans and advances
- To create credits
- To perform agency function
- To carry out utility functions.

The commercial bank and banker has its own right and duties. The rights are mentioned point-wise as follows.

- Banker enjoys a general lien over customer's securities in his possession.
- He has an implied right to change a reasonable commission for his service andinterest upon loans.
- He has the right of set-off like any other debtors.
- He has the right to appropriate payment as per the rules laid down in Clayton's case.

- Banker need not seek out the creditor to make the payment. It is the creditor who should demand payment.

Similarly, the duties of banker are as follows.

- To receive his customer's money and cheques and other instruments for collection.
- To repay the customer's deposit on the presentation of customer's mandate known as the cheque.
- To maintain secrecy in respect of customer's account and affairs.
- To give a reasonable notice before closing a customer's account.

2.1.3 Concepts and Meaning of Interest Rates

A rate which is charged or paid for the use of money is known as interest rate. Interest is the amount paid by a borrower to a lender above the amount (the principal) that has been borrowed. An interest rate is often expressed as an annual percentage of the principal. It is calculated by dividing the amount of interest by the amount of principal. Conceptually, interest is both a payment and receipt for the use of money. Interest, therefore, can be considered from the above two point. If interest is paid, it can be considered as a 'cost'. One the other hand, if interest is received, it can be considered as In other words, interest is the rewards for the pure yield of capital of saving for forgoing of liquidity and surplus of money. The rate of interest, according to Keynes, is a purely monetary phenomenon and in his theory, he has presented “a proposition that the rate of interest influences the level of economic activity by first influencing the rate of real investment in the economy”. According to him, the real investment is in fixed capital or durable machines. Schulz has also expressed his view 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, bank will make excessive profits and this leads to waste of save resources. However, the neo-classical economist defined the interest as the price for the use of loanable funds. But the modern economist, 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. 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 produce either positive or negative impact upon the growth of a developing economy such as ours" (Rose, 2003: p113).

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 forth a greater 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.

2.1.4 Functions of the Interest Rate in the Economy

The rate of interest performs several important functions in the economy which are as follows.

- It helps guarantee that current saving will flow into investment to promote economic growth.
- It brings the supply of money into balance with the demand of public for money.
- It rations the available supply of credit, generally providing loanable funds to those investment projects with the highest expected returns.
- It is a significant tool of government policy through its influence on the volume of saving and investment. If the economy is growing too slowly and unemployment is rising, the government can use its policy tools to lower interest rate in order to stimulate borrowing and investment. On the other hand, an economy experiencing rapid inflation has traditionally called for a government policy of higher interest rate to slow borrowing and spending and encourage more saving (Rose, 2003: p,113).

2.1.5 Theories of Interest Rate

Various interest rates have been propounded by various economists, which describe how interest rate is determined in various situations. These differences are due to the risk premium associated with the issuer. Even securities issued by the same borrowers often

carry a variety of interest rates. In this section, we focus upon those basic forces that influence the level of interest rates.

To uncover these basic rate-determination forces, however, we must make a simplifying assumption. We assume in this chapter that there is one fundamental interest rate in the economy known as the pure or real rate of interest which is the component of all interest rates. The closest approximation to this pure rate in the real world is the market yield on the government bonds minus inflation. The rate of interest on Treasury bond is called risk free rate of interest, which consists of real rate of interest plus premium for inflation. It is a rate of return presenting no risk of financial loss to the investor and representing the opportunity cost of holding idle cash, because the investor can always invest in no risk bonds and earn this minimum rate of return. Once pure rate of interest is determined, all other interest rates may be determined from it by examining the expected future inflation and special characteristics of the securities issued by individual borrowers. For example, only the government can borrow at risk-free interest rate; other borrowers pay higher rates that due to the greater risk of loss attached to their securities. Difference in liquidity, marketability and maturities are other important factors causing interest rate to differ from the pure or risk free rates. In this study mainly four theories of interest will be reviewed.

2.1.5.1 Classical Theory of Interest Rates

One of the oldest theories concerning the determination of the pure or risk-free interest rate is the classical theory of interest rates, developed during 18th and 19th centuries by a number of British economists and elaborated by Fisher (1930) and other more recently. This theory is also called saving- investment theory of demand and supply theory. The basic ideal of this theory is that the demand for capital and supply of capital determine the rate of interest. The interest rate is determined at a point where demand for capital is equal to supply of capital. The classical theory argues that the rate of interest is determined by two forces:

- The supply of savings, derived from households
- The demand for investments capital, coming mainly from the business sector.

A. Saving by Households

Most of the saving in modern industrialized economics is carried out by individuals and families. For these households, saving is simply abstinence from consumption spending. Current, savings therefore are equal to the differences between current income and current expenditure.

In making the decision on the timing and amount of saving to be done, households typically consider several factors, the size of current income and long-term income, the desired savings target, and the desired proportion of income to be set aside in the form of savings. Generally, the volume of households saving rises with income. Higher incomes facilities and individuals tend to save more and consume less relative to their total income than families with lower incomes.

Although income levels probably dominate saving decisions, interest rates also play an important role. Interest rates affect an individual's choice between consumption and saving for future consumption. The classical theory of interest assumes that individuals have a definite time preference for current over future consumption. A rational individual, it is assume, will always prefer current enjoyment of good s and services over future enjoyment. Therefore, the only way to encourage an individual or family to consume less now and save more is to offer a higher rate of interest on current saving. If more were saved more is to offer a higher rate of interest on current savings. If more were saved in the current period at a high rate of return, future consumption would be increased. For example, if the current rate of interest is 10% and a household save Rs100 instead of spending it on current consumption, it will be able to consume Rs110 in goods and services a year from now.

The classical theory considers the payment of interest a reward for waiting- the postponement of current consumption in favor of greater future consumption. Higher interest rates increase the attractiveness of saving relative to consumption spending, encouraging more individuals to substitute current saving for some quality of current consumption. This so called Substitution Effect calls for a positive relationship between interest rates and the volume of savings. Higher interest rates bring forth a greater volume of current savings.

B. Saving by Business Firms

Not only households, but also business firms save their earning. Most business hold savings balances in the form of retained earnings (as reflected in their equity or net worth accounts). In facts, the increases in retained earnings reported by business each year is a key measure of the volume of current business saving, which supplies most of the money for annual investment spending by business firm.

The critical element in determining the amount of business savings is the level of business profit. If profits are expected to rise, business will be able to draw more heavily on earnings retained in the firm and less heavily on the money and capital market for funds. The result is a reduction in the demand for credit and a tendency toward lower interest rates. On the other hand, when profits fall but firms do not cut back on their own investment plans, they are formed to make heavier use of money and capital markets for investments funds. The demand for credit rises and interest rates may rise as well.

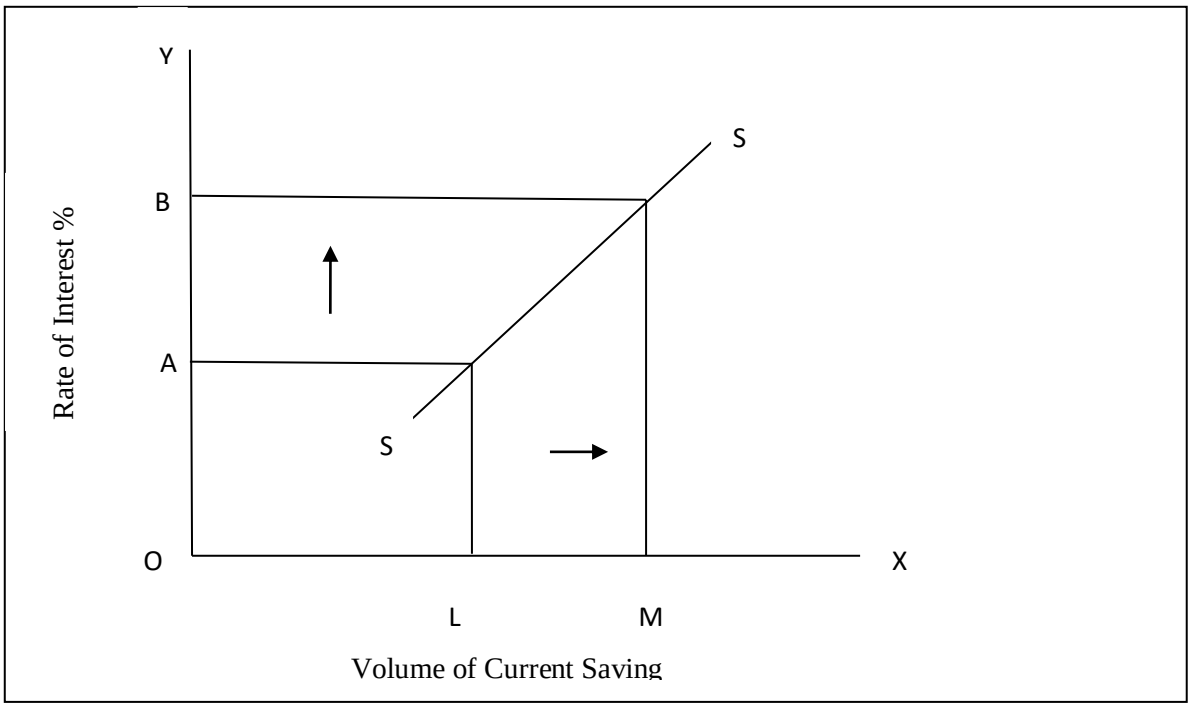
Although the principal determined of business is profits, interest rates also play a role in the decision of what proportion of current operating cost and long term expenditures should be financed internally and what proportion externally. Higher interest rate in the money and capital markets typically encourage firms to use internally generated funds more heavily in financing projects. Conversely, lower interest rates encourage greater use of external funds from the money and capital markets.

C. Saving by Government

Government's saving is defined as the difference between revenues and expenditure such that saving exists when revenues exceed expenditure (a budget surplus). Income flows in the economy (out of which government tax revenues arise) and the pacing of government spending programs are the dominant factors affecting government savings. The total supply of funds is sum of above three elements as SS on figure 2.1.

Figure: 2.1

Substitution Effect relating saving and Interest Rate



Source: Rose, 1797, p: 193

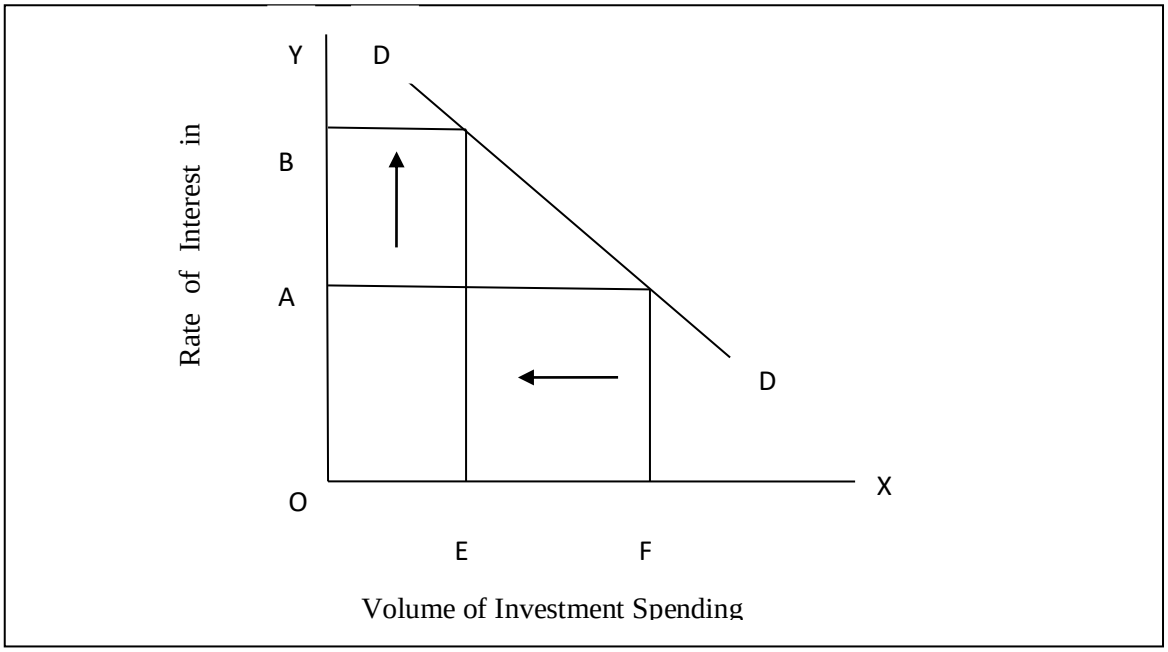
Above figure 2.1 shows the substitution effect between saving and interest rate, OX axis represents the volume of saving and OY axis represents the rate of interest. If interest rate increase volume of saving also increase, interest rate is increase from A to B in this situation volume of saving is also increase from L to M. This figure prove that the substitution effect of saving and interest rate. SS line represents the total supply of fund.

D. The Demand for Investment Funds

The saving made by business, government and households are important determinants of interest rate but they are only one-side determinants. The factor in investment spending made by business firms, governments and in some cases households. Business requires huge amounts of funds each year to purchase equipments, machinery and inventories and to support to construction of new buildings and other physical facilities. The majority of business expenditures for these purposes consist of what economists call replacement investment. But according to the classical economists, interest rates and investable fund have inverse relationship. At low rate of interest, more investment project becomes economically viable. On the other hand, if the rate of interest rises to high level fewer investments project will be pursed and fewer funds will be required from the financial market as:

Figure: 2.2

The Investment Demand Schedule



Source: Rose, 1797, p: 195

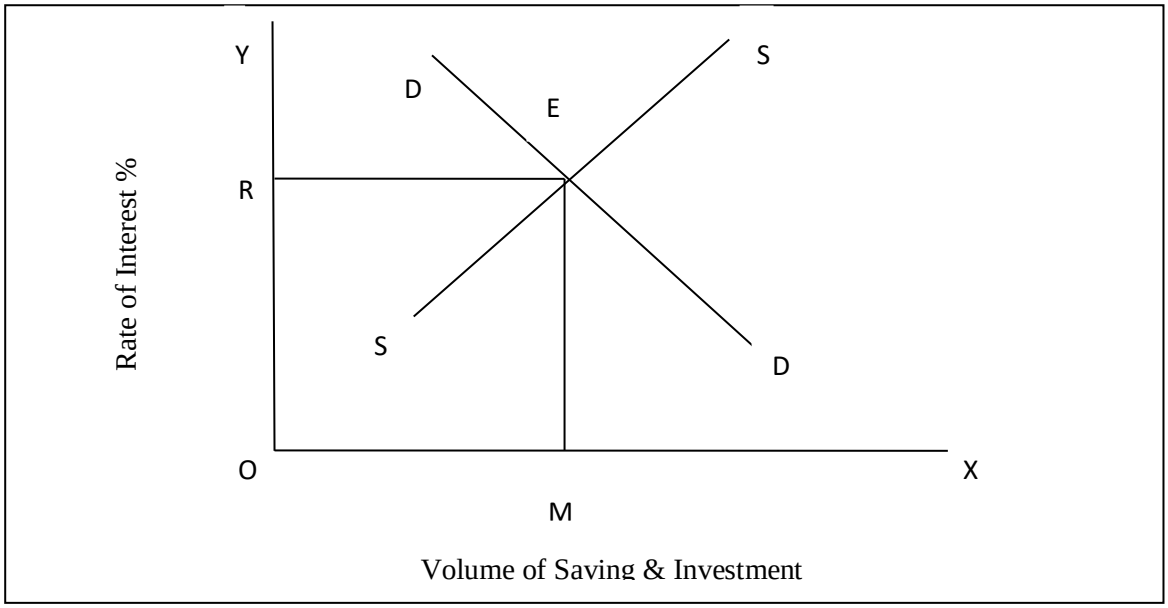
Above figure 2.2 shows the relationship between investment and interest rate, OX axis represents the volume of investment and OY axis represents the rate of interest. If interest rate increases volume of investment decrease, interest rate is increase from A to B in this situation volume of investment decrease from F to E.

E. The Equilibrium Rate of Interest in the Classical Theory of Interest

According to the classical economists, the interest rates in the financial markets were determined by the free interplay of the supply of saving and the demand for investment. The market rate of interest moves towards in equilibrium level. However, supply and demand forces change so fast that the interest rate rarely has an opportunity to settle in at a specific equilibrium level. At any given time, the rate is probably above or below its true equilibrium level but moving toward the equilibrium. If the market rate is temporarily above equilibrium, the volume of savings exceeds the demand for investment capital creating exceeds supply of savings; savers will offer their funds at lower and lower rates until the market interest rate approaches equilibrium. Similarly, if the market rate is temporarily below equilibrium, investment demand exceeds the quantity of saving available. Business firm will bid up interest rate until it approaches the level at which the quantity saved equals to quantity of funds for investment purpose.

Figure: 2.3

The Equilibrium Interest Rate in Classical Theory of Interest Rate



Source: Rose, 1797, p: 197

Figure 2.3 shows the equilibrium interest rate in classical theory. OX axis represents the volume of saving & investment and OY axis represents the rate of interest. Specifically, the equilibrium rate of interest is determined at the point where the quantity of savings supplied to the market is exactly equal to the quantity of funds demanded for the investment. To support this in figure 2-3 this occurs at point E where the equilibrium rate of the interest is OE and the equilibrium quantity of capital and fund traded is the financial market is OM.

2.1.5.2 The Loanable Fund Theory of Interest

In this theory, the main theme is the supply and demand for loanable funds (i.e. lending & borrowing) determines the interest rate. This explanation emphasizes the flow of funds by suppliers of loanable funds (lenders) and the flow of funds by the demanders of loanable funds (borrowers). It is a monetary theory of interest since it focuses on the financial factors that influence interest rates (i.e. borrowing and lending). In addition, the loanable fund theory is a short-run, partial equilibrium explanation in which some factors produce a change in the interest rate, but there is no analysis of the long-run impact of this change in the interest rate an d on the level of employment, income and production of the resulting impact of changes in employment, income and production on the interest rate.

Rather, the loanable fund theory focuses on the factors that underlay the supply and demand schedules for loanable funds and on their interaction.

A. Supply of Loanable Fund

There are mainly two sources of supply of loanable fund

- The amount of saving by households, business and governments.
- The amount of new money created by the commercial banking system.

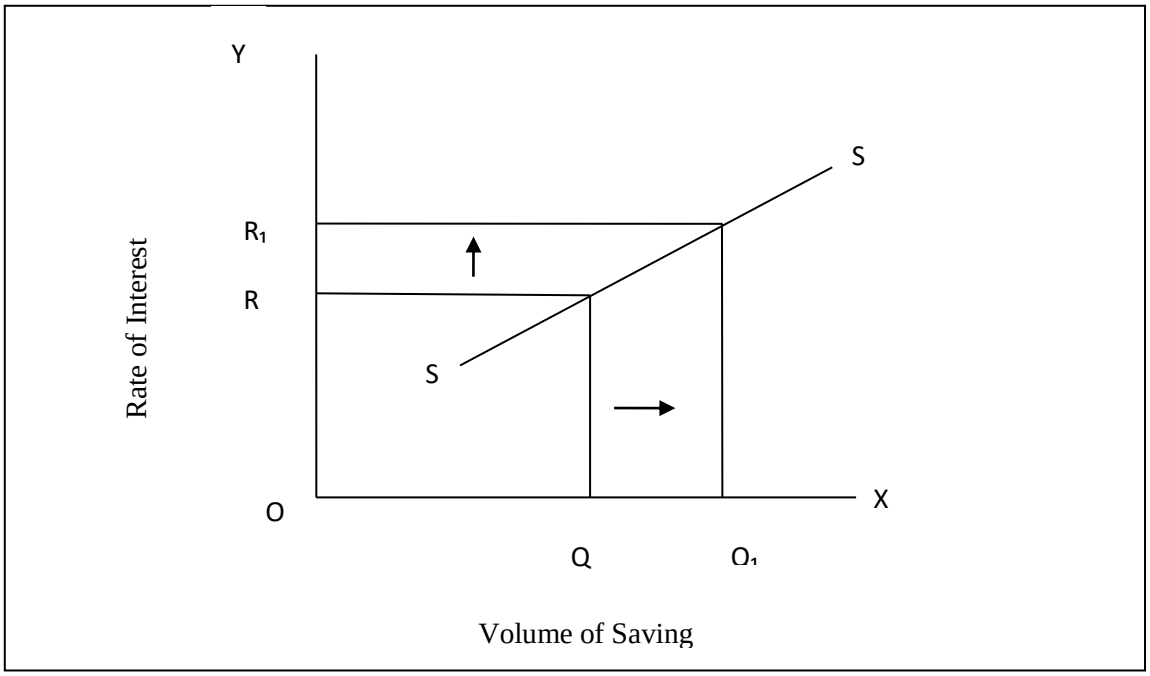
1. **Saving**: - Saving refers to the postponement of current consumption. The decision is to forget current consumption in order to have a larger quantity of consumption in the future. Individuals or households save for a variety of reasons but there is little evidence to suggest that the quantity of loanable funds supplied through saving is clearly influenced by the level of the interest rate. A higher interest rate represents a greater reward to saver for postponing current consumption and thus might be expected to produce a higher quantity of savings for some individuals. In general case, the quantity of savings supplied by individuals is principally determined by the level of income and it is influenced to lesser degree by the level of interest rates.

   Business saving refers to the net income after taxes of the firm, less any cash dividends i.e. retained earnings. There is little reason to believe that the volume of saving at business firm is strongly influenced by the level of interest rates.

   For governments, the volume of saving is defined as the differences between revenues and expenditures such that saving exists when revenues exceed expenditure (a budget surplus).

Figure: 2.4

The Interest Rate and Volume of Saving



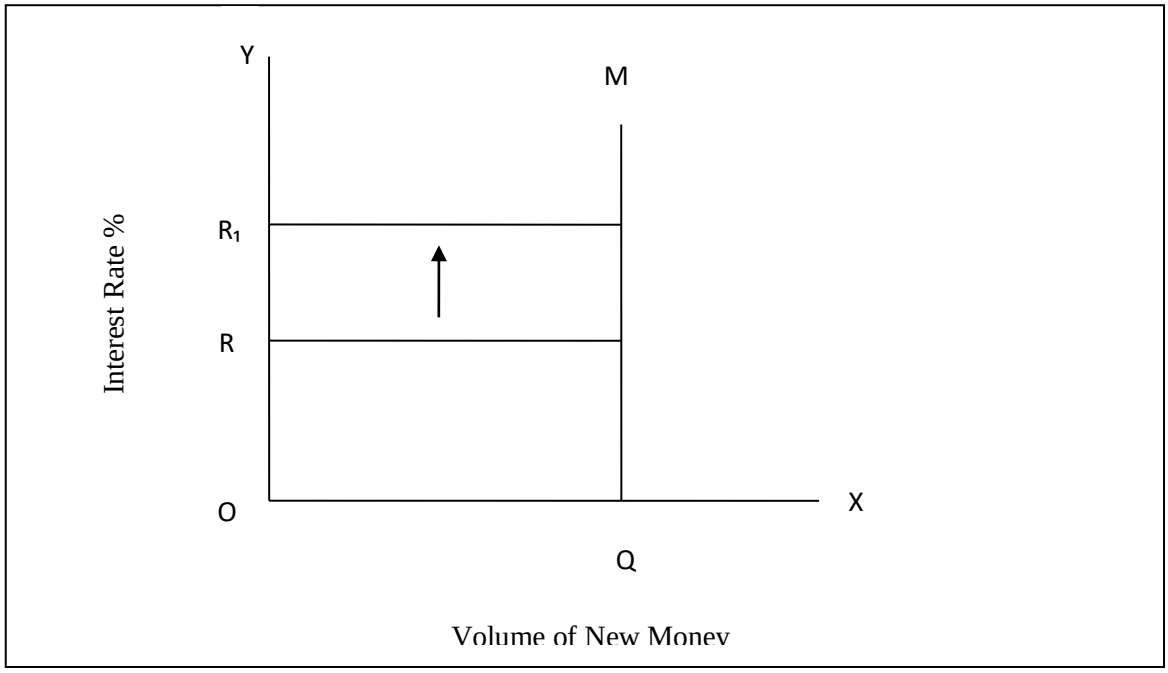
Source: Source: Rose, 2003, P: 227

Figure 2.4 shows the relation between interest rate and volume of saving. In the figure OX axis represents the volume of saving and OY axis represents the rate of interest. The volume of saving of each unites is influenced by a variety of factors of which the interest rate is one. As a result, we might expect that the relationship between the interest rate and the volume of saving. At an interest rate of R, the volume of saving would be Q, where as higher interest rate of R_1', the volume of saving would be only a slightly higher Q_1. The responsiveness of saving to change in interest rates is quite small.

2. **New Money: -** Although the volume of saving is the principal sources of loanable fund in the financial markets, the supply of the loanable funds may be increased through the creation of new money beyond the amount made possible by current saving. The amount of new money created is determined jointly by the actions of the commercial banking system and the central bank. Commercial bank uses any excess reserve to make loans and purchase securities and create money through the credit creation process. However, the ability of commercial bank to create money is limited by the central bank through the use of its monetary policy tools like open market operations, reserve requirement and discount rate changes. Neither of these factors could be directly influenced by the level of interest rates.

Figure: 2.5

The Supply of Loanable Fund



Source: Source: Rose, 2003, P: 230

Figure 2.5 shows the relationship between the amount of new money created and interest rate. In the figure OX axis represents the volume of new money and OY axis represents the rate of interest. The volume of new money supplied is Q and the interest rate is R but the interest rate is increase from R to R_1 the amount of new money created is the same Q. it's clear that the change in the money supply are determined by factors other than the interest rate.

In summary, the supply of loanable fund is the sum of the supply of savings and the amount of new money created. This supply schedule of loanable fund may be increased by either an increase in the desire to save by business, households and governments or by the creation of more new money by commercial banking system. Conversely, the supply of loanable funds may fall because of a reduction in the desire to save.

B. Demand of Loanable fund

The demand of loanable fund is composed of the demand by individual, business and government for the purpose of investment, consumption and hoarding.

1. **Consumer / Individual Demand: -** Consumer demand loanable fund to purchase a wide variety of goods and services on credit. Recent research indicates that

consumers are not particularly responsive to the rate of interest when they seek credit but focus instead principally on the non price terms of loan, such as down payment, maturity and size of installment payments. This implies that consumer demand for credit is relatively inelastic with respect to the rate of interest. Certainly a rise in interest rate leads to some reduction in the quantity of consumer demand for loanable fund whereas a decline in interest rate stimulates some additional consumer borrowing. However, along the consumer's relatively inelastic demand schedule, a substantial change in the rate of interest must occur before the quantity of consumer demand for funds changes significantly.

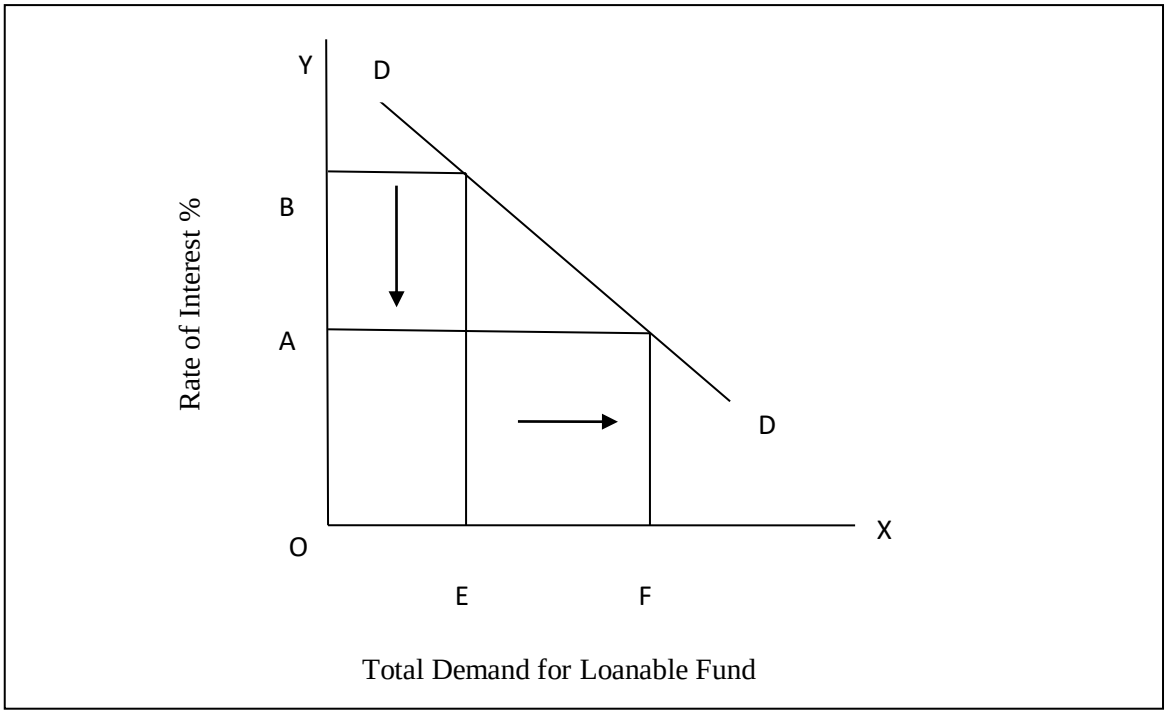
2. **Domestic Business Demand:** - The credit demands of domestic business generally are more responsive to changes in the rate of interest than in consumer borrowing. Most business credit is for such investment purposes as the purchase of inventories and new plant and equipment. As noted earlier in a high interest rate eliminates some business investment projects from consideration because their expected rate of return is lower than the cost of funds. On the other hand, at lower rates of interest, many investment projects look profitable with their expected returns exceeding the cost of funds; therefore the quantity of loanable funds demanded by the business sector increases as the rate of interest falls.

3. **Government Demand:-** Government demand for loanable fund is a growing factor in the financial market but doesn't depend significantly on the level of interest rate. Government decision on spending and borrowing depends in response to social needs and the public welfare, not the rate of interest. Moreover in case of central government, it has the power to tax and to create money to pay its debts. State and local government demand is slightly inelastic because many local governments are limited in their borrowing activities by legal interest rate ceiling. When open market rate rises above the ceiling, some state and local governments are prevented from offering their securities to the public.
4. **Total Demand for Loanable Fund:-** The total demand for the loanable fund is the sum of domestic consumer, business and government credit demands. These demands curve slopes downward and to the right with respect to the rate of interest. Higher rate of interest leads some business, consumer and government to

curtail their borrowing plans, lower rates on the other hand bring forth more credit demand.

Figure: 2.6

The Demand for Loanable Fund



Source: Source: Rose, 2003, P: 232

Above figure 2.6 shows the relationship between interest rate and demand for loanable fund, OX axis represents the total demand for loanabale fund and OY axis represents the rate of interest. If interest rate decreases total demand for loanabale fund increase, interest rate is decrease from B to A in this situation total demand for loanabale fund increase from E to F. DD line represents the total demand of loanable fund. The total demand, DD in the shows that the demand of loanable fund increases with the decrease in interest rate.

C. The Equilibrium Rate of Interest in the Loanable Fund Theory

Two forces of supply and demand for loanable fund determine not only the volume of lending and borrowing in the economy but also the rate of interest. The interest rate tends towards the equilibrium point at which the supply of loanable funds equals the demand for loanable funds. If the interest rate is temporarily above equilibrium, the quantity of loanable funds supplied by domestic savers and foreign lenders, by banking system, and

from the dishoarding of money exceeds the total demand for loanable funds and thee rate of interest will be bid down,. On the other hand, if the interest rate is temporarily below equilibrium, loanable funds demand will exceed the supply. The interest rate will be bid up by borrowers until it settles at equilibrium once again.

2.1.5.3 The Liquidity Preference Theory of Interest Rate

During 1903's British economist John Maynard Keynes (1936) developed a short term theory of the rate of interest for that he argued, was more relevant for policy maker and for explaining near-term changes in interest rates. This theory is also known as the liquidity preference of (cash balance) theory of interest rate (Peter S. Rose "Money & Capital Markets: Financial Institutions & Instruments in a Global Market Place." The liquidity preference is the desire of people to hold cash. It is assumed that individuals inherently prefer money among all financial assets since it can used to make payments and is thus the most liquid assets. So to encourage people to part with their liquidity they should be rewarded in the form of interest. Higher the liquidity, higher is the interest demanded for parting with liquidity. According to this theory the demand for and supply of money determine the interest rate.

A. The Demand of Liquidity

People prefer to keep a fixed portion of their income in the form of cash or liquid money for the fulfillment of their different objectives. This preference (desire) of cash or liquid money 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 vice versa. In the same way, if the current rate of interest is higher in the 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 them. Prof. Keynes has divided the objectives or the references of the people to hold cash with them into three parts:

- **Transaction Motive:** Transaction Motive represents the demand of money to purchase goods and services.

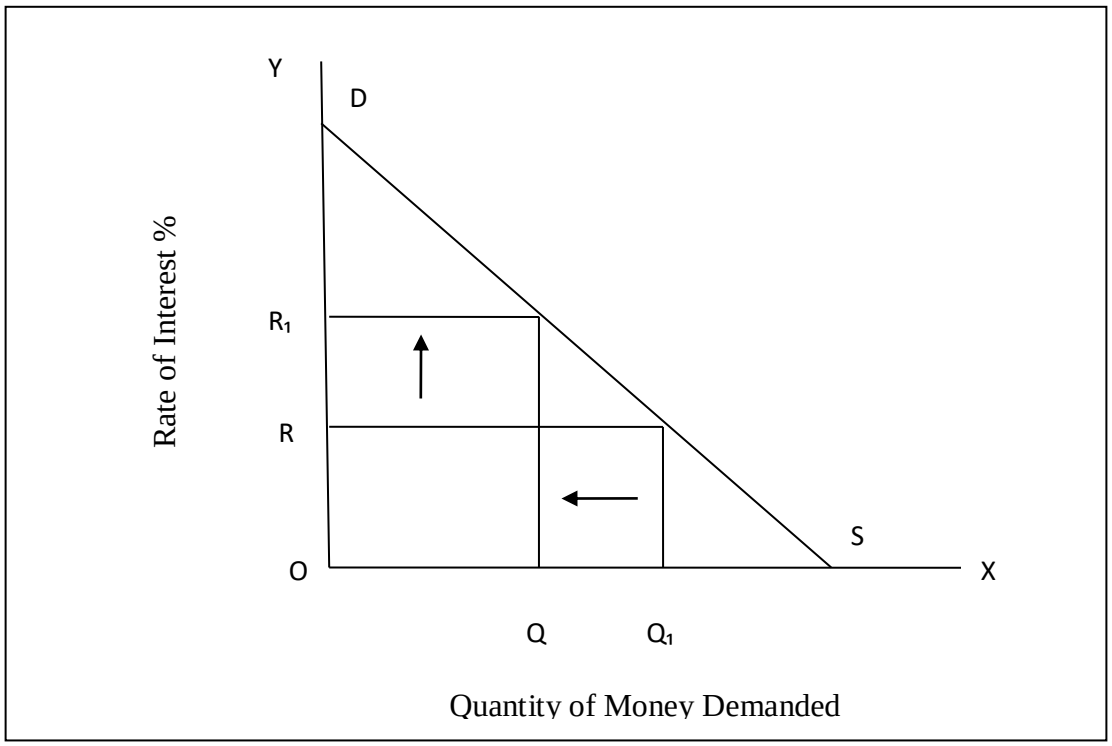
- **Precautionary Motive:** Some money also must be hold as a motive for precautionary because future is uncertain and we cannot predict exactly what expenses or investment opportunities will arise in the future.
- **Speculative Motive:** speculative Motive represents the demand of money due to uncertainty about the future prices of bonds.

B. Total Demand of Liquidity (Money)

The total demand for money or cash balances in the economy is simply the sum of transactions, precautionary and speculative demands. Because the principal determination of transactions and precautionary demand is income, not interest rates these money demands are fixed at a certain level of national income. In the figure 2-7 Ds are the aggregate demands for the economy.

Figure: 2.7

Total Demand for Money



Source: Source: Rose, 2003, P: 234

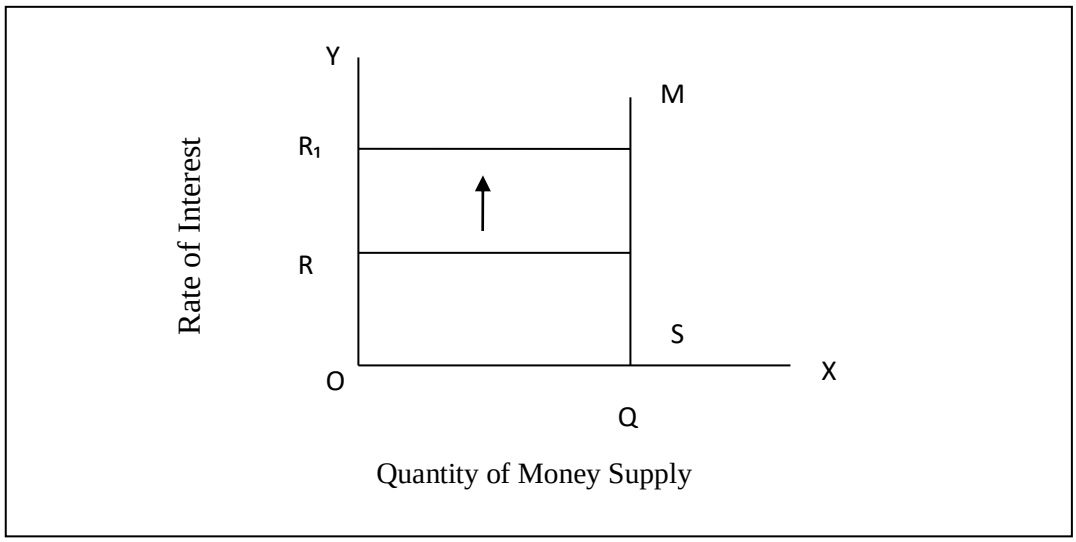
Above figure 2.7 shows the relationship between demand of money and interest rate, OX axis represents the demand of money and OY axis represents the rate of interest. If interest rate increases quantity of money decrease, interest rate is increase from R to R_1 in this situation demand of money decrease from Q_1 to Q. DS line represents the aggregate demand for the economy.

C. The Supply of Money

In modern economics, the money supply is controlled, or at least closely regulated by the government and the central bank. The total supply of money consists of coins plus bank notes plus bank deposit. The supply of money is made by the central bank in fixed quantity for a particular period. The quantity of money is a stock. Supply of money Ms is shown in the figure 2.8.

Figure: 2.8

The Supply of Money in Liquidity Preference Theory



Source: Rose, 2003, P: 236

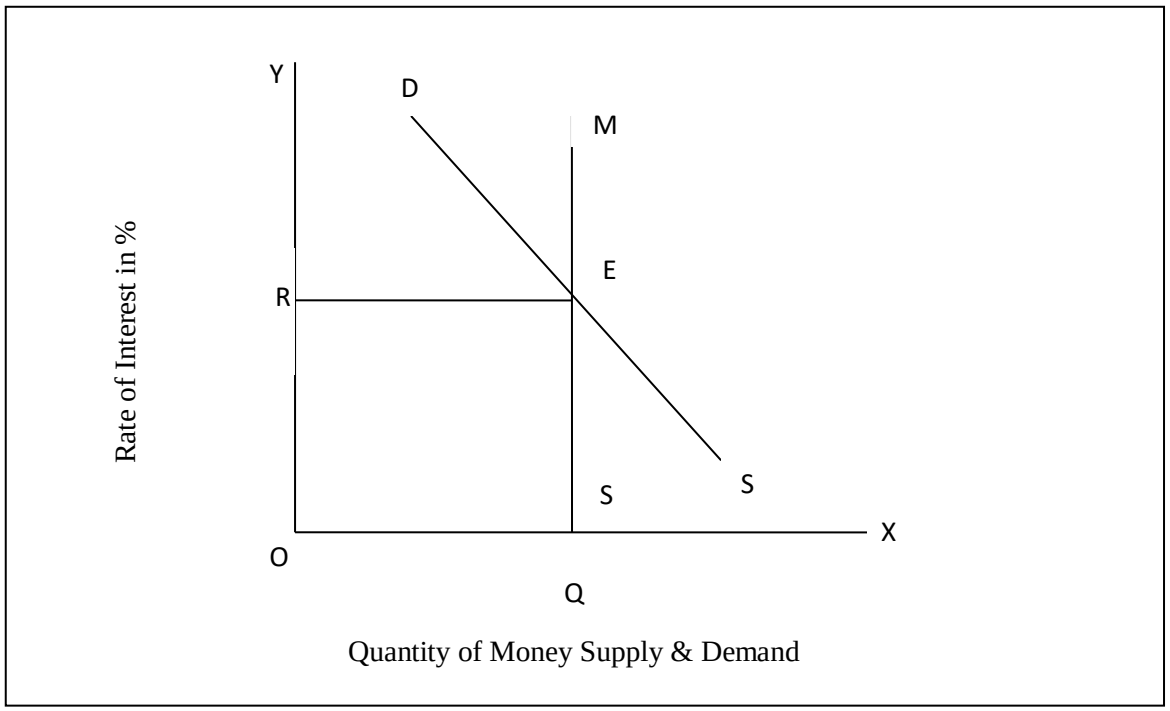
Figure 2.8 shows the relationship between interest rate and quantity of money supply under the liquidity preference theory. In the figure OX axis represents quantity of money supply and OY axis represents the rate of interest. The quantity of money supply is Q and the interest rate is R but the interest rate is increase from R to R_1 the quantity of money supply is the same Q. it's clear that the change in the interest rate not affect the supply of money.

D. The Equilibrium Rate of Interest in Liquidity Preference Theory

The interplay of the total demand for the supply of money or cash balance determines the equilibrium rate of interest in the short run. In the figure below IE is the point where the quantity of money demanded by the public equals the quantity of money supplied. The equilibrium rate of interest is shown in the following figure 2.9

Figure: 2.9

The Equilibrium Rate of Interest under Liquidity Preference Theory



Source: Thapa, 2067: 89

Figure 2.9 shows the equilibrium interest rate under liquidity preference theory. OX axis represents the volume of money supply & demand and OY axis represents the rate of interest. Specifically, the equilibrium rate of interest is determined at the point where the quantity of money supplied to the market is exactly equal to the quantity of money demanded for the investment. To support this in figure 2-9 this occurs at point E where the equilibrium rate of the interest is OR and the equilibrium quantity of money supply and demand is the financial market is OQ.

2.1.5.4 The Rational Expectation Theory

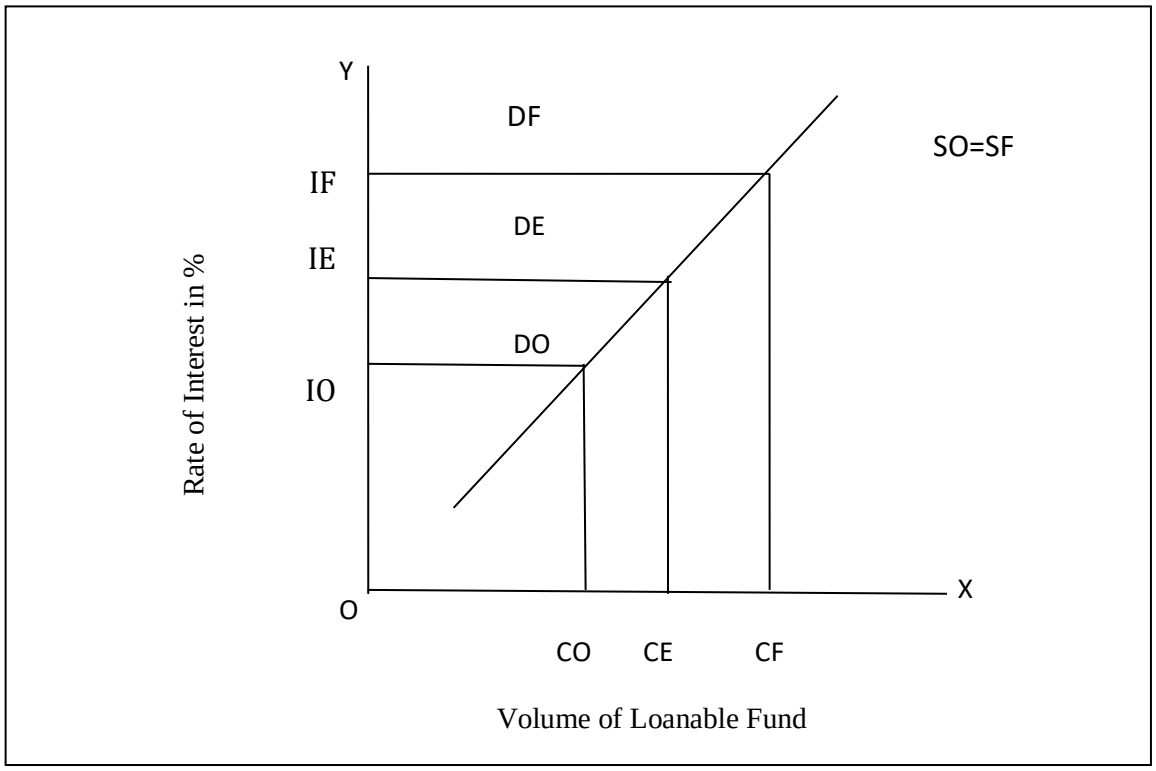
The Rational Expectation Theory is new for the financial market and institutions. This theory builds on a growing body of research evidence that the money and capital markets are highly efficient institutions in digesting new information affecting interest rates and security prices. This theory assumes that equilibrium interest rate depends upon the change in investor's expectation regarding future security prices and return. Investor's decision towards the borrowing and lending funds come from the availability of new information. When new information appears about investment, saving or the money supply, investors begin immediately to translate that new information into decision to borrow and lend funds. So rapid is the process of the market digesting new information

that security prices and interest rates presumably impound the new data from virtually the moment they appear. In the absence of new information, next period's interest rate will be equal to current periods interest rate. In other words, the knowledge of past, interest rate will not be a reliable forecast of future interest rate. In a perfect efficient market it is impossible to win excess returns continuously by trading on publicly available information.

Figure: 2.10

The Expected Demand for Supply of Loanable Funds

Under the Rational Expectation Theory



Source: Paul & William, p: 469

In the figure 2-9, SO and SF represents the actual supply and demand for loanable funds in the current period, while DF reflects the actual demand for loanable funds that will prevail in the next time. The supply of loanable funds is assumed to be the same in both time periods (SO=SF).

Now suppose that during the current periods, the government makes an unexpected announcement of its increased need to borrow more money in future period F due to an unusually large budget deficit. The result is now expected demand for loanable fund

curve DE, projected to prevail in the next periods F but as viewed by borrowers and lenders today in time period will not be IO, but rather IE, where the expected demand curve (DE) intersects the actual supply curve SO. The equilibrium quantity of loanable funds traded in the current period then will be CE and CO. This is because, according to the rational expectations theory, borrowers and lenders will act as rational agents, using all the information posses to assets today. When the future period arrives, the equilibrium interest rate will rise to rate IF and moves upward because the demand for loanable funds demand as seen by market participants.

2.1.6 Interest Rate Movements and Its Relevance

Interest rate movements affect the values of securities, and therefore affect the performance of all types of financial institutions. It is critical for managers of financial institutions (including portfolio managers) to understand why interest rates change, how their movements affect performance, and how to manage according to anticipated movements (Panday 1990: p-234)

Interest rate movements can affect the values of virtually all securities. They have a direct influence on the market values of debt securities such as money market securities, bond and mortgages. Interest rate has an indirect effect on values of stocks and exchange rates. Since the price movements in derivatives are partially influenced by the price of the underlying instruments, interest rate movements affect the prices of derivatives representing debt securities or stock or currencies. Thus, all participants in financial markets closely monitor interest rate movements. So they can restructure their positions in securities to benefit from any expected movements in interest rate .interest rate movement also effect the value of most financial institutions. Interest rate movements affect both the cost of funds to depository the interest received on same loans. In addition, the market value of securities (such as bonds) held by depository institutions or not-depository institutions are affected as well. Thus, managers of financial institutions closely monitor interest rate movements so they can capitalize on favorable movements or reduce their institutions exposure to unfavorable movements (Shrestha 1889: p-230)

2.1.7 Factors Influencing the Difference in Interest Rate

Though it is assumed that deposit increases as interest rate increases and vice versa. But it is affected by numerous factors. In real world, different financial institution quotes different interest rate. It means that the same types of instrument carries different interest rate so there is presence of interest rate spread. For this difference, there are numbers of factors influencing the difference in interest rates. (Thygerson, 1993:38)

a. **Credit or Default Risk:-** Credit or default risk involves the potential that a saver will receive less principal and interest on the financial claim that the contract specifies. Default risk is related to the probability that some or all of the initial investment will not be returned. The degree of default risk is closely related to the financial condition of the company. Credit risk requires making estimates of the potential for loss. This probability is than converted into an interest rate premium. The credit or default risk premium and added to the saver's required nominal yield. Typically, the securities issued by the government. Especially T-bills are considered to be credit risk free.
b. **Marketability Risk:-** Marketability is the capability of being sold quickly at low transaction cost. (Kohn; 1999:174). Marketability risk deals with the degree of difficulty in being able to concert a financial claim into cash at its most recent transaction price or very close to it. Savers who purchase investments with poor marketability expect to be compensated for the lack of marketability. This represents an additional interest spread and is referred to as the marketability or liquidity risk premium.
c. **Call or Prepayment Risk: -** Some financial claims offer the borrower the right to repay the principal debt prior to maturity, on financial claims like bond, these provision are referred to as call provision. On 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 prepay the debt. The investor in the financial claim that is called or subject to prepayment accepts risk. The risk is that if interest rate falls, the borrowers will call the bond or prepay the mortgage. The investor receiving the cash funds that he or she 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 and additional interest spread reoffered to as the call option premium.

d. 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 borrowing involves considerable operating costs. 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.

e. **Exchange Rate Risk:-** As today's financial markets have 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 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 relates to the potentiality that the rate of exchange between the domestic currency and foreign denominated currency will change as a result of any numbers of factors. The primary risk for the borrower is that the value of the currency borrowed rises in relation to 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 that has risen in value relative to the domestic. This potential chance in currency value reflected in computing the cost of borrowing.

f. Taxability: - The returns earned by investors on financial assets are greatly affected by the taxes imposed by government. 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.

2.1.8 Concept of Deposit

Deposit is a sum of money lodged with a bank, discount houses or other financial institution. It is nothing more than the assets of an individual which is given to the bank for safe keeping with an obligation to get something (interest) from it. The deposits are subject to withdraw by means of cheque or on a short notice by customer. There are several restrictions on these deposits, regarding the amount of deposit, 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. Through the bank plays an important role in influencing the customer to art with his funds and open deposit accounts with it, it is ultimately the customer who

decides whether he \she should deposit his surplus founds in current deposit a/c, saving deposits or fixed/time deposit a/c. Bank deposits arise in two ways. When the banker receives cash, it credits the customer's account, it is known as a primary or a simple deposit. People deposit cash in the bank and thereby convert one form of money, cash into another form of bank money. They prefer to keep their money in deposit accounts and issue cheques against them to their creditors. Deposits also arise when customers are granted accommodation in the form of loans. When a bank grants a loan to a customer it doesn't usually pay cash but simply credits the customer's account with the amount of loan. Of course, there is nothing that prevents the borrower from withdrawing the entire amount of borrowing in cash but quite often retains the amount with the bank in a deposit.

2.1.8.1 Types of Deposit

Banks and financial institutions offer various types of deposit a/c to attract the saving from the customers. Under this study only three types of deposit are taken which are mentions below.

a. **Current Deposit: -** A current deposit is a running account with amounts being paid into the drawn out of the account continuously. These accounts are also called demand deposits or demand liabilities since the bank is under an obligation to pay money in such deposits on demand. The account never becomes time barred because the limitation does not run until a demand is made by the customer on the bank for the payment of deposit. These accounts are generally opened by business houses, public institutions, corporate bodies and other organization whose banking transactions are numerous and frequent. This type of account is just a facility offered by bank to its customer. So then bank doesn't give interest on this account. Under this study this type of deposit is not considered.
b. **Saving Deposit: -** According to Commercial Bank Act 2031 (1974) saving account means "An account of amounts deposited in a bank for saving purpose." The saving deposit bears the features of both of the current and fixed period's deposits. Saving accounts are mainly meant for non-trading customer who have some potential for saving and who don't have numerous transactions entering their account. While operating the account the minimum compensating balance

differ according to the bank rule. The bank fixes the minimum and maximum amount of withdraw able from this deposit. If the bank goes into liquidity priority is given to the saving deposit than current and fixed deposits while repaying the liabilities.

c. **Fixed Deposit: -** Fixed deposits constitute a very important resource for banks and financial institutions as they need not to keep greater reserve in respect of such deposits. Under the commercial bank act 2031, "Fixed account means as account of amounts deposited in a bank for certain period of time." The customers opening such account deposit their money in the account for a fixed period. Usually, only the person or institution who wants to gain more interest opens such type of account. Bank paid higher interest rate on this account compared with saving deposit. The bank invests this money on the productive sector and gains profit and the customer too can be made his financial transaction stronger by getting more interest from this deposit. The principal amount with interest must be returned to the customer after expiry of fixed time. Bank generally gives loans up to 90% of the amount deposited under fixed deposit account against the security of the deposit. For this bank charges higher interest rate than the interest given on the fixed deposit.

2.1.8.2 Important of Deposit

Deposit plays an important role in the financial system. Deposit arises from saving. An individual's income equals consumption plus saving. An individual deposits the save part of income in the bank and gets interest from it. Bank in turn lend this money and earn profit by charging high interest rate. This investment (money lend by bank) leads to create new employment opportunity in the economy. Ultimately due to new employment the purchasing power of the economy increases and finally GDP and growth of the country occurs. It means that the deposit has very important role in the economy. There is a direct relationship between deposit of banks and the investment in the economy. If the volume of deposit is low, the investment in the economy also lags behind due to lack of resources. The deposit of banks is the accumulated capital which can directly be invested. There is a great need of such deposit in the developing countries. Deposit includes the idle money of the public, bank being the inter-mediator to accept this sort of money and

help to channelize this in productive sector. So the importance of banks and financial intermediaries is larger in present context

2.1.9 Concept of Lending (Credit)

Credit is the provision of resources by one party to another party where that second party does not reimburse the fist party immediately, there by generating a debt and instead arranges either to repay or return those resources at a lateral date. In credit transactions the creditor turns over to the debtor to repay an equivalent amount usually money in future plus an added sum called interest. In other words bank earns profit by lending the amount in terms of loan or credit and in return it gets interests. Bank loan are classified as 1) Loan and Advances, 2) Overdrafts and 3) Cash Credit & Discounting of Bills.

If the credit is made to the government the credit is known as public credit and if credit is transacted by the private for his own purposes the credit becomes private. There are certain distinctions between public and private credit. Bank credit refers to the credit taken by banks. Bank is the major source of credit to both private and public debtor. Sometimes bank also take credit. There is another type of credit know as investment credit and commercial credit which can be divided according to the purpose of using credit. The former refers to the credit which is used for investment and the latter for trade purposes. Similarly, there is another type of credit consumer's credit and producer's credit. The latter type of credit is the advances made to individuals firms, companies and governments, which are used to facilitate the carrying on of the various branches of utility creation.

2.1.9.1 Factors Affecting the Volume of Lending

The value of credit within a country depends upon different factors. For this study only the effect of interest rate is taken into consideration. Some other factors affecting the volume of credit are mention below:

a. **Credit (lending) Rate: -** If the bank credit rate is very high then, the volume of credit expansion is less and vice versa. It means that there is inverse relation between credit and interest rate of credit.

b. **Rate of Return: -** If the rate of return is high the people inclined to invest more. People earn more profit and they become able to afford higher rate of interest along with timely repayment of loan.
c. **Investment Opportunity: -** If the investment opportunity within the country is high, the volume of credit becomes high. More investment opportunity will be available when the interest rate is low and vice versa.
d. **Pace of Financial Development: -** If there is enough banking facilities to provide loan in easy terms, the volume of credit may be high. If the banking facilities in the country expanded the volume of credit rises automatically.
e. **Basic Infrastructure: -** The development of basic infrastructure in the country automatically increases the financial activities and leads to increase in the volume of credit.
f. **Political Condition: -** The political condition of the country, especially political in-stability, is also one of the major causes of low volume of credit. In this situation, no one would like to take risk on his new capital.

2.2 Review of Journal and Articles

Pradhan (2000) in his articles, *"Deposit Mobilization, Its Problem and Prospects"* He has presented the following problems in the context of Nepal:

- People do not have knowledge and proper education for saving in institutional manner. They so now know financial organizational process, withdrawal system, depositing system etc.
- Financial institutions do not want to operate and provide their services in rural areas.
- He has also recommended about how to mobilize the deposit collection by the financial institutions by rendering their services in rural areas, by adding various services.
- By operating rural banking programmers and unit
- Nepal Rastra Bank must organize training programmers to develop the skilled human resources.
- By spreading a numbers of co-operative societies to develop mini banking services and improves the habits of public on deposit collection to the rural areas.

Manandhar (2004) conduct a study on the topic *"NRB Directives and Interest Rate in Nepal"* Nepal Rastra Bank as a central bank of Nepal control and regulate all the financial activities as well as formulate and implement necessary financial rules and regulation in the country. As a central bank of the country it is the sole controller for regulating interest rate in the country. Taking the reference of history of interest rates, we observe different changes in interest rate. In the beginning, the interest rate charged and offered by banks and financial institutions was mentioned at a lower level with a view to stimulate real income and employment. Regulation of interest rate by NRB is made in the early stage of financial market development taking the period from 1955 to 1965. But NRB gradually began to liberalize the determinations of interest rate on phase wise basis according to compatibility of the banks and the financial institutions that have developed in the country. In the early 1980's Nepal has adopted liberal economic policy. Number of finance companies and commercial banks begin to develop and government made the liberal policy in maintaining the interest rate were encouraged for commercial banks, established under joint venture in association with foreign banks in private sector. Similarly, deregulated of interest rate was applied to under finance companies established finance company acts. As a sole institution authorized to determine interest rate NRB has full discretions on determining interest rates structure from 1960 to 1975.

- On 16th November 1984 government had provided autonomy in offering the interest rate on saving and fixed deposit to the extent of 1.5% and 1% respectively above the prevailing rates. In 1986 financial institutions got freedom in fixing their interest rates in their deposits and loans. In addition, there was also limitation on the interest rate on different loans provided for the productive and priority sector. However there was limitation imposed on certain sectors of lending such as the rate of maximum of 15% on the priority sectors loan. And for other kinds of loans financial institutions were given freedom to maintain the interest rate structure. In this way government has provided freedom as well as maintains certain limitation on the determination of interest rate.
- On August 22, 1992, Nepal Rastra Bank issued some directives to commercial banks and financial institutions to clearly spell out the interest rate on deposits. NRB also instructed the bank and financial institutions to limit their interest rate spread on deposit and credit at 6% within mid-December 1993. A further

instruction to banks and financial institutions was issued in 2002, and now the interest rate spread required to be maintained by commercial banks and financial institutions has also been removed. The interest rate regime in Nepalese perspective changed from rigid control and monopoly of NRB to liberalization from 1960. At present there is complete freedom to have competitive system as an important part of government's liberalization policy. In this way interest rate became a market determined phenomena rather than a regulated phenomena. The process of interest rate deregulation becomes a major indicative factor of the financial system reform in the country.

Shrestha, (2006) has given a short foretaste on the *"Leanding Management in Commercial Bank, Theory and Practice".* Shrestha has highlighted the following issues in his article.

The lending management becomes very important for both individuals as well as institutional investors. Investors would like to select a best mix of investment assets subject to the following aspects:

- Higher return which is comparable with alternative opportunities available according to the risk class of investors.
- Good liquidity with adequate safety of investment.
- Certain capital gain.
- Maximum tax concession.
- Flexible investment.
- Economic, efficient and effective investment mix.

NRB (2012) *"Provisions Relating to Interest Rates"* the following Directives have been issued, having exercised the powers conferred by Section 79 of the Nepal Rastra Bank Act, 2002, with regard to the interest to be paid for the deposits and interest to be charged for loans and advances by the licensed institutions.

a. **Provisions Relating to Interest Rates:-** The "A", "B" and "C" Class licensed institutions shall be free to fix interest rates for both deposits and lending, including fixation of types of interest and procedures on their own.

b. **Prohibition for Fixing Flat Rate of Interest:-** The licensed institutions other than "D" Class institutions shall not be allowed to fix flat interest rates on the loan and advances.

c. **Interest Rate to be approved:-** Licensed institutions shall implement the interest rates for deposits and lending, procedures for calculation of interest, penal interest, commission and service charges only after approval. The institutions may increase the interest rate for deposits up to a point of 0.5 percent over the published rates, but in case of interest rate on lending it should not be higher than published rate. Provided that;

   1. Interest rate may be fixed on the agreement between bank or financial institution and customer in the case of perpetual fund or in case of deposit having the maturity period of more than five years.

   2. No provision of published interest rate shall be applicable in case of the institutional deposit to be collected on the basis of bidding.

d. **Submission of Return on Interest Rate:-** The licensed institutions shall compulsorily furnish the statements of interest rates on deposits and lending to Banks and Financial Institutions Regulation Department and the concerned Supervision Department of this Bank within seven days of the end of each quarter. Moreover, the licensed institutions shall submit all provisions and procedures relating to interest rates according to Clause 3 above at the time of beginning of the implementation and changes made thereto within seven days.

e. **Interest Rates to be published:-** The national level "A", "B", and "C" Class licensed institutions shall publish the particulars according to Clause 4 above at the time of each amendment made in the interest rates on deposit and lending in national daily newspapers. The regional/ district level institutions shall publish the particulars of changes in the requirement of about the minimum level of balance to be maintained in the regional/district level newspapers. Provided that the "D" Class institutions may publish the rates putting the information on its notice board.

f. **Provisions of recording interest income:-** The interest accruals on loan and advances shall be recognized as income on cash basis only. The interest accrued but not realized in cash shall be recognized in the year of cash realization and the account shall be reconciled accordingly. Interest receivable for a period shall be debited to "interest receivable account" and credit to "interest suspense account".

g. **Provisions relating to providing interest:-** In situation where interest on credit/lending by banks and financial institutions on aquarterly basis, interest shall be credited to the savings account of depositors at least on every 3/3 months basis. Interest to be provided to depositors shall be provided at least on average deposit balance of week, month, quarter or other duration on the basis of which the interest has to be calculated according to the policy of the concerned bank and financial institution to provide interest on deposit liability.

(Note:"Average deposit balance" means the average of daily closing balance to be maintained after the end of daily transaction. (For example, the procedures according to which licensed banks and financial institutions use to have calculated interest on the remaining amount of credit and lending, the same procedures shall be applied in the calculation of the interest.)

2.3 Review of Previous Thesis

Neupane (2006) on the topic *"Interest Rate Structure and Its Influence on Deposit and Lending of Joint Venture Banks in Nepal".* He has shown the influence of interest rate on deposit and lending in Nepalese Joint Venture Banks. The conclusions drawn by Mr Neupane were;

- The interest rate of all sample banks is found to be in decreasing trends.
- Analysis of sample banks shown that interest rates on lending are far higher than deposit rates.
- Analysis of sample banks concludes that interest rate on deposit is found low which does not attract the depositor.
- Lending interest rate of sample banks have decreased every year which provide better opportunities for the borrower's investors.
- Sample Banks under study show weak on mobilization of collected deposit.

Bhatta (2007) conducted a study entitled *"Interest Rate and its effect on Deposit and Lending"* with the following objectives.

- To examine the relationship between interest rate and deposits
- To examine the relationship between interest rate and loans

- To present and analyze interest rate structure of various commercial banks in different time period
- To show the relationship between inflation and interest rate on deposit and lending.

The major findings of his study are as follows.

- Deposit rates of all the sample banks under study are in decreasing trend; means that every year deposit rates of sample banks under study have decreased.
- Lending rates of all the sample banks under study are also in decreasing trend; means that every year lending rates of sample banks under study have decreased.
- Analysis shows that interest rates on lending are far higher than deposit rates of sample banks. The correlation coefficient between these two variables (deposit rate and lending rate) of sample banks comes highly positive.
- The correlation analysis between lending rate and lending amount of all sample banks under study comes highly negative. This relation between two variables (lending rate and lending amount) of sample banks matches with the theory which says with the increase in lending rate, lending amount decreases and vice-versa. This thesis concluded that lending rate is the most important determinant of loan and advances of all commercial banks. This makes clear that borrower‟s seem more interest conscious.

Parajuli (2008) carried out a study entitled *"Interest rate and its relation with Deposit, Lending and Inflation in Nepal"*. The major objective of this study is to find out the relation of interest rate with deposit and lending amount (i.e. existence of substitution effect).

The findings drawn by Parajuli were as follows.

- The interest rate on both deposit and lending of all the sample banks are found to be in decreasing trend. Theoretically, there is positive relationship between saving amount and saving interest rate but here negative relationship is found. It states that there is no substitution effect in Nepalese financial market.
- Analysis of fixed deposit amount and fixed interest rate shows negative relationship except RBB and NBL. Theoretically, there is negative relationship

between lending interest rate and lending amount. In this study for the 5 sample banks except NBL have negative correlation between these two variables.

- The relationship between interest rate on deposit and inflation rate is positive. Similarly, the correlation between interest rate on lending and inflation rate is found to be moderately positive.
- This thesis concluded that the spread between deposit interest rate and lending interest rate is in decreasing trend.

Shrestha (2009) on the topic *"A study of Interest Rate & its impact on Resource Mobilization and Utilization".* The main objectives of the study were;

- How far the interest rate impact on the mobilization in order to meet the lack of capital for the implementation of various project.
- To see the deposit credit margin ratio throughout the changed incurred in the interest rate by which one can see that how far the deposits have been effectively utilized.

With the above mention objective his major findings were;

- The structure of interest rate has greater influence over the resource mobilization and utilization in the productive sector.
- The commercial banks of Nepal are not fully succeeded in this regards.
- The commercial banks are not fully been able to motivate and facilitate to their customer except the change in interest rate as instructed by central bank.
- It can be solved by attracting saving into maximum and mobilization these savings into the sector where money is needed. For this branches should be extended even to the remote area of the country and mobilized those idle deposits and diversified their money according to needs.

Pokhrel (2010) on the topic" *Interest Rate and Its Relation with Deposit, Lending and Inflation in Nepal".* The main objective of the study was to explore the relation of interest rate among the three variables i.e. deposit, lending and inflation existing in the country.

The major findings of his study were as follows.

- Deposits depend upon numerous factors besides income, inflation and interest rate. Keeping other variables constant, the intuitional interest rate is important explanatory variables to influence the volume of deposit in the country.
- There is positive relationship between deposit interest rate and deposit amount.
- Commercial banks are concentrated in the urban area of the country due to which major parts of credit are flow in urban area.
- The volume of deposit has overcome the volume of credit due to lack of investment opportunity on productive sector and high interest rate on lending. If the lending rate of interest is concessional, there is the possibility of raising investment and the volume of lending.

Joshi (2011) has conducted a study on *" Deposit and Lending of Commercial Bank of Nepal"* a comparative study of SCBNL with NABIL Bank and BOK.

Her Main Objectives

- To examine the liquidity assets management and profitability position and investment policy of SCBNL in comparison to NABIL and BOKL.
- To analyze the relationship between loan and advance and total investment with other financial variable of SCBNL and compare with NABIL and BOKL.
- To study the various risks in investment of SCBNL in comparison to NABIL and BOKL.

Her Majors Findings

- SCBNL has higher idle cash and bank balance. It may decrease profit of bank. It is good to invest more on share & debentures as it encourage financial and economic development of the country.
- A commercial bank must mobilize its fund in different sector such as to purchase share & debentures of other financial and non financial companies out of total working fund.
- SCBNL has invested its more of the funds i.e. total investment on total deposit ratio, in comparison to other commercial banks but percentage of investment on share and debenture in very nominal.

- Portfolio condition of a bank should be regularly revised from the time to time. It should always try to maintain the equilibrium in the portfolio condition of the bank. So it can be said “all eggs should not be kept in the same basket”.
- On the basis of above facts, it is seen that SCBNL has invested much of its fund in total outside assets but it has not achieved the desired result.
- The risk taken by SCBNL, from the angle of credit and capital are in an average whereas the consistencies of the same are highly volatile which may result higher loss. The bank should not test those risks on an experiment basis as seen from the consistency angle.

2.4 Research Gap

Research gap refers to the gap between previous research and this research. Many research studies have been conducted by the different students, experts and researcher about deposit mobilization, lending and interest rate .There have been fund numerous research studies on financial companies and public enterprises regarding deposit mobilization, lending and interest rate. But the Assessment of Interest Rate on Nepalese Commercial Banks And It’s Impact on Deposit & Lending can be hardly fund from the review of related studies no one study have been found on Assessment of Interest Rate on Nepalese Commercial Banks And It’s Impact on Deposit & Lending with reference to EBL and NIBL.

The financial and statistical tools used by most of the researchers were ratio analysis, test of hypothesis and regression analysis. This study includes different tools like ratio analysis, correlation analysis and co-efficient of variation, trend analysis, t-test as specific tools.Thus the research study made on "Assessment of Interest Rate on Nepalese Commercial Banks And It’s Impact on Deposit & Lending" will be an effort to analyze on detail about the interest rate, deposit and lending of the EBL & NIBL in present situation with the help of various related financial as well as statistical tools and techniques. The study can be beneficial to all the concerned parties and people as well.

CHAPTER - THREE

RESEARCH METHODOLOGY

Research in common parlance refers to a search for knowledge is composed by means repeatedly or again and again and "search" means to investigate or find. Research methodology is a way to systematically solve the research problem. Research methodology may be defined as "a systematic process that is adopted by the researcher in studying problem with certain objective and view". In other word, research methodology describes the methods and process applied in the entire aspect of the study focus of data, data gathering instrument and procedure, data tabulating and processing and methods of analysis. It is really a method of critical thinking by defined and redefining the problems, formulating hypothesis or suggested solution and collecting and organizing and evaluating data, making deduction and making conclusions. Research methodology is a path from which we can solve research dilemma systematically to accomplish the basic objective of the study. It consists of a brief explanation of research design, nature and sources of data, method of data collection and methods of tools used for analyzing data.

3.1 Research Design

A research design is the arrangement of conditions for collection and analysis of data that aim to combine relevance to the research purpose with economy in procedure. Research design in the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to objective of this study. To achieve the objective of this study, descriptive and analytical research design has been used. It is the process which gives us an appropriate way to reach research goal. It includes definite procedures and techniques which guide in sufficient way for analyzing and evaluating the study. This study is carried out by using both quantitative and qualitative analysis methods. Mostly, secondary data has been used for analysis, but the discussion and personal interview with the concerned employees of the selected banks are also used for qualitative analysis. Hence, research design of this study is based on descriptive and analytical method.

3.2 Sources of Data

Mainly the study is conducted on the basis of secondary data. The data relating to the Interest rate are obtained from banking and financial report of NRB. The supplementary data and information are obtained from annual reports of concerned banks. Other information sources have been taken from Central Library Tribhuvan University, Shanker Dev Campus library, Nepal Stock Exchange e.t.c.

3.3 Population and Sample

A small portion chosen from the population for studying its properties is called a sample and the number of units in the sample is known as the sample size. The method of selecting for study a small portion of the population to draw conclusion about characteristics of the population is known as sampling. Sampling may be defined as the selection of part of the population on the basis of which a judgment or inference about the universe is made (Sharma & Chaudhary, 2058: p171&173). Here only two sample commercial banks are taken out of twenty-nine banks. For selecting the samples, non-random sampling method is used here among different methods. Organizations under study are as follows, whose general introduction and major objectives are presented in chapter one. The sample organizations are as follows:

1. Nepal Investment Bank Limited.(NIBL)
2. Everest Bank Limited.(EBL)

3.4 Data Processing and Presentation

Data obtained from various sources cannot be directly used in their original form as they are raw data.When data will not be presented in understandable and easier way there would be no use of conducting research study or analysis of data. Analysis part would be difficult to understand to the readers without processing the data. So, to make the study understandable at the first sight data should be processed. As presentations of data means to keep raw data into understandable form by editing, rechecking and using various tools such as tables, charts, figures and trend lines. In this study also data are presented using

all the necessary tools so as to make understand the analysis part in proper and easier way.

3.5 Tools for Data Analysis

The thesis will cover and include the financial and statistical tools to analyze the data in order to reach to the conclusion of the research. In order to get the concrete results from this research, data are analyzed, by using different types of tools. As per the topic requirement, emphasis is given on statistical tools, so for this study the following financial and statistical tools are going to be used.

3.5.1 Financial Tools: - Financial analysis is the process of identifying the financial strengths and weaknesses of the organization by properly establishing relationships between the items of the balance sheet and the profit and loss account.

a. **Credit Deposit Ratio: -** The total credit is the loan and advance and investment. Loan is the sum of the money that will be repay by the borrower. Investment is defined simply to be the sacrifice of current consumption for future consumption whose future objective is to increase future wealth.

$$\text{Credit deposit ratio (CD Ratio)} = \frac{Total\ Credit}{Total\ Deposit}$$

b. **Growth Ratio: -** Growth Ratio is calculated to find out how would the bank is maintaining economic and financial condition. The following formula has been used to calculate growth ratio.

$$D_n = D_0\ (1+g)^{n-1}$$

Where,

D_n = Total amount in nth year.

D_0 = Total amount in beginning year

G = Growth rate of amount

N = Total no. of years during the study period.

To examine and analysis following growth ratio are calculated in this study.

- Growth ratio of Deposit.
- Growth ratio of total Lending.

3.5.2 Statistical Tools:- Statistical tools are used to analyze the relationship between two variables and to find how these variables are related.In this study,following statistical tools are used.

a. **Summary Measures**:- The summary measures such as mean ± standard deviation for summaring the data related to deposit, lending and interest rate etc. has been applied Mena and standard deviation computed as follows.

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N}$$

Where,

$\bar{X}$ = Arithmetic Mean

$\sum X$ = Sum of values of all items, and,

N = Number of items

$$\text{Standerd deviation}(\sigma) = \sqrt{\frac{\sum(\mathbf{X}-\bar{\mathbf{x}})^2}{n-1}}$$

Where,

$\boldsymbol{\sigma}$ = Standerd deviation

$\sum(\mathbf{X}-\bar{\mathbf{x}})^2$ = Sum of squares of the deviations measured from arithmetic average.

n = Number of items

b. **Coefficient of Variation(cv)**:- The coefficient of variation is the ratio of standard deviation to the mean for a given sample used to measure spread. It can also be thought of as the measure of relative risk.The larger the coefficient of variation, the greater the risk relative to the average.Mathematically,

$$Cv = \frac{\sigma}{\bar{X}} \times 100$$

Where,

Cv = Cofficient of Variation

$\boldsymbol{\sigma}$ = Standerd Deviation

$\bar{X}$ = Arithmetic Mean

c. **Coefficient of Correlation**:- Correlation is a statistical tool design to measure the degree of association between two or more variables.In other word if the changes in one variable affects the changes in other variable,then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation.The coefficient of correlation measures the degree of relationship between to sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the tudy because of the simplisity and suitable for the nature of data. The result of coefficient of correlation is always lie between +1 and -1.The formula for the calculation of coefficient of correlation between X and Y is given below.

$$r = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

Where,

r = Correlation coefficient

$\sum x_1$ = $X_1 - \bar{X}_1$

$\sum x_2$ = $X_2 - \bar{X}_2$

Under this topic, Karl Pearson's correlation coefficient is used to measure the degree of relationship between the following variables.

1. Coefficient of correlation betweween Interest rate & Deposit.
2. Coefficient of correlation betweween Interest rate & Lending.

The interpretation of calculated valve of correlation cofficient by following way.

- If r = 0, then there is no correlation between variables.
- If r > 0, then there is positive correlation between variables.
- If r < 0, then there is negative relation between variables.
- If r = +1,then there is perfect positive correlation.
- If r = -1, then there is perfect negative correlation.

d. **Least Square Linear Trend Analysis:-** Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly The future trend is forecasted by using the following formula.

$$Y = a + bx$$

where,

Y = the dependent variable

a = Y intercept

b = the slope or the rate of change of Y per unit change in x

x = the independent variable

so, researcher is going to analyze the trend of dividend per share, earning per share and market value per share with the help of this trend value analysis using least square method. On the basis of past five years and also future value of next 5 year is being forecasted.

e. **Assessment of the Sample Corrlation Cofficient:-** For this study, t-test for significance of an observed and sample correlation cofficient is used.

Set up Hypothesis

Null hypothesis (H_0); $\rho = 0$ i.e. There is no correlation between the considerred variables.

Alternative Hypothesis (H_1); $\rho \neq 0$ i.e. There is significant correlation between the considerred variables.

Test statistic under H_0;

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

Where,

r = Sample correlation between two variables

r^2 = Sample correlation Coefficient

n = No of Pair of ovservations

Level of significance: Level of significance $\propto$ = 5%

Critical Value: Tabulated or critical value of t at $\propto$ % level of significance for (n - 2) degree of freedom obtain from 't' tables.

Decision: If calculated 't' is less then or equal to tabulated value of 't' it falls in the accepted region and the null hypothesis is accepted and if calculated 't' is greater then tabulated 't' null hypothesis is rejected.

CHAPTER - FOUR

PRESENTATION AND ANALYSIS OF DATA

This chapter is like a nervous system of human body, which leads to conclude through major findings, important conclusion and applicable recommendation. It makes the proper linkage with the other chapters of the study. Without this part the study remains incomplete in a sense that the above set objectives in chapter one cannot be achieved and conclusion and recommendation cannot be drawn. It is not possible to ignore this part to know what the real problems are and what factors are affecting those problems in the real world in conjunction to the research topic.

To make our study clear and result oriented, presentation, analysis and interpretation of At first the interest rate structure is shown (that of deposit and lending) then after the relationship between interest rate on deposit and deposit amount and relationship between interest rate on lending and lending amount is shown and analyzed. This part is the core of the study which includes detailed presentation, analysis and their interrelationship of the data from which concrete result of Nepalese market can be obtained. In this section, the filtered data are presented and analyzed. The relevant data and information necessary for the study and to show the relationship between variables i.e. between interest rate on deposit and deposit amount and interest on lending and lending amount are presented analyzed and interpreted keeping the objectives set in mind. This section consists of various calculations made for the analysis of interest rate and its impact on deposit amount and lending amount of sample banks. To make our study effective and precise as well as easily understandable, this chapter is categorized into three parts; presentation, analysis, interpretation and findings. The analysis is fully based on secondary data. Firstly, data are presented in terms of table, graph chart 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. Even relationship between deposit rate and lending rate is calculated and analyzed. Analysis is made on the basis of different statistical tools like correlation coefficient, coefficient of determination, and t-statistics for significance.

4.1 Analysis of Interest Rates and Deposit

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 forth a greater 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. A bank takes various types of deposits from individuals, business organizations and other different types of institutions. Normally, they are classified into two types: Interest Bearing Deposits and Interest Free Deposit

In this section, detail study of fluctuation in interest rate on deposit of sample banks is studied. For this study only saving and fixed deposits are considered because current deposit doesn't earn any interest. The interest rates are generally different in magnitude for every sample banks. These differences are due to the numerous factors like maturity period, policy of bank, goodwill of organization and so on.

4.1.1 Everest Bank Limited (EBL)

Table: 4.1

Interest Rate on Deposit of EBL

Deposit	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Saving	5.25	5.25	5.25	5.00	3.25	3.25	3.00	3.00	3.00	3.00
Fixed										
1 Year	6.25	6.25	6.00	5.50	3.50	4.00	4.00	5.00	5.00	5.00
2 Years Above	6.75	6.75	6.25	6.00	4.00	4.50	4.50	5.25	5.25	5.25
Mean of FDIR	6.50	6.50	6.13	5.75	3.75	4.25	4.25	5.13	5.13	5.13
Average Rate	5.88	5.88	5.69	5.38	3.50	3.75	3.63	4.07	4.07	4.07

Source: Banking and financial statistics NRB (2001 to 2010)

The table 4.1, portrays the interest rate of EBL on saving deposit and fixed deposits. The interest rate on saving deposit is fluctuated, means both on increasing and decreasing trend. The interest rate on saving deposit is 5.25% in the 2001 to 2003 but it was 5% in 2004, 3.25% in 2005 & 2006 after that the rate is constant at the rate of 3%. It shows that the interest rate is in constant during FY 2001 to 2003, it decrease at 2004 to 2006 after

that constant up to 2010. Similarly the average fixed deposit interest rate is 6.50%, 6.50%, 6.13%, 5.75%, 3.75%, 4.25% and 4.25% in FY 2001, 2002, 2003, 2004, 2005, 2006 and 2007 respectively after that the rate of interest remain constant up to the FY 2010 at the rate of 5.13%.

Figure: 4.1

Trend of Interest Rate on Deposit of EBL

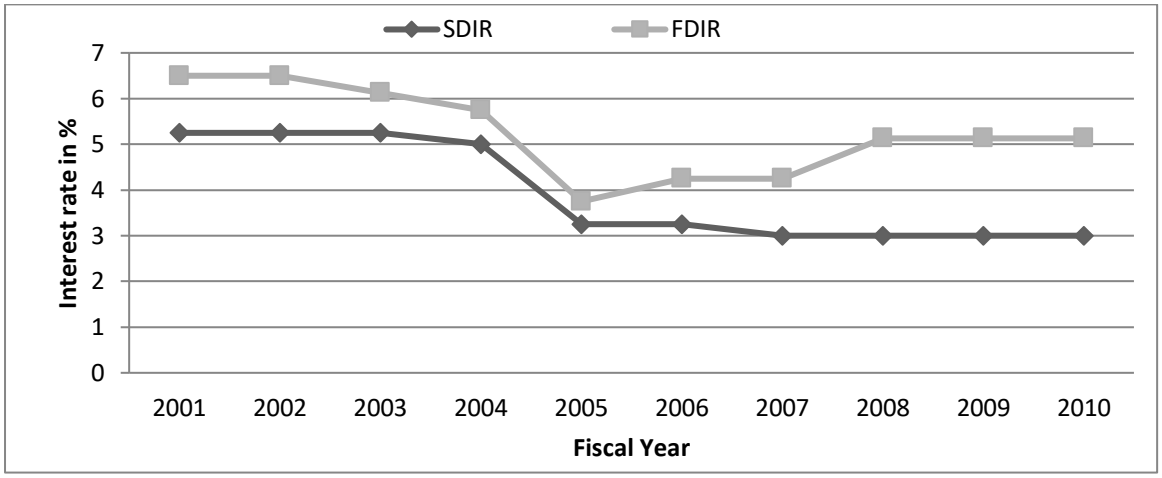


Table: 4.2

Deposit Position of EBL

Year	SDIR %	SD (Rs. In Millions)	FDIR %	FD (Rs. In Millions)
2001/02	5.25	1384.1	6.5	2470.2
2002/03	5.25	1733.3	6.5	2694.6
2003/04	5.25	2758	6.13	2803.4
2004/05	5	3730.7	5.75	29131.1
2005/06	3.25	4806.9	3.75	3444.5
2006/07	3.25	6929.2	4.25	3298.2
2007/08	3	9018	4.25	5658.7
2008/09	3	11883.9	5.13	6558
2009/10	3	14782.3	5.13	7094.7
2010/11	3	13360	5.13	10440.3
Mean ± SD	3.93 ± 1.09	-	5.25 ± 0.97	-
CV	27.85%	-	18.44%	-

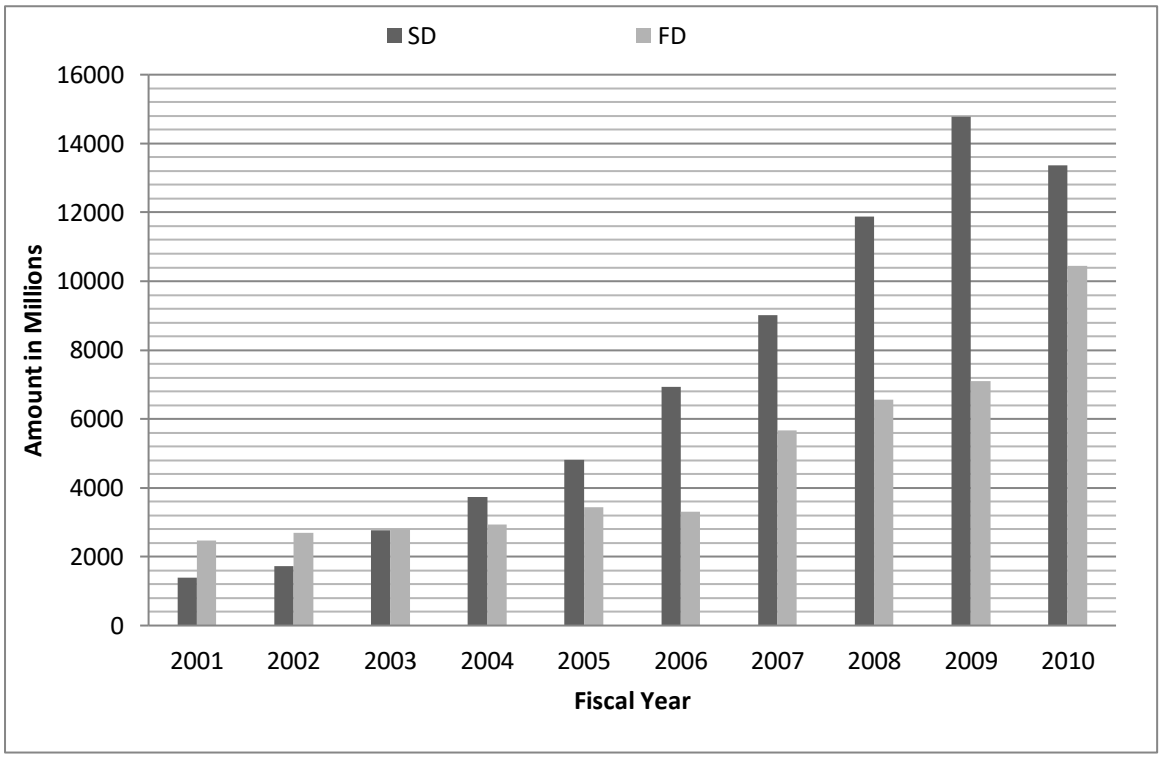
Source: Financial Statement of Sample Banks from 2001 to 2010

The table 4.3, shows the amount of saving deposit and its interest rate as well as amount of fixed deposit and its interest rate for 10 fiscal year. The table indicates that, in one hand deposits rates are declining where as in other hand deposits amount is increasing in each fiscal year, except the year 2010. This suggests that deposit interest rate and deposit amount may have negative relationship, i.e. when DIR is decreased, amount of deposits increase.

The average value of SDIR is 3.93% and the FDIR is 5.25. The Standard Deviations of SDIR, and FDIR are 1.09% and 0.97% respectively, it means FDIR is less variability in compare to SDIR. The CV of SDIR and FDIR ratio of EBL is 27.85% and 18.44% respectively which indicate that SDIR is more variable than FDIR.

Figure: 4.2

Deposit Position of EBL



4.1.2 Nepal Investment Bank Ltd. (NIBL)

Table: 4.3

Interest Rate on Deposit of NIBL

Deposit	2001/	2002	2003	2004	2005	2006	2007	2008	2009	2010
Saving	6.00	5.25	5.00	5.00	2.75	2.75	2.50	2.50	2.50	2.50
Fixed										
1 Year	7.00	6.75	6.75	6.50	3.50	3.50	5.00	5.00	5.00	5.00
2 Years Above	7.25	7.00	7.00	6.75	3.75	3.75	5.50	5.50	5.50	5.50
Mean of FDIR	7.13	6.88	6.88	6.63	3.63	3.63	5.25	5.25	5.25	5.25
Average Rate	6.75	6.33	6.25	6.08	3.33	3.33	4.33	4.33	4.33	4.33

Source: Banking and financial statistics NRB (2001 to 2010)

The table 4.4, portrays the interest rate of NIBL on saving deposit and fixed deposits. The interest rate on saving deposit is in decreasing trend. The interest rate on saving deposit is 6%% in the 2001 and 5.25% in 2002 but it was 5% in 2003 and 2004, 2.75% in 2005 & 2006 after that the rate is constant at the rate of 2.5%. Similarly the average fixed deposit interest rate is 6.75%, 6.33%, 6.25%, 6.08%, 3.33% and 3.33% in FY 2001, 2002, 2003, 2004, 2005 and 2006 respectively after that the rate of interest remain constant up to the FY 2010 at the rate of 4.33%..

Figure: 4.3

Trend of Interest Rate on Deposit of NIBL

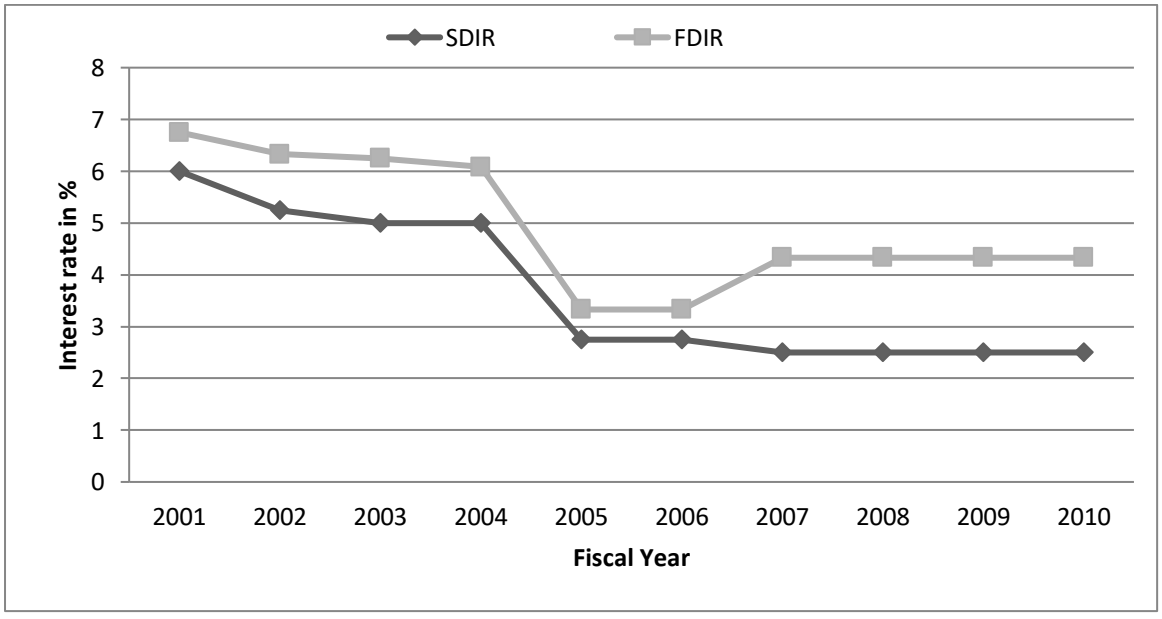


Table: 4.4

Deposit Position of NIBL

Year	SDIR %	SD (Rs. In Millions)	FDIR %	FD (Rs. In Millions)
2001/02	6	1259.6	6.75	1658.7
2002/03	5.25	1276.7	6.33	945.9
2003/04	5	2433.9	6.25	1672.8
2004/05	5	4922.0	6.08	2294.7
2005/06	2.75	6703.5	3.33	3212.4
2006/07	2.75	8082.0	3.33	5413.0
2007/08	2.5	10742.2	4.33	7516.8
2008/09	2.5	13688.8	4.33	7944.2
2009/10	2.5	17066.2	4.33	11633.4
2010/11	2.5	14322.5	4.33	16825.1
Mean ± SD	3.68±1.44	-	4.94±1.29	-
CV	39.50%	-	26.05%	-

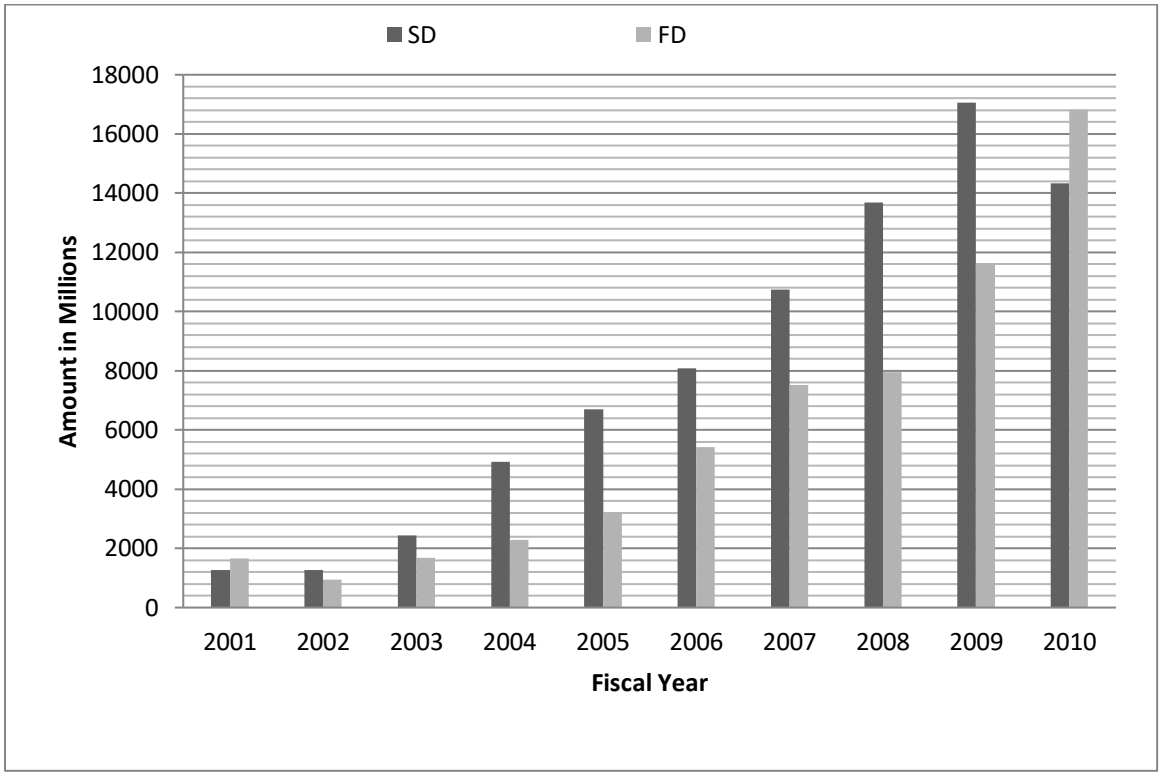
Source: Financial Statement of Sample Banks from 2001 to 2010

The table 4.5, shows the amount of saving deposit and its interest rate as well as amount of fixed deposit and its interest rate for 10 fiscal year. The table indicates that, in one hand deposits rates are declining where as in other hand deposits amount is increasing in each fiscal year, except the year 2010. This suggests that deposit interest rate and deposit amount may have negative relationship, i.e. when DIR is decreased, amount of deposits increase.

The average value of SDIR is 3.68% and the FDIR is 4.94. The Standard Deviations of SDIR, and FDIR are 1.44% and 1.29% respectively, it means FDIR is less variability in compare to SDIR. The CV of SDIR and FDIR of NIBL is 39.50% and 26.05% respectively which indicate that SDIR is more variable than FDIR.

Figure: 4.4

Deposit Position of NIBL



4.2 Analysis of Lending and Interest Rate

This is second area of the analysis where mainly the relationship between lending interest rate and its effect upon lending amount is measured.

4.2.1 Interest Rate on Lending

Generally, when there is higher interest rate (esp. lending or credit rate) in the economy, people normally borrow lesser amount than the period when lending interest rate is low. According to theory, when there is low lending rate, then there should be higher amount of borrowing.

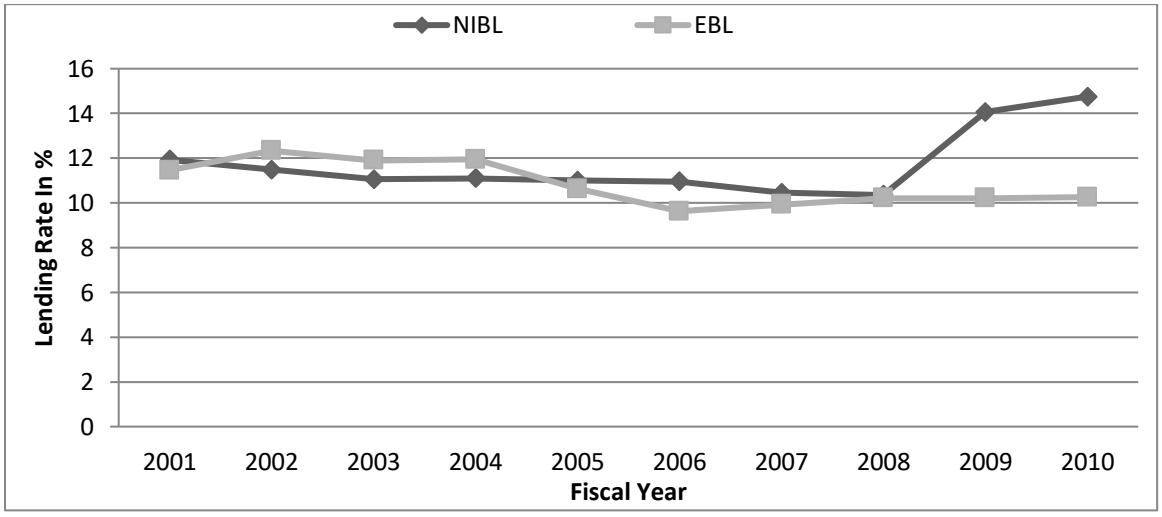
Table: 4.5
Interest Rate on Lending

Year	Lending Rate (In %)	
	NIBL	EBL
2001/02	11.93	11.46
2002/03	11.48	12.33
2003/04	11.05	11.90
2004/05	11.10	11.94
2005/06	11	10.62
2006/07	10.95	9.63
2007/08	10.45	9.92
2008/09	10.35	10.21
2009/10	14.06	10.21
2010/11	14.75	10.25
Mean ± SD	11.71 ± 1.50	10.85 ± 0.97
CV	12.79%	8.93%

Source: Banking and financial statistics NRB (2001 to 2010)

Figure: 4.5

Trend of Interest Rate on Lending of Sample Banks



Lending activity of commercial banks can be diversified into different sectors. But according to the publication of Nepal Rastra Bank- Banking & Financial statistics- the loan of commercial banks are classified in different sub-sectors like overdraft, export credit, Import LC, commercial loan and so on. Besides this there are other section (area) when bank provides loan and these areas are placed in the topic of "others". For this study, lending area are categorized as classified by NRB. According to table 4-5, it shows

that average interest rate on lending of different area. The average interest rate in lending of NIBL is in decreasing trend except the year 2009 and 2010 & 2010 and the average interest rate on lending of EBL is in fluctuating trend over the study period.

Over the study period, the average lending rate of NIBL is high than EBL. The average lending rates of NABIL is 11.71% and EBL is 10.85% respectively. The standard deviation of lending rate of NABIL is the high than EBL, it means in the lending rate NABIL has high variability than EBL and the CV also shows the same result. It is also observed that, there is high variability found in interest rate on lending of NABIL than EBL.

4.2.2 Lending Amount (Credit)

The total credit is the loan and advance and investment. Loan is the sum of the money that will be repay by the borrower. Investment is defined simply to be the sacrifice of current consumption for future consumption whose future objective is to increase future wealth. The general public gets attracted to take loan and advances from the bank if the interest rate is lower. The bank provides loan to the general public for different purposes like industry, trade, commerce etc.

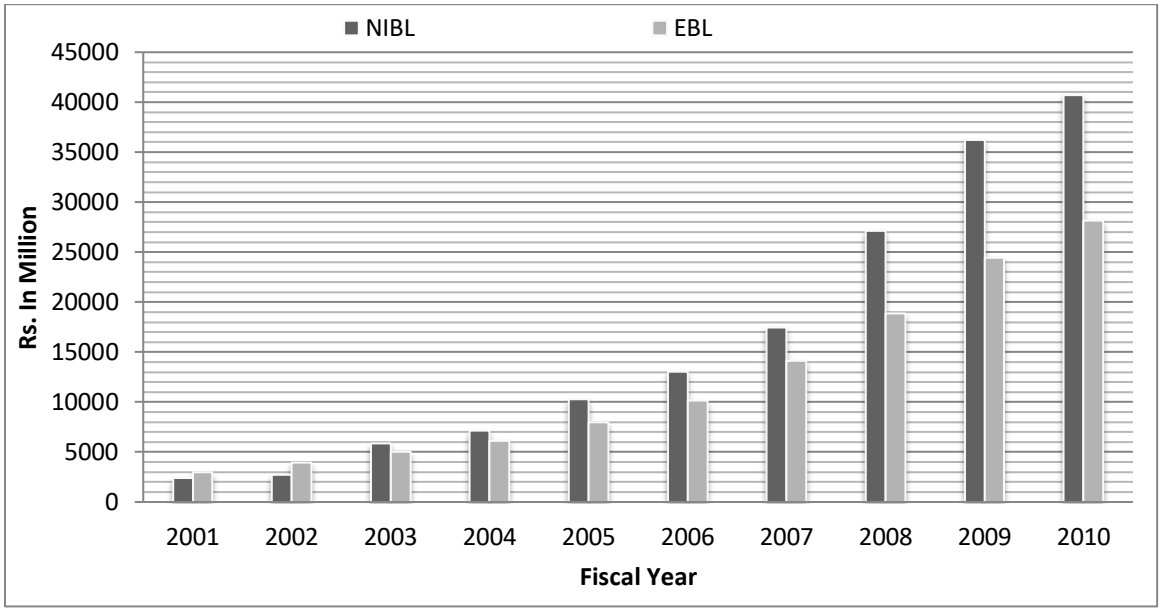
Table: 4.6
Lending Amounts of Sample Banks

Year	Lending Amount (Rs. In millions)	
	NIBL	EBL
2001/02	2385.5	2963.70
2002/03	2693.0	3969.60
2003/04	5872.6	5030.90
2004/0	7174.7	6116.60
2005/06	10295.4	7944.10
2006/07	13007.2	10154.90
2007/08	17482.0	14100.00
2008/09	27145.5	18836.40
2009/10	36250.4	24469.60
2010/11	40689.6	28156.40
Mean	16299.6	12174.22

Source: Banking and financial statistics NRB (2001 to 2010)

The above table shows the lending amount of sample banks. Over the study period, lending amount of sample banks is in increasing trend. The above table 4.6 clear that there is positive relationship between lending rate and lending amount i. e. if lending rate is increase the amount of deposit also increase and if the lending rate is decrease the amount of lending also decrease.

Figure: 4.6
Lending Position of Sample Banks



4.3 Correlation Analysis

To find out the relationship between two continuous variables, Karl Pearson's co-efficient of correlation (r) is used. One of the very convenient and useful way of interpreting the value of coefficient of correlation(r) between the two variables is coefficient of determination, which is denoted by r^2. It explains the total variation in dependent variable is explained by independent variable.

The significant of coefficient of correlation (r) is tested with the help of 't' test. If calculated 't' is less than or equal to tabulated value of 't' it falls in the accepted region and null hypothesis is accepted or 'r' is not significant of correlation in the population and if calculated 't' is greater than tabulated 't' null hypothesis is rejected or 'r' is significant of correlation in the population.

4.3.1 Relationship between Deposit Rate and Deposit Amount

Coefficient of correlation measures the degree of relationship between two variables, Deposit Rate (DR) & Deposit Amount (DA). DR is independent variable (X_1) and DA is dependent variable (X_2). The purpose of computing is to find out the relationship between DR and DA is going to same direction or opposite direction.

Table: 4.7
Correlation between Deposit Rate and Deposit Amount

Factors	Banks	
	NIBL	**EBL**
r	-0.594	-0.654
r^2	0.353	0.428
Calculated 't' Value	2.89	2.45
Tabulated 't' Value	2.262	2.262
Remarks	Significant	Significant
Result	Moderate Degree of Negative Correlation	Moderate Degree of Negative Correlation

Source: Appendix I & II

From the Table-4.7, the values of coefficient of correlation (r) of NIBL and EBL are -0.594 and -0.654 respectively which shows that there is a negative correlation between DR and DA of sample banks. The value of coefficient of determination (r^2) is 0.353 and 0.428 of NIBL and EBL, which shows that 35.3% and 42.8% of the total variation in dependent variable (DA) is explained by independent variable (DR). The calculated 't' value of NIBL is more than the tabulated value i.e. 2.89 > 2.262, therefore it reveals that the relationship between DR and DA is significant, in case of EBL, the calculated value of t is also more than the tabulated value i.e. 2.45 > 2.262, therefore it reveals that the relationship between DR and DA is significant.

4.3.2 Relationship between Lending Rate and Lending Amount

Coefficient of correlation measures the degree of relationship between two variables, Lending Rate (LR) & Lending Amount (LA). LR is independent variable (X_1) and LA is

dependent variable (X_2). The purpose of computing is to find out the relationship between LR and LA is going to same direction or opposite direction.

Table: 4.8
Correlation between Lending Rate and Lending Amount

Factors	Banks	
	NIBL	**EBL**
r	0.664	-0.668
r^2	0.441	0.446
Calculated 't' Value	2.52	2.54
Tabulated 't' Value	2.262	2.262
Remarks	Significant	Significant
Result	Moderate Degree of Positive Correlation	Moderate Degree of Negative Correlation

Source: Appendix III & IV

From the Table-4.8, the values of coefficient of correlation (r) of NIBL and EBL are 0.664 and -0.668 respectively which shows that there is a negative correlation between LR and LA of EBL and positive correlation between LR and LA of NIBL. The value of coefficient of determination (r^2) is 0.441 and 0.446 of NIBL and EBL, which shows that 44.1% and 44.6% of the total variation in dependent variable (LA) is explained by independent variable (LR). The calculated 't' value of both sample banks are more than the tabulated value i.e. 2.52 > 2.262 of NIBL and 2.54 > 2.262 of EBL, therefore it reveals that the relationship between LR and LA is significant.

4.4 Least Square Linear Trend Analysis

4.4.1 Trend Analysis of Deposit Amount

Under this topic, an effort has been made to calculate the trend value of DA of NIBL, and EBL with comparatively under nine years study period and project the trend for next five years. The following table describes the trend values of DA of sampled banks for five years.

Table: 4.9

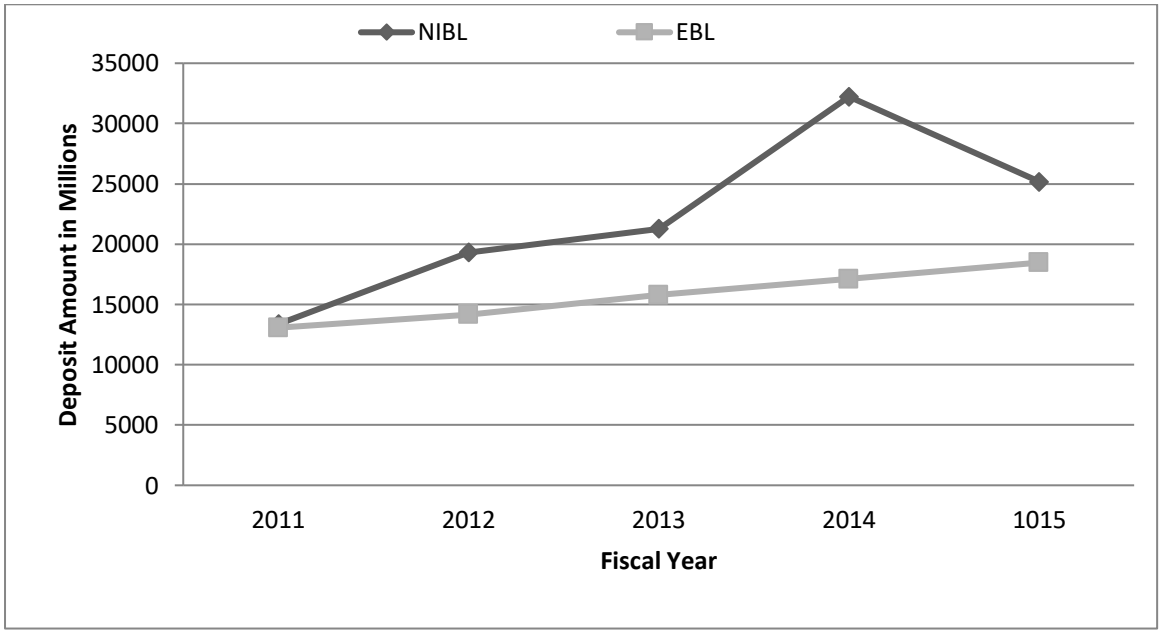
Comparative Trend Analysis of DA of NIBL & EBL (Rs in Millions)

Fiscal Year	Actual Value		Fiscal Year	Trend Value	
	NABIL	EBL		NABIL	EBL
2006/07	6747.5	5113.7	2011/12	13363.83	13071.51
2007/08	9129.5	7338.35	2012/13	19317.75	14149.97
2008/09	10816.5	9220.95	2013/14	2127..67	15768.43
2009/10	14349.8	10938.5	2014/15	32225.59	17116.89
1010/11	15573.8	11900.15	2015/16	25179.51	18465.35

Source: Appendix V & VI

Figure: 4.7

Trend Line of DA of NIBL & EBL



The above table 4.9 and figure 4.7 shows that the trend line of DA of sample banks are increasing trend. 'Y' has shown the trend value of total DA. Since, the calculated value of 'b' is positive of both sample banks; it is found that the bank's DA is increasing with time. Comparatively the slope of equation of NIBL is high and its trend line is sloping upward rapidly. If other things remaining the same, it shows that the DA increasing by Rs. 1953.92 and increase by Rs. 1348.46 millions every year of NIBL and EBL respectively.

4.4.2 Trend Analysis of Lending Amount

Under this topic, an effort has been made to calculate the trend value of LA of NIBL, and EBL with comparatively under nine years study period and project the trend for next five years. The following table describes the trend values of DA of sampled banks for five years.

Table: 4.10

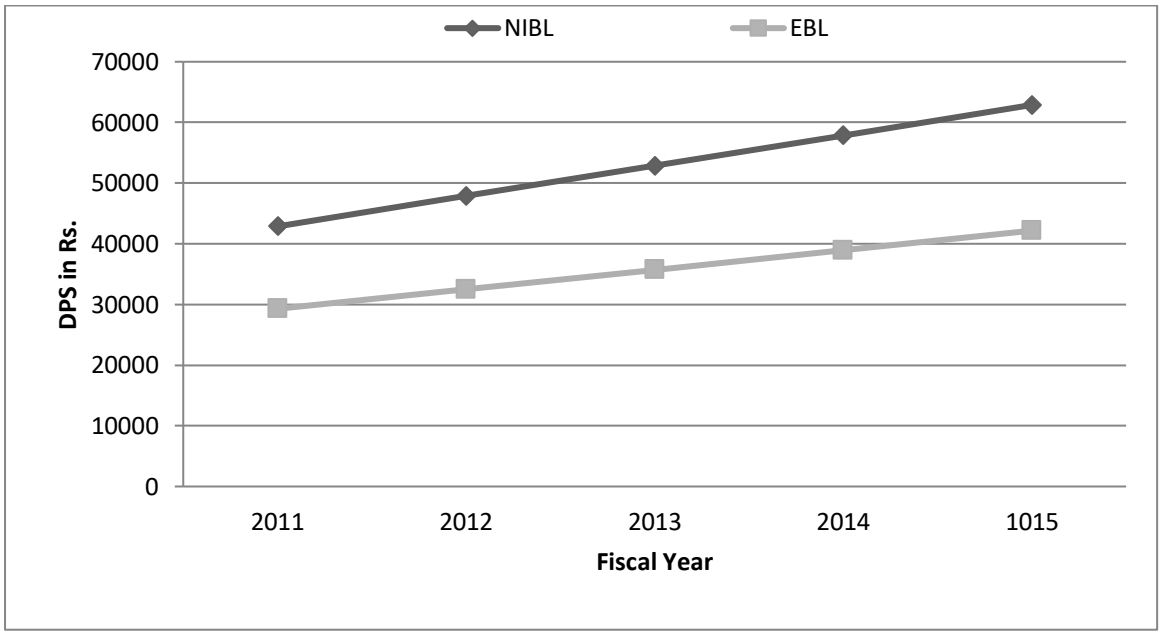
Comparative Trend Analysis of LA of NIBL & EBL (Rs in Millions)

Fiscal Year	Actual Value		Fiscal Year	Trend Value	
	NIBL	EBL		NIBL	EBL
2006/07	13007.2	10154.9	2011/12	42867.00	29288.86
2007/08	17482	14100	2012/13	47871.27	32507.11
2008/09	27145.5	18836.4	2013/14	52875.56	35725.36
2009/10	36250.4	24469.6	2014/15	57879.84	38943.61
2010/11	40689.6	28156.4	2015/16	62884.12	42161.86

Source: Appendix VII & VIII

Figure: 4.8

Trend Line of LA of NIBL & EBL



The above table 4.10 and figure 4.8 shows that the trend line of LA of sample banks are increasing trend. 'Y' has shown the trend value of total LA. Since, the calculated value of 'b' is positive of both sample banks; it is found that the bank's LA is increasing with time. Comparatively the slope of equation of NIBL is high and its trend line is sloping upward rapidly. If other things remaining the same, it shows that the LA increasing by Rs. 5004.28 and increase by Rs. 3218.25 millions every year of NIBL and EBL respectively.

4.5 Major Findings

- The interest rate on saving deposit of EBL is in decreasing trend. The interest rate on saving deposit is 5.25% in the 2001 to 2003 but it was 5% in 2004, 3.25% in 2005 & 2006 after that the rate is constant at the rate of 3%. It shows that the interest rate is in constant during FY 2001 to 2003, it decrease at 2004 to 2006 after that constant up to 2010. Similarly the average fixed deposit interest rate is 6.50%, 6.50%, 6.13%, 5.75%, 3.75%, 4.25% and 4.25% in FY 2001, 2002, 2003, 2004, 2005, 2006 and 2007 respectively after that the rate of interest remain constant up to the FY 2010 at the rate of 5.13%.

- The deposits rates of EBL are declining where as deposits amount is increasing in each fiscal year, except the year 2010. The average value of SDIR is 3.93% and the FDIR is 5.25. The Standard Deviations of SDIR, and FDIR are 1.09% and 0.97% respectively, it means FDIR is less variability in compare to SDIR. The CV of SDIR and FDIR ratio of EBL is 27.85% and 18.44% respectively which indicate that SDIR is more variable than FDIR.

- The interest rate on saving deposit of NINL is in decreasing trend. The interest rate on saving deposit is 6%% in 2001 and 5.25% in 2002 but it was 5% in 2003 and 2004, 2.75% in 2005 & 2006 after that the rate is constant at the rate of 2.5%. Similarly the average fixed deposit interest rate is 6.75%, 6.33%, 6.25%, 6.08%, 3.33% and 3.33% in FY 2001, 2002, 2003, 2004, 2005 and 2006 respectively after that the rate of interest remain constant up to the FY 2010 at the rate of 4.33%.

- The deposits rates of NIBL are declining where as deposits amount is increasing in each fiscal year, except the year 2010. The average value of SDIR is 3.68% and the FDIR is 4.94. The Standard Deviations of SDIR, and FDIR are 1.44% and

1.29% respectively, it means FDIR is less variability in compare to SDIR. The CV of SDIR and FDIR of NIBL is 39.50% and 26.05% respectively which indicate that SDIR is more variable than FDIR.

- Over the study period, lending amount of sample banks is in increasing trend. The average interest rate in lending of NIBL is in decreasing trend except the year 2009 & 2010 and the average interest rate on lending of EBL is in fluctuating trend over the study period.
- The average lending rate of NIBL is high than EBL. The average lending rates of NABIL is 11.71% and EBL is 10.85% respectively. The standard deviation of lending rate of NABIL is the high than EBL, it means in the lending rate NABIL has high variability than EBL and the CV also shows the same result.
- The values of coefficient of correlation (r) of NIBL and EBL are -0.594 and -0.654 respectively which shows that there is a negative correlation between DR and DA of sample banks. The value of coefficient of determination (r^2) is 0.353 and 0.428 of NIBL and EBL, which shows that 35.3% and 42.8% of the total variation in dependent variable (DA) is explained by independent variable (DR). The calculated 't' value of NIBL is more than the tabulated value i.e. 2.89 > 2.262, therefore it reveals that the relationship between DR and DA is significant, in case of EBL, the calculated value of t is also more than the tabulated value i.e. 2.45 > 2.262, therefore it reveals that the relationship between DR and DA is significant.
- the values of coefficient of correlation (r) of NIBL and EBL are 0.664 and -0.668 respectively which shows that there is a negative correlation between LR and LA of EBL and positive correlation between LR and LA of NIBL. The value of coefficient of determination (r^2) is 0.441 and 0.446 of NIBL and EBL, which shows that 44.1% and 44.6% of the total variation in dependent variable (LA) is explained by independent variable (LR). The calculated 't' value of both sample banks are more than the tabulated value i.e. 2.52 > 2.262 of NIBL and 2.54 > 2.262 of EBL, therefore it reveals that the relationship between LR and LA is significant.
- The trend lines of DA of sample banks are increasing trend. The calculated value of 'b' is positive of both sample banks; it is found that the bank's DA is increasing

with time. If other things remaining the same, it shows that the DA increasing by Rs. 1953.92 and increase by Rs. 1348.46 millions every year of NIBL and EBL respectively.

- The trend lines of LA of sample banks are increasing trend. The calculated value of 'b' is positive of both sample banks; it is found that the bank's LA is increasing with time. If other things remaining the same, it shows that the LA increasing by Rs. 5004.28 and increase by Rs. 3218.25 millions every year of NIBL and EBL respectively.

CHAPTER - FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter is the last part of this study which is the most important chapter for the research because this chapter extracts of all the previously discussed chapters. When a study is completed, we should summarize and conclude in specific form, as it is an important issue in research. In this chapter, summary and conclusion made after analyzing and interpreting the necessary data regarding structure of interest rates and its impact on deposit and lending of selected commercial banks. Finally, constructive suggestions and recommendation, which can be of immense help to improve interest rates and its impact on deposit and lending of commercial banks. In this way, an attempt has been made to summaries the whole study in this chapter categorizing in three subsections namely summary, conclusion and recommendation.

5.1 Summary

Banking sector plays an important role in the economic development of the country. Commercial banks are one of the vital aspects of this sector, which deals in the process of channelizing the available resources in the needed sectors. It is the intermediary between the deficit and surplus of financial resources. After the adoption of economic liberalization policy, particularly the financial sector liberalization that paved the way for establishment of new banks and non-bank financial institutions in the country. Consequently, by the end of mid-march 2012, 32 commercial banks 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 institution act as an intermediary between the individual who lend and who borrow. These institutions accept deposits and in turn lend it to people who are in need of financial resources. These institutions make the flow of fund easier. So we cannot deny the role a bank plays in developing an economy. It pools the fund scattered in the economy and mobilizes them to the productive sector. As focus on the above explanation the study has covered on the study of interest rates regarding its impact on deposit and lending byten years data and mainly concerns the below issues:

Though there are various factors in the economy that affects the volume of deposit and lending, interest rate is one of the major factor that affect deposit and lending amount. With the major objective of showing relationship between deposit rate and deposit amount i.e. substitution effect, lending rate and lending amount, this study is undertaken. The study is conducted to identify whether some of the theories of finance and economics are applicable or not in the Nepalese financial markets. The major theories are substitution effect, fisher effect and inverse relationship between interest rate and lending amount. For this purpose, brief introduction about Nepalese economy, interest rate, sample organizations, statement of problem, and significance of the study and limitation of study are made in the first chapter of this dissertation.

In second chapter, theoretical review as well as review of previous research has been made. Different views about interest, function of interest, theories of interest, types of interest, factors affecting interest rate and so on are reviewed. Of the theories of interest, the main four theories: – The Classical Theory, Liquidity Preference Theory, Loanable Fund Theory and Rational Expectation Theory are reviewed. Similarly, the factor affecting interest rate like credit or default risk, liquidity risk, marketability risk, call or prepayment risk, servicing cost, exchange rate risk, taxability are explained. Similarly, factors affecting the volume of credit like credit risk, rate of return, investment opportunity and so on are explained. Research design used is mainly analytical. Out of the total financial system, two commercial banks are chosen for sample purpose. The study is mainly based on secondary data used for the analysis. These all are made on third chapter. Secondary data are collected form NRB,s economic reports and annual reports of related banks. Lastly on fourth chapter, collected data are presented in tabular and graphic form and analyzed using various financial and statistical tools like mean, standard deviation, correlation coefficient and t-statistics.

5.2 Conclusion

However, as per t-test the relation is significant. Hence, there is relation between deposit interest rate and deposit amount. Therefore, it is concluded that for deposit also, there is no substitution effect at all. According to the theory, there is positive relationship between deposits rate and deposit amount. But the analysis of substitution effect for both fixed and saving deposit shows that substitution effect do not exist for all sample banks. After

Presentation and data analysis of relevant data of sample commercial banks under study, using various analytical tools, some major's findings of this study as evaluated and found in analysis. are summarized as follows: But as per t-test the relation is not significant.

In case of deposit, Both banks have negative correlation coefficient between interest rate and deposit and as per t-test the relation is significant. 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 institution rather than to hold. This may be due to the fact that, in the last 10 FYs people accumulated most of their funds on saving accounts though they don't get appropriate interest on it. It may be just because of unavailability of other reliable place of investment, political instability and feeling of insecurity among people. The depositors place interest rate's rowle as secondary in their decision for keeping deposit in the banks. Absence of better investment opportunities, expectation of inflationary pressures and the associated safety, liquidity and profitability, whatever are their respective roles, must have been the factors responsible for increase in volume of deposit despite downscaling introduced in interest rates during the review period. This might have produced negatives relationship between interest rates and deposits.

The interest rates on both deposit and lending of sample banks are found to be in decreasing trend. But contrary to this, deposit amount and lending amount is increasing every year. From the study, it is found that the interest rate of saving deposit is decreasing continuously whereas on other hand saving deposit amount is increasing in every fiscal year. Therefore, there is a negative relationship between deposit interest rate and deposit amount of both sample banks as proved by negative correlation coefficient of both banks as well as successful significant t-test of both banks.

From the study, there is negative correlation coefficient between lending rate and lending amount of EBL, this negative correlation indicates that there is inverse relationship between lending interest rate and lending amount, as per t- test the relation is significant for all sample banks. Therefore it is conclude that there is substitution effect at all. According to theory, there is negative or inverse relationship between lending rate and lending amount. The study found that EBL has inverse relationship between lending rate and lending amount. But, increase in lending amount is not due to the decrease in lending

rate but may be due to other factor, as it higher t-calculated value than tabulated value which indicated significant relationship between variables under study. So it can be concluded that the lending interest rate is also an important factor for expansion or contraction of lending amount.

It is found that deposit rate and lending rate of sample banks are moved into same direction. There is positive correlation between deposit rate and lending rate which indicates that change in one variable causes to change in other variable in same direction. Banks want to maintain the interest rate spread (i.e. difference of lending rate and deposit rate) to achieve uniform profitability due to which the positive relation between the rates is witnessed. But decrease in deposit interest rate is more than decrease in lending rate which is constraint for investment.

5.3 Recommendation

Productive sector implies trade, commerce, industry, hydropower, tourism and cultural sectors.Unproductive sector implies consumer loans, hire purchase loans, personal loans, pledge loans and those sectors which do not create wealth and do not add to GDP of the country. Commercial banks should emphasize on the repayment on loan and provide incentive to borrowers to encourage paying loan. Good repayment of loans is the strength of commercial banks. Commercial banks are suggested to charge higher rate in unproductive sectors and lower rate in productive sectors. So that scarce deposit collected from public goes to productive sector which ultimately enhances GDP and productivity of the country and provides safety to the deposits. On the contrary if deposit gets invested in unproductive sector, it does not generate any productive return and ultimately collapses rendering losses to banks and depositors as well.

Commercial banks should formulate and implement a client oriented service policy while fixing deposit rates and lending rates. It helps the banks to face the cutthroat competition very boldly. Base on the above conclusion following suggestions can be recommended to related banks and concerned parties.

- The financial institutions like Commercial banks are suggested to quote higher interest rate on deposit because it helps to generate more capital from depositors which are needed for the development of the country.
- Money gets invested in unproductive sector like gold, land and real estate due to low interest rate in bank. Hence, banks in Nepal had to face huge liquidity crunch in the recent past. In consequence of which, we could see hopping rise in interest rate of banks. NRB is suggested to provide clear cut policies related to interest rates on both deposit and lending rate.
- The financial institutions are suggested to include the inflation premium as far as possible while fixing the interest rates. If the inflation rate is not considered and real rate come out to be negative then depositors may withdraw their money and utilize it on non-productive sectors.
- Investment should be higher yield oriented. For this they have to invest their fund in sector with higher return as well as introduce competitive customer oriented schemes. It will increase the profit position of commercial banks.
- Although the belief those high interest rates tend to avoid capital flights to India, yet the actual fact is that increase in interest rate of government securities has compelled banks to raise interest rate on deposits and thereby making lending to productive sectors costly. Thus, it is advisable to lower interest on government securities enjoying tax advantage so that there will be better effect on deposit and lending rates.

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Appendix I

Calculation for Mean Value & Correlation Between

Deposit Rate & Deposit Amount of NIBL

Year	DR (X_1)	DA (X_2)	$x_1=X_1-\bar{x}_1$	$x_2=X_2-\bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
2001	6.75	1459.15	1.77	-5521.57	-9773.18	3.13	30487735.26
2002	6.33	1111.3	1.35	-5869.42	-7923.72	1.82	34450091.14
2003	6.25	2053.35	1.27	-4927.37	-6257.76	1.61	24278975.12
2004	6.08	3608.35	1.10	-3372.37	-3709.61	1.21	11372879.42
2005	3.33	4957.95	-1.65	-2022.77	3337.57	2.72	4091598.47
2006	3.33	6747.5	-1.65	-233.22	384.81	2.72	54391.57
2007	4.44	9129.5	-0.54	2148.78	-1160.34	0.29	4617255.49
2008	4.44	10816.5	-0.54	3835.78	-2071.32	0.29	14713208.21
2009	4.44	14349.8	-0.54	7369.08	-3979.30	0.29	54303340.05
2010	4.44	15573.8	-0.54	8593.08	-4640.26	0.29	73841023.89
$N_1 = 10$ $N_2 = 10$	**$\sum X_1$ =49.83**	**$\sum X_2$ =69807.20**	-	-	**$\sum x_1.x_2$ = -35793.11**	**$\sum x_1^2$= 14.39**	**$\sum x_2^2$= 252210498.61**

For DR,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{49.83}{10} = 4.98$$

For DA,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{69807.20}{10} = 6980.72$$

Correlation Between DR & DA,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum {x_1}^2 \sum {x_2}^2}}$$

$$= \frac{-35793.11}{\sqrt{14.39 \times 252210498.61}} \quad = -0.594$$

$$r^2 = -0.594^2 = 0.353 \text{ Or, } 35.3\%$$

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{-0.59415}{\sqrt{1-0.353}} \times \sqrt{10-2} \quad = 2.89$$

Appendix II

Calculation for Mean Value & Correlation Between

Deposit Rate & Deposit Amount of EBL

Year	DR (X_1)	DA (X_2)	$x_1=X_1-\bar{x}_1$	$x_2=X_2-\bar{x}_2$	$x_1 . x_2$	${x_1}^2$	${x_2}^2$
2001	5.88	1927.15	1.29	-3961.86	-5110.80	1.66	15696334.66
2002	5.88	2213.95	1.29	-3675.06	-4740.83	1.66	13506066.00
2003	5.69	2780.7	1.10	-3108.31	-3419.14	1.21	9661591.06
2004	5.38	3330.9	0.79	-2558.11	-2020.91	0.62	6543926.77
2005	3.5	4125.7	-1.09	-1763.31	1922.01	1.19	3109262.16

2006	3.75	5113.7	-0.84	-775.31	651.26	0.71	601105.60
2007	3.63	7338.35	-0.96	1449.34	-1391.37	0.92	2100586.44
2008	4.07	9220.95	-0.52	3331.94	-1732.61	0.27	11101824.16
2009	4.07	10938.5	-0.52	5049.49	-2625.73	0.27	25497349.26
2010	4.07	11900.15	-0.52	6011.14	-3125.79	0.27	36133804.10
N_1 = 10 N_2 = 10	**$\sum X_1$ =45.92**	**$\sum X_2$ =58890.05**	-	-	**$\sum x_1.x_2$ = -21593.91**	**$\sum {x_1}^2$= 8.79**	**$\sum {x_2}^2$= 123951850.20**

For DR,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{45.92}{10} = 4.59$$

For DA,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{58890.05}{10} = 5889.01$$

Correlation between DR & DA,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum {x_1}^2 \sum {x_2}^2}}$$

$$= \frac{-21593.91}{\sqrt{8.79 \times 123951850.20}} = -0.654$$

$$r^2 = -0.654^2 = 0.428 \text{ Or, } 42.8\%$$

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{-0.654}{\sqrt{1-0.428}} \times \sqrt{10-2} \quad = 2.45$$

Appendix III

Calculation for Mean Value & Correlation Between

Lending Rate & Lending Amount of NIBL

Year	LR (X_1)	LA (X_2)	$x_1=X_1-\bar{x}_1$	$x_2=X_2-\bar{x}_2$	$x_1 . x_2$	x_1^2	x_2^2
2001	11.93	2385.5	0.22	-13914.09	-3061.10	0.05	193601900.53
2002	11.48	2693	-0.23	-13606.59	3129.52	0.05	185139291.43
2003	11.05	5872.6	-0.66	-10426.99	6881.81	0.44	108722120.46
2004	11.1	7174.7	-0.61	-9124.89	5566.18	0.37	83263617.51
2005	11	10295.4	-0.71	-6004.19	4262.97	0.50	36050297.56
2006	10.95	13007.2	-0.76	-3292.39	2502.22	0.58	10839831.91
2007	10.45	17482	-1.26	1182.41	-1489.84	1.59	1398093.41
2008	10.35	27145.5	-1.36	10845.91	-14750.44	1.85	117633763.73
2009	14.06	36250.4	2.35	19950.81	46884.40	5.52	398034819.66
2010	14.75	40689.6	3.04	24390.01	74145.63	9.24	594872587.80
N_1 = 10 N_2 = 10	**$\sum X_1$ =117.12**	**$\sum X_2$ =162995.90**	-	-	**$\sum x_1.x_2$ = 124071.36**	**$\sum x_1^2$= 20.19**	**$\sum x_2^2$= 1729556323.99**

For LR,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{117.12}{10} = 11.71$$

For LA,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{162995.90}{10} = 16299.59$$

Correlation between LR & LA,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum {x_1}^2 \sum {x_2}^2}}$$

$$= \frac{124071.36}{\sqrt{20.19 \times 1729556323.99}} = 0.664$$

$r^2 = 0.664^2 = 0.441$ Or, 44.1%

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{0.664}{\sqrt{1-0.441}} \times \sqrt{10-2} = 2.52$$

Appendix IV

Calculation for Mean Value & Correlation Between

Lending Rate & Lending Amount of EBL

Year	LR (X_1)	LA (X_2)	$x_1 = X_1 - \bar{x}_1$	$x_2 = X_2 - \bar{x}_2$	$x_1 . x_2$	${x_1}^2$	${x_2}^2$
2001	11.46	2963.7	0.61	-9210.52	-5618.42	0.37	84833678.67

2002	12.33	3969.6	1.48	-8204.62	-12142.84	2.19	67315789.34
2003	11.9	5030.9	1.05	-7143.32	-7500.49	1.10	51027020.62
2004	11.94	6116.6	1.09	-6057.62	-6602.81	1.19	36694760.06
2005	10.62	7944.1	-0.23	-4230.12	972.93	0.05	17893915.21
2006	9.63	10154.9	-1.22	-2019.32	2463.57	1.49	4077653.26
2007	9.92	14100	-0.93	1925.78	-1790.98	0.86	3708628.61
2008	10.21	18836.4	-0.64	6662.18	-4263.80	0.41	44384642.35
2009	10.21	24469.6	-0.64	12295.38	-7869.04	0.41	151176369.34
2010	10.25	28156.4	-0.60	15982.18	-9589.31	0.36	255430077.55
N_1 = 10 **N_2 = 10**	**$\sum X_1$ =108.74**	**$\sum X_2$ =121742.20**	-	-	**$\sum x_1.x_2$ = -51941.17**	**$\sum x_1^2$= 8.44**	**$\sum x_2^2$= 716542535.04**

For LR,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{108.74}{10} = 10.85$$

For LA,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{121742.20}{10} = 12174.22$$

Correlation between LR & LA,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum {x_1}^2 \sum {x_2}^2}}$$

$$= \frac{-51941.17}{\sqrt{8.44 \times 716542535.04}} = -0.668$$

r^2 = -0.668² = 0.446 Or, 44.6%

T-value,

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

$$= \frac{0.668}{\sqrt{1-0.446}} \times \sqrt{10-2} \quad = 2.54$$

Appendix V

Calculation of Trend Value of DA of Sample Banks

Fiscal Year	t	X = t-5	x^2	NIBL		EBL	
				DA (Y_1)	XY_1	DA (Y_2)	XY_2
2002	1	-4	14	1111.3	-4445.2	2213.95	-8855.8
2003	2	-3	9	2053.35	-6160.05	2780.7	-8342.1
2004	3	-2	4	3608.35	-7216.7	3330.9	-6661.8
2005	4	-1	1	4957.95	-4957.95	4125.7	-4125.7
2006	5	0	0	6747.5	0	5113.7	0
2007	6	1	1	9129.5	9129.5	7338.35	7338.35
2008	7	2	4	10816.5	21633	9220.95	18441.9
2009	8	3	9	14349.8	43049.4	10938.5	32815.5
2010	9	4	16	15573.8	62295.2	11900.15	47600.6
Total		0	58	68348.05	113327.2	56962.9	78210.95

Calculation of intercept of 'y' when x = 0

$$a_1 = \frac{Y_1}{N_1} = \frac{68348.05}{9} = 7594.23$$

$$a_2 = \frac{Y_2}{N_2} = \frac{56962.9}{9} = 6329.21$$

Calculation of Slope of Trend Line

$$b_1 = \frac{XY_1}{X^2} = \frac{113327.2}{58} = 1953.92$$

$$b_2 = \frac{XY_2}{X^2} = \frac{78210.95}{58} = 1348.46$$

Therefore the trend line equations are:

$$Y_1 = a_1 + b_1 x$$

$$Y_2 = a_2 + b_2 x$$

Appendix VI

Forecasted Value for Next Five Years

Year	X	NIBL	EBL
		$Y_1 = 7594.23 + 1953.92 X$	**$Y_2 = 6329.21 + 1348.46 X$**
2011	4	7594.23 + 1953.92 × 5 = 17363.83	6329.21 + 1348.46 × 5 = 13071.51
2012	5	7594.23 + 1953.92 × 6 = 19317.75	6329.21 + 1348.46 × 6 = 14419.97
2013	6	7594.23 + 1953.92 × 7 = 21271.67	6329.21 + 1348.46 × 7 = 15768.43
2014	7	7594.23 + 1953.92 × 8 = 23225.59	6329.21 + 1348.46 × 8 = 17116.89
2015	8	7594.23 + 1953.92 × 9 = 25179.51	6329.21 + 1348.46 × 9 =18465.35

Appendix VII

Calculation of Trend Value of LA of Sample Banks

Fiscal Year	t	X = t-5	x^2	NIBL		EBL	
				DA (Y_1)	XY_1	DA (Y_2)	XY_2
2002	1	-4	14	2693	-10772	3969.6	-15878.4
2003	2	-3	9	5872.6	-17617.8	5030.9	-15092.7
2004	3	-2	4	7174.7	-14349.4	6116.6	-12233.2
2005	4	-1	1	10295.4	-10295.4	7944.1	-7944.1
2006	5	0	0	13007.2	0	10154.9	0
2007	6	1	1	17482	17482	14100	14100
2008	7	2	4	27145.5	54291	18836.4	37672.8
2009	8	3	9	36250.4	108751.2	24469.6	73408.8
2010	9	4	16	40689.6	162758.4	28156.4	112625.6
Total		0	58	160610.4	290248	118778.5	186658.8

Calculation of intercept of 'y' when x = 0

$$a_1 = \frac{Y_1}{N_1} = \frac{160610.4}{9} = 17845.6$$

$$a_2 = \frac{Y_2}{N_2} = \frac{118778.5}{9} = 13197.61$$

Calculation of Slope of Trend Line

$$b_1 = \frac{XY_1}{X^2} = \frac{290248}{58} = 5004.28$$

$$b_2 = \frac{XY_2}{X^2} = \frac{186658.8}{58} = 3218.25$$

Therefore the trend line equations are:

$$Y_1 = a_1 + b_1 x$$

$$Y_2 = a_2 + b_2 x$$

Appendix VII

Forecasted Value for Next Five Years

Year	X	NIBL	EBL
		Y_1 = 17845.6 + 5004.28 X	**Y_2 = 13197.61 + 3218.25 X**
2011	4	17845.6 + 5004.28 × 5 = 42867.00	13197.61 + 3218.25 × 5 = 29288.86
2012	5	17845.6 + 5004.28 × 6 = 47871.28	13197.61 + 3218.25 × 6 = 32507.11
2013	6	17845.6 + 5004.28 × 7 = 52875.56	13197.61 + 3218.25 × 7 = 35725.36
2014	7	17845.6 + 5004.28 × 8 = 57879.84	13197.61 + 3218.25 × 8 = 38943.61
2015	8	17845.6 + 5004.28 × 9 = 62884.12	13197.61 + 3218.25 × 9 =42161.86